T. W. Hardison diary, 1946

Thomas William Hardison

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WARNER'S CALENDAR of MEDICAL HISTORY

For the use of the Medical Profession
1st Day of Year
365 Days to Come

Tuesday

6 a.m. 18; 30.16; other: NE
Pt. cloudy by 7 a.m.

Mrs. today: Bryant & Elizabeth Davidson (twins);
Bryant's brother-in-law, Ruck; Rev. G.R. Reynolds, Apples;
bad gallbladder, sending us 3 rinses of wood ($10.50) from
Midsummer place in the Valley; c, finally close
Leigh & Mahon, 5 to 8:30 P.M., to work on
the plumbing. They failed to get one broken
pipe repaired, so we still can't use the
system.

Miss not the discourse of the aged, for they also learned of their fathers: because from
them thou shalt learn understanding, and to give answer in time
of need—Ecclesiastes

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January 2

Wednesday

6 A.M. 31. 30.12; freezing rain; E.

Blanks, Leigh went all afternoon repairing
the water system & finished it at 5 o'clock.
The bill was $10.85 — less than I expected.

A good letter came from Son, written
Dec. 25. He expects to be discharged from
the Army in February.

The freezing drizzle continued until
noon, after which the mountain was enveloped
in a dense fog. The trees, wings, houses, but little on the
ground. Temp. range 30 to 33.

January 3

Thursday

6 A.M. 37; 30.04; foggy; E.
The ice all melted last night. Precipitation in last
12 hours about 0.25 in.

A letter from Son today, written Dec. 25 (christmas).
He says he thinks he will start home very soon now,
possibly by January 15.

Mr. W. U. Young brought his wife for examination
of P.M. She is due to be confined sometime in
the next two months — which is as much as she
knows about it.

J.J. Body came 5 P.M. for medicine for his sister
Daisy (Joseph Hubbard's wife).
The fog continued all day & tonight is
very dense.

January 31 Days

Numa Pompilius, generally accredited with
the formation of the Roman calendar, added
two new months and called the first Janu-
arius, in honor of Janus. This deity, repre-
sented with two faces, was primarily the
god of gates and doors: therefore, of all
beginnings.

Frinkles if due to age are fine; if due to habit, they are coarse. The former appear
late; the latter may begin in early life.

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
6 AM 48: 30.07; fog; SE
Fog lifted 10 AM. Cloudy throughout. Thunderstorm came up from W 12:30 PM. Little rain. Foggy again after 2 PM.

4 Days Past
361 Days to Come

6 AM 57, 29.36; cloudy; SW
Thunderstorm and rain last night. 1.50 in. rain.

The power line cut when we got up. I went to Apple 9:30 AM and telephoned the office at Perugia. Current restored 2:10 PM.

Dr. Usborne leaves at 29.34 PM to 4 PM.

At 11 this afternoon.

Dr. Linnaeus McIlroy came 11 AM to tell us they are going to leave the Park, where Dr. Linnaeus has been Superintendent nearly 14 years.

They are going to buy a store board of L.D.

Dr. Linnaeus took 2 bottles of water to the

Linnaeus Drug Store for me. He promised to deliver water next week if possible.

In maturity nature cures, in senility nature kills. Aid nature in maturity, prevent death in senility—L. L. Nascher

The Importance of Geriatrics

Our shifting and maturing population trend is bringing into the medical foreground a heretofore little explored branch of medicine—geriatrics. The word, first used by the pioneer of modern geriatrics—Ignatz Leo Nascher—comes from the Greek [gēras, old age, and iatrike, medical treatment]. Provocative factors in the growth of this science are the triumphs of medicine over fatal diseases, and the recurrence of war years abetted by lowered birth rates. The development of geriatrics and preventive geriatrics entails an exactitude of therapeutics and a need for individualization not encountered in any other age group.
Edin 50; 29.60; cloudy; S

Ed. began 9:30 A.M. to talk to me about a job in the painting work.

At Kemp, Webb, Nancy & George came 11 A.M. at 8:15 A.M. They remained all night, after the loss of Mr. Kemp.

Ford first brought his wife for examination. 3 P.M. he also got medicine for his mother.

Rain 5 CM. followed by thunderstorm.

Some of the ancient Egyptians were not only philosophic about old age, but looked forward to spanning a ripe 110 years. An inscription attesting to this desire is to be found on a statue of Amenophis, the son of Hepu who rivalled the god of healing, Imhotep. It reads: "If I have attained the age of 80 years, may I live to be 110."

The senile stoop, due to anatomical changes, comes on slowly and late; the senile slouch, due to psychic causes, comes on early and rapidly.
A forerunner of rejuvenating creams appeared in "The Book for Transforming an Old Man into a Youth of Twenty," which is part of the Edwin Smith Surgical Papyrus (1600 B.C.). It was compounded by an Egyptian priest and "found effective myriads of times." Use of the ointment supposedly removed wrinkles from the head, beautified the skin, removed blemishes, disfigurements and all signs of age.

The mind occupied with some task does not dwell upon self and death

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Through Research and Manufacture
10 January
Thursday
9 Days Past
356 Days to Come

6 AM 33; 30.17; clear; SW 7 to 8 AM
Mother & I went to Town, leaving home 10:15 a.m.
returning back 1:30 P.M. I got Phinn [John] to
come up here to look at the pump well structure, with
views to stopping the trouble we are having
with it.

Mary here after we got home, including Slin

The aged often deny pain to avoid examination

In the transcription of the Prisse Papyrus (c.1580 B.C.), there is an ideograph of a bent human figure typifying
the muscular and bony weaknesses of old age. It may be considered the earliest artistic representation of senile
decline, first found in inscriptions during 2700-2800 B.C. The Papyrus expounds the precepts of Ptah-hotep, "To be an old
man is evil for people in every respect."

11 January
Friday
10 Days Past
355 Days to Come

6 AM 38; 29.85; rain; S
0.605 in. Rain last night. To 7 a.m.

William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
12 JANUARY  
Saturday

6 A.M. 30.21; cloudy; NW.
I went to town at 9 a.m. to get chemicals for sterilizing tanks at the spring. Slim is going to
take water tomorrow if the weather permits.
at 12:30 I went with Slim to the Spring to
fill the vats. Keck also went a stroll to turn
the water off when the vats were filled.

Typical temperature curves such as are found in typhoid fever and
malaria are rare in the aged

In the Ebers Papyrus (c.1550 B.C.) are
given a great number of diseases and
symptoms associated with old age. Many
remedies are offered for constipation, gray
hair, baldness, wrinkles, as well as more
serious complications. In the section on
definitions of medical terms, there is this ex-
planation of the manifestations of age: "As
to debility through senile decay, it is (due
to the fact) that purulency is on his heart."

13 JANUARY  
Sunday

6 A.M. 24; 30.15; clear; NW. It was cloudy after 8 a.m.
A job-seeker — Durham, Flannerville — came
at 9 a.m. He wants to be park superintendent.

Vine Vincent, Lloyd, Pint, v wife, Clifton, chance v wife
came late this afternoon.

Slim telephoned me he had put up 50
buckets of water today.
The old Chinese rightly guessed that the reproductive glands were not only concerned in fertilization and procreation but were important sources of bodily vigor. Extracts made from them were deemed valuable for invigorating organisms enfeebled by age. Believing that the pink antlers of cutting deer were saturated with this energizing principle, they prepared powders from the horns.
Wednesday

6 AM 26; 30, 14; Pt. cloudy; NW

I went to see Fletcher deluxe 8:30 AM, walking the
last 31/4 miles back to the car. The trip along the
knee ranch yesterday nearly tore the car to pieces.

Some 10:30.

Mr. Currie (with Rutledge) came just as I got home.
10:30. I stayed with one of them. Rutledge wants
the store concession. It’s the job of going around

John Silas came 2:30 to talk again about
his application for the superintendant’s job to the
Best

Home convention.

Mr. Finke also, 70, who buys timber for
Mr. Pierce, came 3 PM. He
‘is a very interesting man. Born in Germany,
he came to America 55 years ago, when he
was 15. He came to Perry County (Biglow) with
the Bryant Lumber Co., 1900.

Began after 9 AM.

Thursday

6 AM 26; 30, 14; Pt. cloudy; NW
Clean after 9 AM. A fine day.

A few callers in the day, some of them wanting
jobs in the Park.

Forest Green and Homer Hill came 7:15 PM

Stayed until 8.

Major Burns, husband of Lucy Kate Reynolds, an
Army medical officer in terminal base hospital two
years in Europe, came this afternoon with his wife
and baby.

A recurrence of early tuberculosis is mild; a primary tubercular infection
in old age is fatal.

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufactur
18 January
Friday

6 a.m. 35; 30.14; clear; W

J. C. (Clay) Yearnough came for me at 8 a.m to
go to the Valley to see his boy. Home at 10:40.

Major Barnes' family came over again this afternoon.

Hobson, assistant miner of Parry came
11 a.m. talked with me for an hour about
job and concessions in the Park.

19 January
Saturday

3:45 a.m. 22; 29.92; Mt. cloudy; S

Tom St. John began digging a ditch, this morning
from the well to the orchard in which to lay a pipe
to keep the water drained out of the concrete
structure. I am paying him 50 cents an hour
the highest price I can pay for common labor.
He worked 6 1/2 hours today.

Eight rain began falling 3:30 P.M.

Lloyd & Bonnie Vint brought their baby
3:30 P.M. High fever.

Stimulation of a degenerating organ or tissue hastens the degeneration.
20 January
Sunday
6 A.M. 40; 29.73; cloudy & foggy; SE. 1.25 in. rain last night. Fog lifted 9 A.M. Cloudy, remember of day.
Loyd & Bemie went cruising their today.
3 P.M.

21 January
Monday
6 A.M. 29; 30.08; Monday; N. Mother & I went to town this morning, leaving home 9:15 & stopping at Van Vlits to see Dore's baby. Mother stayed at May Hoopes while I attended to business in town. We got home at 11:30.

Some are aged before they are old, some are old but are not aged. Geriatrics deals with the senile state, not with the years of life—J. L. NASCHER

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William R. Warner & Co., Inc.—Serving Medicine Through Research and Manufacture
22 JANUARY
Tuesday

6 AM 22; 30.32; clear; NW
7 AM 21

Vern St. John worked on the ditch from
the well this afternoon.

Mr. & Mrs. Alcorn came 5 PM for an hour
& a half. They arrived at their place last
night with a trailer loaded with household
goods, so are going to begin work on
their house this week. They will be
good neighbors - we are glad to
have them.

22 DAYS PAST
344 DAYS TO COME

23 JANUARY
Wednesday

6 AM 27; 30.03; clear; SE

From St. John & others Miller worked on the
ditch all day.

People hire all day - Alcorn, Paul

(To take about sales release for

Golds) (To take about sales release for

Butley, Holman, John Hill, another

At the last, Joseph Hubbard, Rose Curr

for medicine for his baby.

Cloudy after 8 AM.

Townsend, Raymond, Man, also hire; and

Everett came with Holman.

The saddest thing about old age is that its future is behind it—Ramon y Cajal

As was intimated in "De Senectute"

of Cicero, old age was not as philosophi-

ically regarded by Mediterranean peo-

dles as by the Chinese. But views were

less pessimistic in Rome than in Greece.
The Roman Senate was composed of

older men; the "Gerousia," a Greek coun-

cil of 28 men all over sixty, controlled

the city-state, but it was looked upon as

useless and harmful to younger people.
5:30 A.M. 31; 30. Cold; clear; NW

Tom St. John & Olfie Wallace worked on
the ditch all day, cutting down into
solid rock near the well.

5:30 A.M. 41; 38. 29. 83. Clear; clear; NW

Mother went with Mrs. Hall to her home
Dinners with Clark meeting at Thelma's, at 2

Joseph Hubbard, Jesse Curry came for me
6:15 P.M. to 10 to see his baby. One hour
Home at 8.

And they die an equal death, the idler and the man of mighty deeds—Homer
26 January
Saturday
5:30 A.M. 34; 24.84; cloudy; N.W.
8 A.M. 32.
Down to Rose Crv at 8:30 A.M. To see Joseph.
Hubbard's baby. At Clinic Colby's, & found it
slightly better. Home at 10.

27 January
Sunday
5:30 A.M. 13; 30.8; clear; N.W.
7 A.M. 12.
To Rose Crv at 8 A.M. Found the Hubbard's
baby better. Home at 9:30.
Vincent came 4 PM.
Hatton Ellison came 5 P.M., for examination. Marie
was with him. Charles Jones spent time.

One third of the work of Marsilius Ficinus, "De tri-
plici vita," was devoted to the subject of old age. It
was printed in Basel about 1498. For old men, this
Florentine counseled the medicine of the Magi—pills
made of gold, frankincense and myrrh—but general
advice on diet and hygiene was also included.

What will cure a young person may kill an old one
January 28
Monday

From St. John O. the author worked on the ditch all day — I hope got it deep enough for the pipe. Cost of digging the ditch, to date, $24.75 not including the dynamite.

This Mary Hale, County Demonstration Agent, helped us rebuild theuzzi (OUSH) Couch this afternoon. He worked from one to 5 o'clock on it.

The Police came 6:30 p.m. stayed awhile late.

January 29
Tuesday

6 A.M. 33; 90.23; rain 3
In 9 A.M. 0.35 in rain. fog + drizzle remainder of day.

Another boy, Howard Bissett, just out of the Army, came 3 p.m. to apply for the job of pork superintendent.

Death is Nature's device for securing abundant life — Goethe
30 January
Wednesday

5:30 a.m. 39.2980; cloudy. 5
P.M. cloudy after 9 a.m.

A good letter from Ben.

Some Bayett's N.J. Holbrook came 9:30 a.m. to estimate var taribia for Townsend. I went with them to
showed them our tract o Hunter tract & High Point tract. We
had to leave the cars at ECC camp because of bad roads.

I worked about 3 hours digging the ditch for the
well drain pipe today.

Alcorn came 2 a.m. Bob Nelson & Cook, Pete
Rock came 2:15.

Old Carpenter, Jerey Turner, came 6 o'clock with some bread. Bud Wallace & Gus Judge

Mr. & Mrs. Alcorn here 7 to 8:30 tonight.

Van visit came for 8:30 or 9 to go

Life is growth, the retardation of growth is old age, and its cessation is death

The great thirteenth century Franciscan, Roger Bacon,
wrote a number of medical works dealing with the aged:
A point of interest about Bacon's writings is the fact
that he wrote in obscure language, either in elaborate
cipher or Gaelic.
Mid Demois came 5 pm to get me to go to see Claven Young on his farm. I found a case of pneumonia. I stopped to see Mrs. Ashcraft on my way home.

5:30 An 32; 30.15; clear; S

I was called to Rose Creek 12:30 pm to see Joseph Hubbard (at the John Hewitt place). He had pneumonia, too. I called at home and was made welcome. I was told he had been rather worse, I was told, though he manifested no serious symptoms while I was there, being in more of a somnambulist state. At the same time, I was called back to see Claven Young on Demois farm. I found him somewhat better. I made this call after the trip to Rose Creek.

Charles Reddick & wife, Plumville, Howard Beckett & wife, Moorville, David Bird, Croy, here later in afternoon. Reddick has a contract as part superintendant of boat house construction.

Many grow old before they arrive at age—SIR THOMAS BROWNE

FEBRUARY 28 DAYS

The second of the two months introduced by Numa Pompilius into the Roman calendar, February derived its name from "Februare," the religious expiation and purification which Romans practiced during this month.
Sunday

5:30 A.M. 43° 30.24': Cloudy; S

I went down to see Ann. Young, a Q.A. of S. found him 12 lbs. from 6 and better. Surfacing did well again in this case. Stone at 10.

Blinn & Kaas came 11 A.M. to put the drain pipe in the well structure. They finally, after many difficulties, got it in by 5 P.M. I helped them.

Mr. Kump, Mr. George & another boy came 10:30 A.M.

Dr. Reynolds, Miss Middleton, Mr. Nash, Mr. Davis came 11 P.M. Then can break down & Blinn & Kaas got it stirred.

Thelma came with Blinn this morning & stayed until noon.

Monday

5 A.M. 51° 30.11': Trace of rain; S

Rev. Mr. Hubble came for me 5 A.M. to attend his wife in labor. When I got there (Ashby place) 30 minutes later, the baby was born, had been born 10 minutes.

Dorothy Hubbard came 9 A.M. for me to go to see Leonard, at the Will Jones place. I left the car at 3 P.M. on the way to see them. Changed. Got him on surfacing.

Bishop Mitchell, Lipscomb Lewis, Jack Allen, Alvis came 2:30 P.M. for an hour's visit. The Bishop is buying the house for us as conference ground for the Episcopal Church.

When a man is old he must do more than when he is young—Goethe

Halley, the English astronomer after whom a well-known comet is named, published in 1693 the results of his investigation of mortality in Breslau (1687-1691). It indicated that the mean length of life was then 33.5 years. Wigglesworth's table, the first American one, which was crudely constructed from data obtained in several towns in New Hampshire and Massachusetts, showed the mean length of life to be 35.5 years in 1709. (Portrait of Halley shown.)
5 FEBRUARY
Tuesday

3:30 AM 38°; 29.90; Rain; S

Light rain last night & today, with brief breaks.

Shower until noon. Steady rain all afternoon.

Total rain today, to 6 PM, 0.75 in.

J.E. Townsend, Stuttgart, came 9 AM to talk

with me again about buying our timber.

Ralph came at 1 PM for me to go to see

Thomas Basset. I left to see at least 3

hours; walked through mud & rain. Better

than I saw him yesterday.

6 FEBRUARY
Wednesday

5:30 AM 31°; 30.03; Clear; NW

Mother & I went to town, leaving home at 10

Getting back at 2. I paid taxes—ours, Mr. Hand's

Mrs. Thomas & from Nettie's—talked by telephone to

Harvey Penny about the nice estate property,

attended to other things.

(Nettie: Tax, 37.3; Thomas, 189; Hand, 11.53)

Another early writer on health preservation in the aged

was Sir John Floyer (1649-1734). His "Medicina

Gerocomica or galenic art of preserving old men's

health" was published in 1724. Floyer advocated

"moderation in everything together with hot and cold

bathing."

The high prize of life, the crowning fortune of a man is to be born with a bias to

some pursuit, which finds him employment and happiness—EMERSON

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
William Osler wrote about George Cheyne that "he was a man of enormous bulk who reduced himself by dieting from 448 pounds to proper dimensions." As Cheyne expressed it, "Every wise man after fifty ought to begin to lessen at least the quantity of his aliment and... he ought every seven years to go on abating gradually and sensibly..."
February 9
Saturday

5:30 A.M. 37°; 29.96; cloudy; S.
Blume and Thelma brought Wenda Sue 8 a.m. for
immunization. I cold.
It began raining at 9 a.m., lightly, and continued
throughout the day. Temps 29° to 30°.
until it turned to ice and sleet at 2 p.m.

Ford Vinz came for me 7:45 a.m. to go to
see his baby at Yaris' house. The baby had
drunk some kerosene. It also has tonsillitis.
I had no trouble on the road, in spite of
the ice, and got home at 9:15.
The bus & wines heavy with ice, but
little damage yet.

February 10
Sunday

5:30 A.M. 26°; 24.87; cloudy; NW
4-inch snow on the ground when we got up.
The sun came out at 9. The ice on
the bus & wines has done no damage.

Leonard Hubbard came 9:15 a.m. for
medicine for Dorothy.

Ford Vinz came for me 11 a.m. to go to
see his baby, whom I found no better than
when I saw him last night.

Blume called me to see Wenda Sue
4 p.m. Probably developing pneumonia.

Contrasts between normal and pathologi-
cal old age may be found in abundance
in Shakespeare. There is "Adam," in "As
You Like It," who looked old but re-
mained strong and lusty. Then there is
"Lear," who knew that he had become
"foolish and old man, fourscore and up-
ward." Lear not only was ignorant of all
his whereabouts, but feared for the con-
tinued stability of his mind.

What find you better or more honourable than age? Take the preeminence of it in
everything—in an old friend, in old wine, in an old pedigree—SHACKEBLEY MARMION

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William R. Warner & Co., Inc.—Serving Medicine Thro Research and Manufacture
5:30 am 29; 30.07; clear; Nov
7 Am 27

This morning I saw Dorothy Hubbard,
Nanda Sue Filling (definitely pneumonia),
Lloyd Vint’s baby (letter). Before that,
Debbie Abston brought the baby (Paul
Holmes’ trust).

J.C. Townsend came 1 PM to take away
the timber.

Paul & Claude came 1:30 PM & stayed
a while.

5:30 am 31; 30.07; clear; SE
7 Am 3 G; Pt. cloudy

I saw Dorothy Hubbard 9:30 am, r on to
see Nanda Sue Filling, Both better. Mrs. Black
was with Dorothy.

Alice came 4 PM. Tom St. John came 8 am
for something to eat. To finish filling the ditch.
Through 2 PM. Cost of digging ditch $2.95.
Putting in pipe (plum & sock) $30; filling ditch
$2.75

Orrin Rhinehart, son of Jack, & his
grandmother, Mrs. Ada Rhinehart, brought (in
Charlie Jones’ truck). Jack’s 11-year-old boy,
3:30 PM, with pneumonia. Orrin has just
retired from 3 years service; wounded in Vietnam.

Lloyd Vint came, 5 PM, for me to go to
see his baby. Worse than yesterday. Home 6:30
in a rainstorm.

A telegram came by mail from Mary saying son
is in Manila waiting for orders to transportation home.

It is notorious that the desire to live increases as life itself shortens—RAMÓN Y CAJAL

Bodily vigor and mental activity characterized the long life of Goethe. Some of his best poems were written after he had passed his 75th birthday. At 82, he completed the second part of Faust. He was forever falling in love and said, a few months before his death, “The force which has been my greatest stimulant and aid has been love.”

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
FEBRUARY

13 Wednesday

5:30 A.M. 57; 29.58; rain; S 0.75 in. Rain to 7 A.M.

Leaving home at 9 A.M., I went to the Valley in a hard rain to see Rod's Victory, then on to Jack Rheins's (on the old Welsh ranch) to see his 11-year-old boy, whom I found somewhat better than yesterday. On the way I met out of the house, paid for the care, so he did yesterday. You don't want me from your home. On way back, I stopped to see Colburn's, Whittington's today. Despite the heavy rain, I had no trouble. The rain continued until 11:30 A.M. I got home at 11:30. Total rainfall since has been last night, 2.25 in. Next to NW 19M, with temp. 48° 2 barometer 29.44. Wind velocity very high.

5:30 A.M. 23.30.4; clear; XM

Mr. Bisce a Mr. Timmerman come. 9:30 A.M. I went with him to look at the timber. Mr. Neal came 1:30 P.M., just after Bisce's Tinerman left. After talking about the timber for an hour, he offered me $750 for it - that is, in the pine above 9 ft. in size on the northwest & spring tract (18.40 acres) & the pine tract. The sale was made by his taking an option on it until Dec. 15. He paid $2,000 cash, the balance to be paid May 15. This is the first time we have ever sold a pine tree. This change in our capital (from timber to bonds) is one of the first courses.

14 Thursday

Floyd Rose is up for me to go to see his baby. After dark, I arrived a call to see Ishmael Welsh's wife. Home at 7:15.

Mrs. Welsh's father spent most of the afternoon here with us.

The famous Russian biologist, Elie Metchnikoff, wrote a book on "The Prolongation of Life," an English translation of which appeared in 1908. His studies on the lactic acid bacilli and the conquest of intestinal putrefaction were instituted while at the Pasteur Institute in Paris, where he went in 1887.
5:30 am 35; 30.30; clear; s

Mr. Pierce & Mr. Whitehead came 8:30 a.m. I feel
better about my trade with Uncle Neal yesterday, since
they say they do not blame me. In spite of the fact,
knowing that Mr. Pierce's first offer yesterday was only $50.
Now I should have made and he pay $10,000.

Anyhow, to feel better about it than I did yesterday.

Death is the veil which those who live call life;
They sleep, and it is lifted—SHELLEY

The intellectual heir of Claude Bernard was
Charles Brown-Séquard who, with his mentor, was a principal founder of the doctrine
of internal secretions. In 1836, Brown-
Séquard produced a syndrome corresponding to that of Addison's disease by excising
the suprarenal capsules of animals and in 1889, proposed the theory that certain
glands released substances into the bloodstream affecting distant organs.
4:20 A.M. 45; 30.18; cloudy.

The afternoon: Mr. Kemp, Nib, George; Mr. Holmes Filler, who are moving to Monrovia this week after 4 years in the Park.

Ernestine Robertson McCloskey came 11 a.m. for examination. Due to be confined about May 15 or 20.

5:30 A.M. 41; 30,14; cloudy. E.

Light rain began falling 5:05 A.M.

I got a young pine tree in the woods north of the yard & put it out on the brow near Denis & Robert's room, 9 to 10 A.M.

Light rain & fog throughout the day. 6:20 in.

By night. The thermometer stood at 41 to 43 all day.

In old age it is often a case of the young and high-spirited taking advantage of physical infirmities. As an instance, there is the recollection by Santiago Ramón y Cajal of a very aged professor at Saragossa who sometimes forgot his false teeth. On such occasions, the poor professor's inarticulate distress was a signal to the students for a joyful and spontaneous exodus.
5:30 a.m. 40° 29.82. Pt. cloudy; W 0.15 in., rain after midnight.

Mother; I went to town 8:30 a.m. to sign the timber contract we made last week with Dr. Hald (Hamilton Lumber).

He got back home 40° M.

William Whitfield, one hour, came for medicine for his wife 2:30 p.m.

In town this morning, I took out automobile insurance with Arthur Green.

Mr. & Mrs. Aiken here tonight until bedtime.

---

Age carries all things, even the mind, away—Virgil

Trends indicate that we are approaching a stabilized, possibly a declining, larger older population. In the space of ten years, 1930-1940, the number of people 65 years or older in the United States increased 2,322,401. One third of the total population of the world soon will be over fifty years of age. In 1937 the number of persons over 65 will be more than double that of today.
Mother went out to see Mrs. Alcorn this afternoon. I took Martin to Mrs. Upchurch's for luncheon. I stayed for dinner. Bernie Dillman brought Martin and G.U.

Mr. and Mrs. Alcorn are coming tonight. They are going back to Magnolia tomorrow for a few days.

The sun shone after 10 AM.

The father of modern geriatrics is Ignatius Leo Nascher. He first used the term "geriatrics" and first wrote a book on the subject (1914). He began his research studies in 1906. As Nascher has graphically expressed, "disease in senility is a departure from the norm of senility and not from the norm of maturity; and the treatment of senile diseases has for its object return to the norm of senility and not to the norm of maturity."

---

The father of modern geriatrics is Ignatius Leo Nascher.
In the aged, examinations should be brief and, preferably, infrequent. If otherwise, the patient is likely to become depressed and suspicious. The woman who believes her lung affected because her physician kept his stethoscope longer on one side than on the other may be taken as an example of a definite patient. Secret talks with the family should be avoided whenever possible.
5:30 A.M. 45; 29.88; Clear SW

Charlie Massey & Sue Charles came this afternoon with Henry Merrill, former citizen of Milton, now living in Texas.

FeBRuARY 25

Monday

5:30 A.M. 56; 29.54; Cloudy; S

Mother went with me to the CCC Camp 9 A.M. to see about the work being done there. We came back by the short route & saw Mrs. Reddy.

The Robinson's family came 10:30 A.M. The 2 boys sick.

Shawn of G.M. about 0.05 in.

SARANAE—is it not? that of the myriads who before us passed the door of Darkness thru, not one returns to tell us of the road which to discover we must travel too—OMAR KHAYYAM

Nothing is more disconcerting to the aged patient than to have the physician diagnose the condition as "old age," This nihilistic professional viewpoint is apt to discourage the patient from seeking medical advice unless seriously ill. Sincere interest in the peculiarities of senile patients will be rewarded with good results. In this group, as in no other, "hope" is the best physician.
Sickroom psychology may be a deciding factor in the aged. There are some perennially young and active patients who must be urged to stay in bed, but many more must be encouraged to get up as soon as they are able. If bedridden overlong, the chances of recovery may be lessened by the danger of hyperstatic pneumonia, by the effect on circulation, and by psychic depression.
March 1

Friday

5:30 AM 43° 29'35" Clear

O'Neill came 8:15 AM for me to go with him to look at the Hunter's land (110 acres was in the High Point area), to see the timber that he bought from us. Feb. 14, without knowing it, we went out of it, walking about 3 miles, and got back home 2:15 PM. O'Neill told me he would pay $1000 for the Hunter land.

Miss Robinson & others from Rose Creek waited here for me with some patients from 9 AM to 2 PM. I just missed them.

Sisters Edition brought his wife 3 PM. She had extinguished a fire on the roof of the boat house. There was a state of collapse as a result. She remained here 2 1/2 hours before she was strong enough to be taken home.

A good letter from Son came today.

Written Feb. 24.

March 2

Saturday

6:00 AM 32° 20'7" Clear

Major John B. Morris, who, as captain, was commanding officer of the CCC Camps here several years, now living in Lincoln, Neb., came 11 AM & stayed an hour. He was en route to Florida with the woman.

Mrs. Chiles & Mrs. Blairs — relatives or friends.

What is dark and incomprehensible attracts some minds more than what is clear and understandable — VBCHOW

March 31 days

Among the early Romans this was the first month of the year. It is not surprising that the Romans dedicated their first month to Mars when it is considered what importance they attached to war. Saxons called this month "Lenet-month" — length-month.

William R. Warner & Co., Inc.—Serving Medicine Through Research and Manufacture
6 A.M. 32°; 30.05; clear; S.
Dr. Reynolds, Miss Vivian Hill & Mrs. Campbell here 7:30 to 11:30 A.M.
All the Westphal family, including Eddie Sonja, just home from the city.
We were glad to have them.
Dr. amps came while the Westphal were here.
At cloudy after 7 A.M., with high south wind.

6:30 P.M. 34°; 29.98; cloudy; S.
The high wind which has blown continuously for the last four days subdued last night. It came up again in the Southwest 8 A.M. & blew a gale all day, while fields in the Valley burned off but did not reach the mountains.
Mother & I cleaned Don's room this afternoon.

In sensibility to great pain shows that the mind is affected—Hippocratic Canon

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
5 March
Tuesday

5:30 A.M. 50°, 29.92°; cloudy, S.E.

Lord Vint came at 7 a.m. paid his account, $28.

Thunderstorm came up 19 M. & lasted rest of day
with night showers. Storm became less
50 M. Lights went off 5:30.

We heard Winston Churchill speaks
3:15 to 4:30 P.M., at Westminster College,
Fulton, Missouri, on "The Dangers of Peace"

6 March
Wednesday

7 A.M. 48°, 29.97°; rain, S.E.

Electric storm with rain, continued all night.

7 A.M. 48°, 29.97°; rain, S.E.

Electric storm with rain, continued all night.

A ¼-inch rain fell last night to 5 A.M., the

heaviest of the winter.

Mother & I went to Little Rock for a meeting
of the Resources & Development Commission. Leaving
home 6:50 a.m.; getting back 7 P.M. Mother
spent the day with Mrs. Thomas while I was
in the meeting. A hard trip for us.

In medieval times, so fastidious were logic and abstraction that practice became a
vulgarity, and he was the greatest teacher who carried his pupils furthest from

things—Allbutt

When the aged must rely upon institutional care and shelter, they should be assured of understanding attention as well as comfort. There are still occasions when they are sadly neglected or where a couple must be separated after having lived together for many years. Simple entertainment should be provided. Reading is a profitable pastime that most elderly people enjoy.

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
7 MARCH
Thursday

5:30 4 in 43; 20. Col; Ener; 3
J. B. only came for medicine for his mother 5 P.M.
Barbara Petrie, Chicago, came to see us this afternoon.
She worked with the Red Cross in Ireland during the war.

8 MARCH
Friday

5:30 4 in 37; 29.90; Cloudy; W
7 A.M. 36
This Robertson & his wife Rhea came 2:30 T.M.
Rhea is pregnant. They came home from service in the Pacific (Pac.) Dec. 15. They have
fought the old Bob's hard luck place in Round
Mountain and are living on it.
This has been one of the windiest days we
ever had.

Women recognize the approach of senes-
cence earlier than men. The first facial
wrinkles, the first gray hairs, fading of
complexion and change of bodily con-
tours are apprehensively noticed. Often
the menopause is a real tragedy, though
hormone therapy has helped to alter this
picture. Controlled exercise and diet as well
as specific vitamin prescription also help to
maintain vitality and fitness in the aging.
9 MARCH
Saturday

67 DAYS PAST
298 DAYS TO COME

5:20 a.m. 33; 30.24; clear, NW

Kind to reach early in morning to help all day.

Of Dr. Wallace brought his case 5:30 P.M.
for examination.

A fine social undertaking was that of Christine Foster who, with her own resources, reopened a toy shop when World War I conditions forced its closing. Old men, discouraged and unable to find employment, were given a chance. The venture was a success, proving that work and responsibility were beneficial to these men.

10 MARCH
Sunday

68 DAYS PAST
297 DAYS TO COME

5:30 a.m. 58; 30.25; clear, NW

Here this morning: Dr. Reynolds; Leisha Dwyer, with her baby, who is much improved as a result of good feeding (not milk). This afternoon: Mr. Alcorn, who has completed moving to the Mountain; Dr. Kemp; Mr. & Mrs. Lamp; and finally a call of people from Pine Bluff who yearly finished us off.

Temp. 37. Barometer 30.10 at noon.
MARCH 11
Monday
69 Days Past
296 Days to Come

5:30 AM 39; 10.30: clear; SE

Mother & I went to town 5:30 AM. No met Mrs. Roseland Thomas at Mary Hop's, on her way up to visit us, went in with us to lunch in town, got home 1:30 PM.

I 7:15 PM, a field burning over in the Valley, north of the old S.F. Depot house. The fire moving rapidly toward the mountain in the high southeast wind, apparently out of control. I discovered another fire on the old Yeagough place, north of the house, near the foot of the mountain, 5:45 PM.

And at 7:30 PM I discovered a large fire just across the Sharp House.

MARCH 12
Tuesday
70 Days Past
295 Days to Come

6:15 AM 47; 24.98; S; cloudy; S

The forest fires seem to have spread this morning, so far as we can tell.

Called 7:30 AM to see Jim Mitchell, 741, on Rose Creek. The first fire 11 AM.

Mother & Mrs. Thomas went over the mountain while I went to Rose Creek. They had lunch at the first house.

I went with Mr. Thomas to look at the land. His decision is not to sell it. We called later: Forest Martin & wife, George Barnes & wife, Mr. Moore & wife; all on way to stay down at lodge, to which we were invited. The Barnes want to buy Mr. Thomas land.

As long as our brain is a mystery, the universe, the reflection of the structure of the brain, will also be a mystery—RAMÓN Y CAJAL

One might say that, in some respects, a man is as old as his joints. Radiography at threescore years and ten show new bone growth around articular margins. There is thickening and contraction of the joint capsule and surrounding ligaments. Shortening of the golf-club swing at 65 or 70 is evidence that the shoulder and wrist joints, as well as the lumbar spine, are no longer capable of wide movement.

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture

72

73
13 MARCH
Wednesday
294 DAYS TO COME

6:15 A.M. 57.3. 29.8. S.W. Cloudy. SE
Light rain in night.

I started on my trip to see Mr. Mitchell on Rose Creek 8:20 A.M. Home 11 A.M. The patient has lobar pneumonia in both lungs.

Both Thomas left 11:30 A.M. after a two

morn. She said at breakfast she would still have the

light rain began falling while I was on

Rose Creek.

Theo Robinson came 2:30 P.M. to report on

his wife Pha, who is improving.

On the trip to Rose Creek this morning. I saw

Joseph Hubbard & his brother Don, who got home

yesterday from Japan.

Rain today 0.40 in.

In the oldest man there usually remains

something of the heart of the child. If

all childhood is left behind, dreams are

no longer possible and life is not half

so pleasant. James Russell Lowell in

passing a great London building which

bore the inscription "Home for In-
curably Children," said to a friend—a

twinkle in his eye—"they'll take me

there some day."

72 DAYS PAST
295 DAYS TO COME

MARCH
Thursday
14

5:30 A.M. 50. 29. 61; cloudy & foggy; S

Will Mitchell came 10:45 P.M. to report his patient

about as yesterday.

Mr. & Mrs. Oliver & the latter's sister, Chicago,

came 3:30 P.M. for half an hour. Good people.

St. cloudy after 6 P.M.

Conscientious and careful physicians allocate causes of disease to natural laws, while

the ablest scientists go back to medicine for their first principles—ARISTOTLE

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
5:15 a.m. SATURDAY: \textit{Cloudy}; \textit{SE}

To Rome Creek early to see Mr. Mitchell. Slightly improved. Stopped on way home to see Charlie Christmas wife, & at William Whitfield's to see Mrs. Fitch. Home at 10:15.

Raining lightly when I got home. It became heavier at 2:30 p.m., by 5 p.m.

Earl Fitch's girl, Geneva, 16, was brought in, 7:30 p.m., suffering from an infection in both ears.

The Lord Winston Churchill spoke tonight at 9:30 to 10:05, in New York, in behalf of his appeal for continued cooperation between the United States & Great Britain. He opposed the old vigor in this speech. Again he warned Nasser against his aggressions. For Thomas C. Babbie against his aggressions. For Thomas C. Babbie & Ambassador John F. Nirevelt. Before Churchill.

Those who work hard escape many kinds of infirmities—Pare

It is no longer an unchallenged fact that learning wanes with the passing of youth and reaches a vanishing point when ripe age begins. Thorkild found that there is a decline in learning ability shortly after the end of the second decade, but that at 50 and beyond there is still retained a considerable capacity for acquiring new knowledge and skills.
While modern science is prolonging human life, there is the burden of old age ailments linked to the extra years—heart lesions, cerebral hemorrhage, nephritis, cataract, glaucoma. The aged are unable to continue the bodily activities of youth. Eyesight becomes extremely precious, whether it is needed to gain a livelihood or lighten the shadows during the "evening of life."

In all things relating to disease, credulity remains a permanent fact, uninfluenced by civilization or education—OSLER
94:3:30.03; cloudy; NW
To Rose Creek 7 A.M. - found Mr. Mitchell no better. Very weak.
Home 9:30, a Mother. I went to town 10:15. Home 3:30 P.M. I got to town with the gasoline tank of the car almost empty. I tried to get the windshield leak fixed by Emmers Motor Co., but they failed.
A very unusual letter from Dr. Sumrall, Mississippi College alum, asking me to select a home site for him on the Mountain.

When Enrico Dandolo became Doge of Venice he was past seventy, and he held that post beyond the age of eighty. Proving that age alone is no absolute veto of unusual achievement and distinction, Dandolo at this late age commanded the Venetian fleet which stormed and captured Constantinople. (Dandolo is pictured at the left.)
The green old age of Thomas Parr was so astounding that he was invited to London by the King of England. He was then 152, had remarried at 119, and died as a result of too rich food at the Royal Court. An autopsy performed by William Harvey showed that the organs were still healthy and even the cartilages of the ribs were not yet ossified.
23 March
Saturday

6 a.m. 58; 29.89; Cloudy
Called to Read Mountain to see the Robertson's wife. She is
sick and is going to sleep. A serious miscarriage at 3½ months. Home at 7 a.m.

Light rain before dawn - 0.25 in.

To Rose Creek T:30 a.m. P. m. found Mr. Mitchell
about 11 when I saw him yesterday. I gave him
5 cc's of vitamins intramuscularly. From
there to Read Mountain, where I found the
Robertson's wife, resting comfortably. Home at 12
p.m. to find his young wife there to see me about the
Thomas place. This cost $3.50 for it.

82 Days Past
283 Days to Come

24 March
Sunday

6 a.m. 35; 29.98; Ch. rain; N.
George Hoke, Opple, came 3 p.m. to talk to
me about buying land. Because of rain, I could not
show it to him, but I drove down the road with
him past the Hunter place to let him see where it is.

Bill Nychaugen came 5 p.m. for me to go to see
Clay Yarbrough's wife. I made the trip & got home
6:30. She has an infection for which she has been
under treatment in Little Rock for the last 6 months.

A light rain throughout most of the day. About
0.25 in. by 7 P.M.

Documentary testimony of the birth of Henry Jen-
kins, a Yorkshire fisherman, is lacking, but his age
was reputedly 169 when he died in 1670. There is
strong circumstantial evidence to support this belief.
Four or five reported centenarians testified that he
was an elderly man when they were children. And
eighty years after his death a statement attesting to
his age was inscribed on a memorial.

When a disease relapses, there is no cure—CHINESE PROVERB

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
25 March
Monday
283 Days Past
282 Days to Come

5:15 AM - 54.54/81; cloudy + foggy; S
Stood to Rose Creek, 7:30 AM, in a light rain. I
found Mr. Mitchell slightly improved, but very weak.
I went up on very hard to see W.H. Robinson at
Lyle Morriste. The Robinsons was at Morriste, for me
to go to see his wife, who had miscarried at 6:30
this morning. I found her doing fairly well, but put
her on sulfa dianine. Home at 12:30.
Heard 11:30 to 2:30 PM, the opening session
of the Century Council of the WAC in New York.
This afternoon: A.S. Keeney, State W.H.C. Dept.
+ H.A. Howell, Extension forestry, wanting to bring a negro down
in July. With them was Cashon + Mrs. Hall. As a Mrs. Jones
was there.

The only scientist known to have reached the age of
102 in "full vigor" was Michel Eugene Chevreul
(1786-1889). He determined the constitution of fats
(1811) and discovered creatine (1832). At 91 he
wrote a very interesting "Histoire de la matiere" and he still lectured when well over 100 years of age.

84 Days Past
281 Days to Come

8:15 AM - 52.52/81; clear; S Fog over Valley
To Rose Creek early. Found Mr. Mitchell much improved.
Left to Round Mountain to see Mr. Thompson's
wife, found her doing satisfactorily. Home 12:30.
Back to see Mr. Mitchell at 2 PM to spend the
afternoon there. It seems that the patient can't
survive much longer. Home 5:30.
A letter from Mr. Hunter this morning. He
sent a check for $100 for making the sale of
150 axes to Beal's yard. A good friend
and a good man.

Glory is nothing more than oblivion postponed—Ramón y Cajal

February

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
27 MARCH
Wednesday

85 Days Past
280 Days to Come

5:15 A.M. 58°; 24.89; cloudy (9/10 of sky) SW.

I started on my trip to Rose Creek 7:15 A.M. Theo Robinson met me on the road and reported Rhea doing well. He paid his account, $30. He is as good a lay as I know. I found Mr. Mitchell much worse than when I left him yesterday. Home at 10:15.

Light rain began while I was on Rose Creek, became heavier at 4 P.M. 0.35 in by 6 P.M.

A letter from Robert today.

86 Days Past
279 Days to Come

MARCH
Thursday

28

8:15 A.M. 55°; 24.67; cloudy NW.

Rain all night, until 5 A.M. Began again 7 A.M. heavy to 7 A.M., 2 inches.

I started to Rose Creek 7:20 A.M. I met Billy Mitchell and Connie deKnight on the Sime Hollingsworth. Came to tell me that Mr. Mitchell died last 11 A.M. Jim Mitchell was a good man & I regret to lose him.

A telegram came by sail from S.E., 8 A.M. from Camp Atterbury, Indiana, yesterday, following his arrival there yesterday morning, saying he would be at home in a week.

Here this afternoon: Mr. Albert & Willie Belle.

Better a tried remedy than a new jangled one—Parr.

The distinguished diplomat-statesman-scientist, Benjamin Franklin, lived to be 84 years old. At 70, he was "one of the most talked about men in the world"; at 72 he was appointed American plenipotentiary to the French court; at 75 he was appointed a member of a commission to make peace with Great Britain; at 79 he became chief executive officer of Pennsylvania.
For more than forty years, Herbert Spencer knew great physical suffering. Yet he produced some of his best works during that trying period. At times he was unable to write more than a few paragraphs a day, but he persevered. Several years before his death at 83 he became practically invalided after a nervous breakdown. Yet he continued to work hard.

From Hippocrates to Hunter, the treatment of disease was one long traffic in hypotheses—OSLER

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
31 MARCH
Sunday

89 DAYS PAST
276 DAYS TO COME

6 a.m. 59; 30.09; clear; s

five this afternoon: Miss Middleton, Mr. Campbell,
Mr. & Mrs. Alcorn, Whittaker & sister, Mrs.
Whitaker (Pero Pier Band). The latter with infection
of both hands.

98 DAYS PAST
273 DAYS TO COME

1 APRIL
Monday

5:15 a.m. 64; 29.98; clear; s

The patient from New York has caught up
again this afternoon, much improved.

Sara Robertson, just out of the Navy, came
to see us tonight.

William Ewart Gladstone, English statesman, attributed his longevity to sound sleep; he locked every state
affair and every care outside of his bedroom door. In
his 89th year, he was as enthusiastic as at thirty. It was
said that no pressure of work made him fussy or
fidgety, nor did he ever become hurried. He lived a
simple life, walked a great deal, and is said to have
masticated his food many times before swallowing.

Only a charlatan will exaggerate the gravity of an insignificant ailment in order to
puff his own importance—Celsius

William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
Bill Ashcraft came for medicine for his mother this afternoon.

The alarm came tonight.

This is my 62nd birthday.

Pl. cloudy after 8 A.M.

Big eaters age early. There is too much waste to be disposed of by the intestines and intestinal decomposition and auto-intoxication occur—L. L. Nascher

**APRIL 30 DAYS T**

In the ancient Alban or Latin calendar, with ten irregular months, April came first with 36 days. It was second, with 30 days, in the calendar of Romulus; and in Numa's twelve month calendar, it was given fourth place with 29 days. Under Julius Caesar, it acquired 30 days.
April 4
Thursday

5:15 A.M. 37.30.07. Cloudy. NW

Armed umpire came for me. I am to go to see
his today. After visiting the cells, I went to town
to have more work done on the car. Mother
did not go. Home at 12:20.

Van How left a load of wood to Morillton
this morning.

Homer's "Iliad" was translated by William Cullen
Bryant at 76; the Odyssey a year later. They are reputed
to be the best classic translations produced by any
English-speaking poet. Bryant assumed editorship of
the New York Evening Post in 1828 and at the age
of 84 was still on the job. He died of a brain hemo-
rhage a few days after having delivered an oration at
the unveiling of the statue of Giuseppe Mazzini.

April 5
Friday


Harriet Dunrell's wife, Fitt North, Mrs. Ainsworth,
was, came 9 A.M. and stayed until 11:30. Dunrell is
a son of Rev. Dunrell, Clinton. Miss A. is a
pilot on the American Airlines. He is a fine
young man. He & his father are interested in band.

This afternoon: Jim Brown, Morillton, &
his father-in-law, Judge Higgson. Hope

Be eager to visit and treat the poor and needy, for no virtuous act is greater
than this — ISAAC JUDAUS

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William R. Warner & Co., Inc. — Serving Medicine Thru Research and Manufacture
6:30 a.m. 63; 29.88; cloudy; S
John & Mary arrived 12:30 a.m. from Clinton, Ohio.
We got to bed at 2:45.

Dr. & Mrs. W. H. Summell, Clinton, Miss, and
son Herbert & wife, also Mrs. Dawson, came 9 a.m., & I
spent 2 hours showing them the Hunter Land. This
afternoon & evening they went to the spring and
High Point. They are good people.

B. E. Summell & Charlie Lens,
Norsen, Miss., 8 to 9 P.M.
The Wadams were here tonight.

Ernestine Rabstock, McBride, Mrs. Munch
came 1:30 P.M.
P. cloudy after 9 A.M. Thunderstorm
9 P.M.

Oliver Wendell Holmes, the American physician-poet,
always retained his optimism and trained himself to
grow old gracefully. In one of his admirable breakfast
talks he said that he found learning was twice as easy as
in his earlier days because of the increased power of con-
tentration. "The Iron Gate," a poem written for an hon-
orary dinner on his seventieth birthday, was considered
his best effort since "The Chambered Nautilus," pro-
duced twenty years previously.
8 APRIL
Monday

6 A.M. 68° 24.78; cloudy; S.W.
We got up in a thunderstorm, with light rain 6:30 to 7:30.
Our refrigerator stopped working yesterday. I discovered it last night, & when I plugged it in this morning it started.

Mother, son & Mary left 4:15 A.M. for Melville
& Greenbrier, in our car. They got home at 4.

Mrs. Alcorn came for me 1:30 P.M. to go
to see Mr. Alcorn, who had fallen from
a ladder while working on his house.
10:30 A.M.

An outstanding example of a fruitful
old age is that of Thomas A. Edison.
During World War I, at seventy, he not
only designed, built and operated sev-
eral benzol plants but was chairman of
the Naval Advisory Board. Though
deaf, he conducted the meetings, sup-
posedly using a secret telegraphic code—
his assistant's finger tapping his knees
beneath the table.

9 APRIL
Tuesday

6 A.M. 55° 29.99; cloudy; N.E.
Out to see Mr. Alcorn 7:30 A.M. & found him resting
comfortably.

Thunderstorm flown to 1:30 P.M. 0.80 in. rain.
Rain again 3 to 7. Total for day, 1.20 in.

Chased Willie Belle Redding came tonight.

William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
10 APRIL
Wednesday

99 DAYS PAST
266 DAYS TO COME

6 AM 51° 29.75; cloudly & foggy, S

I took Mother to Graham this morning,
keeping home 9 A.M. Mother will stay at
Graham until tomorrow. I got home 3 P.M

I went over to see Mr. Alcorn when I got
there & found him resting comfortably. I went
to take him to have an X-ray or two to
have some X-ray pictures made.

11 P.M. cloudly after 9 P.M.

While I was there chopped up the sick pestables
that I brought home from the Pacific. I read aloud
to them "Mark Twain, Business Man," from the Atlantic

“The System of Surgery” by William W. Keen was written when past 70. He
underwent an operation for diverticula
of the sigmoid with resection at 73. At
a dinner celebrating his 84th birthday,
he advised, “Mix merry laughter with
earnest labor. Always have some as yet
unfinished but not too urgent job wait-
ing just outside your door. Then you
will never know ennui...”

100 DAYS PAST
265 DAYS TO COME

APRIL
Thursday 11

5:30 AM 51° 30.02; Cloudy, NW
Don & Mary left for Graham 9:45 A.M. to bring
Mother home. Home 7:15 P.M.

I worked in the yard most of the day. I went
over to see Mr. Alcorn 5:30 to 6:30.
I had planned to take him to the hospital
at Morrisons tomorrow morning for X-ray
examination, but he doesn’t want to go.

No man can be a good physician who has no knowledge of operative surgery, and a
surgeon is nothing if ignorant of medicine; a knowledge of both branches is essential
—LANFRANCHI

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture

102

103
12 APRIL
Friday

5:45 a.m. 42°; 30.31; cloudy; NW
Clear after 9 a.m.

Meant, Don & May went over to the Alcows
10:30 a.m. I found them doing satisfactorily.

Don & I mowed the upper yard by
room. Don using the power mower for
the first time. The machine worked
very well.

Don & I went to town 2:30 p.m.
\got home at 4:30. One of the tires
on the car went out yesterday on Don's
trip to Greenwood, so today I bought a
new one—the first since I bought the
car in November, 1937.

13 APRIL
Saturday

5:30 a.m. 74°; 30.24; clear; SE

Nora & Elizabeth (Taylor) Knight came over to see
us this morning & again tonight. They were married
April 6 & arrived from New Orleans last night to
spend a few days at the lodge. They will live
in Kentucky.

I went over to see the Alcows this afternoon &
found them feeling better.
6 a.m. 52; 30.06; P.m. 0°; 5
Mother, Son, Mary & I had lunch at
the lodge with Elizabeth & Doc.
Many people came this afternoon, among
them Shirley Whitaker & wife, Mike &
Brenda, with a sick baby; Hugh McRae
with others from Apple.
Elizabeth & Doc spent most of the
afternoon with us. After other visitors
left, Don played the violin for them &
us for more than an hour.

There are ghosts in a home—the spirits of sadness or joy or devotion or comradeship
that give each room its character and personality—Robert Quillen

"Reactivation" rather than "rejuvenation" was the principle that Eugene Steinach claimed for his famous
operation for aged persons. Steinach employed his own
glandular theories. He put in a full day's work and went
horseback riding at eighty. His final research efforts de-
veloped upon the isolation, purification and clinical appli-
cation of the sex hormones. His work gave particular
impetus to biochemists.
6 a.m. 46°; 29.98; St. N. rain.

The rain & electroclonic storm continued most of the night. The rainfall since noon yesterday, 6 inches, the heaviest 2½ hours rainfall in years.

Mary & Joseph Hubbard came for me 2:30 P.M. to go to Fort Monmouth again to see Hannie Hubbard & his child. I found both slightly better.

Joseph Hubbard gave me his Japanese infantry rifle as I came back by his home on Rock Creek. Treasure indeed. Joseph was wounded in the foot during the attack by a hand grenade.

Later: June 4, 1947.

5:15 a.m. 40°; 30.19; clear, N.

Mother & I went to Little Rock leaving home 7:45 a.m. & getting back 4 P.M. I had the 5:55 I. & try to get new windshield glass made waterproof. Mother got some pajamas & other garments. Took time—first since he left the company's office—to call on Governor Carl C. Bailey. I also went to the office of the Chicago Southern Air Lines & talked about our trip to Rochester, Minn.

Found a talk by Emma Goldman when we got home, which I answered.

At Jung's, in L. H. today, I bought a good chess board for Son.

A disease often gets worse after having been a little better—Han Shih

William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
5:45 a.m. 43; 30.21; clear; N.

Son & I went to town 10 a.m. June 19.

I had the car guarded while, I, 4 got cushion chairs at the Ames for $600 per set on our trip. One for $100 No. 29-284

Wm. Hubbard came for me 2 p.m. to go to see Horace Hubbard & his girl. I made the trip the way in my car & found the patients about as when I saw them last. The girl has pneumonia in right lung. Home at 5 & found a call to see Emma Bond. Home again 6:30.

Condie brought M. R. pretty calf up to the lot 6:30 p.m. It seemed to be dairly earn.

called 9 p.m. to see Ernesta & Etta McCabe.
She appeared to be near confinement. I stayed until 1 a.m. Friday. I drove Dora's car, because the lights of mine failed when I started the car.

One of the oldest Abkhazians was a man called Shas Chukbar. Though reputedly 137, he looked sixty, was vigorous and upright in bearing. Besides being an excellent carpenter, he was a musician, a dancer, and a fearless hunter. No scientific verification is as yet obtainable, but the exceptional climate of Abkhazia, wholly free from dust particles, may be a conducive factor in the long life of the inhabitants.

Small inward treasure does he possess who, to feel alive, needs every hour the tumult of the street, the emotion of the theatre and the small talk of society—RAMÓN Y CAJAL

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
20 April Saturday

6:41 am 57; 30:12; Clear; S; Full moon. After rain.

The lightning struck on the power-line pole at
the front of the yard burned out #1 wire & hit
the pole & the leaves on the ground. Sen.
sent to Apple to telephone the Light Company.

A new came out at once & took the defective

cord off.

Mr. Hubbell came from Round Mountain.

2 O'clock report the patient was much

better.

Nurse Morris came 3:30 pm for me to

go to see Emma. I found her doing all

right. I think she is not as worried over our trip to the Mayo Clinic

than about Emma. I want me to go over

& reassure them about it.

Miss P. & Mr. McNamara came 6 PM.

110 Days Past
255 Days to Come

5:30 am 60; 30:18; H. cloudy; S E

Mary back today, among them Wilfred, wife,

Vera, Jim, the letter with an infected tooth.

Dr. Keppie & George. Mrs. & Mrs. Alexander.

The start of our car hung this morning

when Don & I tried to start it. Don

pushed the car down the road with his car

but it failed to start. We got you want

to come up & fix it.

Clara's state had 3 kids at noon—two
dogs & a cat.

Don & Mary are going to take us to Little Fox
tonight, where we are to take a plane at

12:30, for Rochester, Minnesota, where Mother
will visit the Mayo Clinic for examination.

Evelyn & Bryant and Melba & Melby came

by plane. Virginia & Melba here.

One of literature's best-known old men is
Father William, described in Lewis Carroll's "Alice in Wonderland":

"You are old, Father William," the young man said,
"And your hair is becoming very white,
But you incessantly stand on your head—
Do you think, at your age, it is right?"

"In my youth," Father William replied to his son,
"I feared it might injure the brain;
But now that I'm perfectly sure I have none,
Why, I do it again and again!"
PLASTIC SURGERY — PAST AND PRESENT
An ancient art, plastic surgery is a relatively young specialty. In its formative stages, it dealt mainly with rhinoplasty; now it embraces even the most extensive and delicate of plastic operations. The Hindu method of rhinoplasty was revived in sixteenth century Europe by the Renaissance surgeons, then lay dormant again until the middle of the nineteenth century. Since then, this art has gained impetus by the impact of several major wars, as well as by industrial mechanization and rapid transportation. Basically, the principles employed in reconstructive surgery are those of the Hindus but great progress has been made in the simplification and standardization of techniques.
24 APRIL
Wednesday

7:30 AM 56° 28'-91 Karl S wind.

Concert was at 3:00 this afternoon and
future rain as will come at 7:30 PM
later time and is going to rain at about 11:00 AM.

Mary and I are out to lodge at 7:00 PM
and sea to come, V played and
were home by 11:00 PM.

113 DAYS PAST
252 DAYS TO COME

114 DAYS PAST
251 DAYS TO COME

25 APRIL
Thursday

6:30 AM 56° 28'-91 NW wind.

Mary went to the concert with us and was
through the concert quite well.

2:30 PM 114 AM 29'-91 Wind.

Mary went out a thorough cleaning
and we went to bed the same day.

We went to the concert for the first
time since the 2nd and took a picture.

The sage does not treat those who are ill, but those who are well—SU WEN

MARCH

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
6:30 AM 55° 29-99 N breeze. Concert came 7:00 this morning.

Dad & chums
11:00 AM - arrived from Daddy, and Uncle & I have talked with. We will go to Washington to meet Daddy at 9:44. We will leave here about 9:00.

Record of the trip to the Mayo Clinic is appended below to next page. The weather was good the whole time - mild & clear.

One Indian potentate, a king of Ghoorka, decided to give constant reminder of his power to the inhabitants of a captured hostile city. He ordered cutting off the noses of all excepting infants and, undoubtedly in deference to a personal whim, adults who played wind instruments. After this edict had been carried out, it was aptly renamed, "The City of Cut Noses."
Monday, April 22. Mother and I took a Chicago and Southern Air Lines plane at Little Rock, 2:45 A. M., for Chicago on the first leg of our trip to Rochester, Minn. Son and Mary took us down to L. R. and waited with us for the plane, which was two hours late. We arrived Chicago 7:15 A. M., missing the Northwestern Airlines Rochester plane on which we had reservations. Two passengers (unidentified doctors) who had reservations on the next plane, leaving Chicago 9:45 A. M., gave us their seats and took a later plane—a kindness we greatly appreciated. We reached Rochester 11:45. The flight from L. R. to C. was smooth, that from C. to R. rough, but we enjoyed it all the way. At Hotel Kahler we couldn't get our room until 5 P. M. We went to the Mayo Clinic 1:30, registered, and Mother's examinations were begun. We got back to the hotel 5:30 and were taken up to our room, No. 401, which was clean, quiet and comfortable.

Tuesday, April 23. Today was devoted to laboratory tests (clinical, blood, X-ray, etc.) and further physical examinations.

Wednesday, April 24. A nurse came to our hotel room 6:30 A. M. and prepared Mother for a proctoscopic examination, which was made at the Clinic at 8:30. At 10 Mother went to the dental section for further examination. She fainted there at 11. I was called, a wheelchair was brought in, and Mother was taken to our hotel room through the tunnel. We had lunch in our room, and Mother was able to go back to the Clinic for a final consultation at 2 P. M. The consultants present were Dr. D. M. Berkman, Dr. McCready, Dr. Prickman and Dr. Vaughn. They told us that the clinical and laboratory findings were negative, and that Mother's condition was apparently due to lack of rest and relaxation, to over-exertion, and to lowered resistance to fatigue. Dr. Berkman, who was in charge, talked at length with us about our life, its demands on us, and the difficulty of doing much to remedy the situation without taking drastic steps. He and the others expressed themselves as believing strongly that we ought to obtain as much relief
as possible from the wearying and time-consuming activities to which we are subjected and which have no connection with the practice of medicine.

Thursday, April 25. I went shopping with Mother this morning. She found a pretty, rose-colored linen dress at Stevenson’s. We bought a box of candy for Mary and tried unsuccessfully to find a good chess set for Son. No plane reservations being available until next week, we took a Pullman on the Chicago and Great Western Railroad at 5:30 P. M. for Kansas City.

Friday, April 26. We arrived at Kansas City 7:30 A. M. At the Union Station I found a combination hygrometer-thermometer for Son. We left 8:45 by Missouri Pacific for Morrilton, where we arrived 9:45 P. M. There was no sleeper on the train, but we got chairs in the parlor car, where Mother was comparatively comfortable. Son and Mary met us at the station and we got home at 10:30.

At the Mayo Clinic we saw a great work; probably the greatest in the world.
wind instruments. After this edict had been carried out, it was aptly renamed, "The City of Cut Noses."
6:10 AM 47° 29.91'; clear; W

Here this morning: John Tread Hatcher & wife, Louis Tread & wife, Tom Harris, wife & children, P. K. Arm & Margaret. Here this afternoon: Tom Hanch & wife, Forest Neas & wife, R. C. Reynolds & Margaret, the Alcorns, Ronnie Ashcroft & th, Billy Mitchell, Mrs. Farm, Ernest others.

Robert McHenry, wife & boy, came 11:30 AM or Dan & Marj's guests for the day & went to the lodge for dinner.

People here from 10 AM to 7 PM almost constantly.

---

7:46 AM 63° 29.95°; rain; SE

Thunderstorm with rain began 7 AM.

Albert Moore came for examination 2 PM.

Rained all day - 1.50 in. by 7 PM.

Charles Reddick, police informant, came 5 PM & reported the water filters at CCC camps had been damaged by vandals.

---

When you treat a disease, first treat the mind—CHEN JEN

---

The possibility of tissue transplantation and grafting aroused compelling interest among laymen and artists alike. A well-known painting is that of the Florentine artist, Fra Angelico, which concerns Cosmas and Damian, the most popular of all medical saints. In it, the brothers are shown replacing the amputated leg of a white man with that from a deceased Moor.
30 APRIL
Tuesday

6 a.m. 58°; 24.8% cloud. SE
been last night. 0.15 m. Total in last 24 hours, 1.75 in.
been o. they went to Conway. 10th to do
Mrs. Charles guest at a recital tonight.

120 DAYS PAST
246 DAYS TO COME

MAY
Wednesday

6 a.m. 60°; 24.8%; cloudy; SE
been & they returned at noon from Conway, where
been & trying to make arrangements to enter the
Hendrix women's school.

A girl named Howard, from 10 Gage Ave.,
5 a day from Conway, named Lineberger,
were drowned in the Lake, in the Park, about
2 o'clock. I went over to the best house
at 5.
Dr. cloudy this afternoon.

The difference between a clever man and a dull fellow is that the former has a set of finer lenses and perceiving apparatus by which he gets a sharper image of things and retains it longer—LIN YUTANG

An early writer on plastic surgery was Aurelius Cornelius Celsus, especially on that of the nose and other parts of the head. His procedure was to use the skin of neighboring parts. This innovator, first to recommend plastic operations on eyelids, wrote, "When the loss of substance of the nose, lips or ears is not very great, one can repair it."
MAY

2

Thursday

64° in 60°; 29.91; cloudy; fro7914; s
Thunderstorm 11 A.M.; Light rain.
Another more violent storm came up
5:30 P.M.

5:30 A.M.; 58; 29.80; cloudy; NW
Rain yesterday & last night. .75 in.
Pt. cloudy after 8 A.M.
Mrs. Halden & Miss Halden, Mrs. Robb
(‘Joe’), Mr. Franco, came 9 A.M.
Mrs. H. Hefner, Monroe, came for reception
for the latter. At noon Mr. & Mrs. L. Hefner,
Morrison, just out of the Marine Corps, came to apply for the
more consideration. I gave them a letter
for Helena approving their application.
Mrs. Hefner, Mr. Boren & several children
came to lunch, while Son was playing his
violin. They spent in the yard listening
for some time before we did count them.

3

Friday

I began giving Author Broadcasts in
1:30 A.M. for 2 days cold she has taken.

You can remove the trouble, if you know the cause—MO Tzu

MAY

31 DAYS

May was the second month and had
21 days in the Alban calendar; it
was third and had 31 days in that
of Romulus; it was fourth and had 30 days in
Numa’s calendar, the odd day being restored
by Julius Caesar.

Jean Mitchell & wife came 9 A.M. with
Laura Askraft & wife. Mr. Mitchell is one
of the best men in the country & has
given me many fossils & Indian artifacts.
I showed him my collections & went with him
to the cave.

This afternoon: Mrs. Mitchell — Ed's wife, Henry
Bob & June — body; May material.
I went to the field 6 P.M. to see Mrs. Mitchell
find her chest.

Mother's temperature 101 this afternoon. Too much
company. I consider giving her penicillin, but she
prefers to wait until tomorrow.

When Justinian II, the great Byzantine emperor,
lost his nose in battle, he sought the services of a
surgeon who could reconstruct it. A marble head
of the emperor was made to commemorate the
event. As can be seen from the sketch, this
attempt at nose reconstruction was not very
esthetic, though it may have been serviceable.
5:30 A.M. 88; 24.9°; Cloudy; SE

Storm remained about as yesterday. Highest
Temperature today 100.4.

Don and Mary went to Corning 11:30.4 a.m. got
there 6 P.M. They arranged to rent a trailer
on the Towanda Camp for the Pennan school.

Aunt Neal was twice this afternoon to
talk to me about buying the Episcopal
Church land on High Point.

L. K. Wolfe came 3 P.M. reported
his wife doing better, and said he
wished him home (Melville) tomorrow.

6:30 A.M. 57; 24.9°; Cloudly
Rain in night 0.01 in. At least after 10 A.M.
I gave mother 414/2 in. until 12:30
Last night until 4:30 Last
tight - = 2 hours. This morning the temperature is
57°. At 1 P.M. it is 98.4. Deterioration.
I went to town at noon. Home at 3 P.M.
Wolfe came by with his wife at 2 P.M. as they
were leaving for home. The patient doing
very well.

How forcible are right words—job

In his Chirurgia magna, Lanfranchi of
Milan mentions an instance in which a
completely detached nose was affixed to
the wound and healed. Nevertheless
he did not give credence to the story.
In his opinion, this plastic feat was impossible "because the spirit which
sides over life, nutrition and motion is
instantly removed from that part which
is separated from the body."
8 MAY
Wednesday
S a m 45; 30.13; Clean; NW
S q u i v e r left for Celina, Ohio, 10:30 a.m.
Vane Vint moved the tenant house from our place
up to Dr. Reynolds' place today. Dr. Reynolds has
paid $100 of the $500 I agreed to sell the land
for.

9 MAY
Thursday
6:30 a.m. 59; 30.05; Pt. cloudy; S
Cloudy thunderstorm came up at night from west, put
the pump out, but not the house lights. Rotten rain.
I worked in the yard with the plow, getting it
ready to use the power mower.

Rhinoplasty, referred to in the Indian
Susruta, found no further mention until
the age of the Italian empiric surgeons.
The Sicilian Branca family seemed to
have rediscovered this technique, pre-
ceding Tagliacozzi. But it was the latter
who first publicized rhinoplasty pro-
cedures from the upper arm. Artificial
noses, as illustrated, from wood or
metal were also used by Tagliacozzi.

Mediocre men, perhaps to console themselves, often ridicule the man of genius for
extravagances and even for lunacies—RAMÓN Y CAJAL
5:15 AM 59; 29.98; Cloudy; S
Rain last night 0.15 in.

I worked with the power mower this morning until John Elly came for examination 11 AM. He had heart.

In light rain, which began at noon, I moved the yard one hour this afternoon, but had to stop before I finished it.

You first came for medicine for Mr. Decker 5:30 PM.

A dirty cook gives diarrhoea quicker than rhubarb—TUNG-SU PAI

Another Italian family, to whom the art of restoring noses was attributed, was the Vianco family. They detached a flap from the arm, cut it in the form of a nose and applied it to the stump on the face. The arm was so taped to the head that the two wounds were applied one to the other. Then, when union was perfect, they cut away the skin from the arm necessary to form a new nose.
12 MAY
Sunday

A.M.: 93; 29.96; clear; N.W.

V. F. Kantz came early to bring us in. The
P. Reynolds came for me about 1 P.M. Benning
& Willard Newland came 1:30 to 2:30. Lorine &
Cassie Ashcroft, with Lenth & Jane Whitman,
came at 3.

Mr. Bracken gave me a check for $100
on his house, making $200 he has paid
of the $500.

Leonard Simmons came 7:30 P.M. for
Messianism. Paid in lumber account of

No had fire in both living room & dining room
all day.

13 MAY
Monday

A.M.: 52; 29.91; cloudy; E.

Rain last night, 6.20 in. Drizzle this
afternoon.

Gasparo Tagliacozzi (1549-1599) has been
justly called the "Father of Plastic Surgery."
His work "De curtorum chirurgia" was the
first dealing exclusively with replacement or
repair of missing noses, ears and lips. In the
initial twenty-four chapters, the author dis-
cussed the various parts of the face, their in-
jury by illness or accident, and the methods
for replacement. The second part was con-
cerned with the nourishment of the patient.

Diminished gastric acidity and lessened irritability cause the aged to prefer acid and
sharp foods and reject alkaline and insipid foods—L. NASCHER

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William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
6:30 A.M. 60° 29.90; cloudy; SE

We got up in a chamber that was warm, and it was very damp in the morning. Lighting struck very near us at 6:40 and blew out a fuse in the wall. The second time this has occurred in the last five days. I got word to Prung, v a car came up at 7:00 and put a new lighting fixture on the transformer in place of the one that burned up a month ago. The rain continued all day. 0.75 in. by 6:00 P.M.

Quiet the patient and bring him glad tidings of his recovery even if you are not certain of it, for in this way you will strengthen his natural forces—Isaac Judeus

A great number of copper engravings in Tagliacozzi accompany the description of rhinoplastic operations. One of them shows the primary stage of the nose replacement operation. The cartilaginous portion of the patient's nose has been removed. A rectangular skin flap has been cut from the upper left arm which will be transplanted onto the stump of the nose.
16. MAY
Thursday
230 DAYS TO COME

5:15. Am 56°; 24.82; Pt. cloudy; NW

Leaving home 8:15 a.m. Mother & I went to town to have some of her teeth filled — the first trip for her since we came home from the Mayo Clinic. Home 1:30 p.m.

Henry, C. Hedges, his children, & Mr. & Mrs. Elg, came 3:30 p.m. for report of John Elg’s pyloroplasty, on their way home from town. They arrive here tonight.

Thunderstorm came up from the west 6 p.m., but we had no rain.

I can see no other reason for the existence of art and poetry and religion except as they tend to restore in us a freshness of vision and a more emotional glamour and more vital sense of life — LIN YUTANG

To facilitate undisturbed healing of the nose, the patient was swathed in bandages that kept the arm in a set position. These bandages were fastened securely to a sort of jacket and cap that the patient wore. Not until ultimate healing of the skin flap with the nasal stump had taken place were these bandages removed. (Taken from another Tagliacozzi illustration.)
18 MAY Saturday

Laid & McCormick, Mississippi, came 8 a.m. to talk about plans for their 400 acre camp fire in July. Mother in bed today.

228 DAYS TO COME

137 DAYS PAST

19 MAY Sunday

Times, in night, 0.20 in. Thunderstorm 8 a.m.

Laid & McCormick came by 8:30 a.m. as they were leaving for Jackson, Miss. Bill Chambers came 8:45 a.m., starting to the Spring, but turned back because of the rain. He brought us two chickens, one dead, the other alive.

Mr. & Mrs. Newsome came 3 o'clock until 5. Forrest & Ledges Nursery came 5 to 6. Ledges is going to operate the stone concession in the Park.

Showers throughout the day. 0.60 in. by 7 p.m.

Mathematical exactitude worries only a petty soul—LIN YUTANG

In this illustration, Tagliacozzi demonstrated an advanced stage of treatment in rhinoplasty. Transplantation had progressed sufficiently to dispense with the extremely uncomfortable bandaging. A simple bandage sufficed to hold the skin transplantation safely in position. Such procedures were employed when the nose was destroyed either by injury or illness.
20 MAY
Monday

5:15 AM, 56°, 29.84/H, cloudy. 

Rain & thunderstorm continue most of night. Rain 1.20 in.

Put cloudy. Fine afternoon.

Ruth Thomas came with her guest, Mrs. Nicks from Chicago, 10 AM. Stayed until 11:45. They went to the lodge.

140 DAYS PAST
225 DAYS TO COME

21 MAY
Tuesday

6 AM, 52°, 30.06/H, clear. NW

Ben Thomas & Mrs. Nicks came by again 11:20 AM, as they were starting back to Little Rock.

Mother & I walked over to see the Allcombs. I came back in a short while. Mother stood longer.

As thy days, so shall thy strength be—Deuteronomy

Still another illustration shows a final phase in nose replacement by means of implantation of a skin flap from the upper arm. The arm wound has already scarred and contracted somewhat. The transplanted skin flap is united completely with the remaining portion of the nose, making unnecessary any bandaging aid. Tagliacozzi described his methods in a strictly scientific manner.
22 MAY
Wednesday

141 Days Past
224 Days to Come

5:15 A m 54: 30.08; P. cloudy: s

Mary and Myers, Rose Creek, came for me 9:30 A m
to go to see his 18 year old boy. Weather & pneumonia
sick 10 days. Died and at 5:15 A m Stanley, Simpson,
later at Hunt, Ola. Home 12:30, after several stops
on the creek to speak to friends. Jean Mitchell gave
me an Indian artifact. Edie Mitchell gave
me cabbages & onions. I saw Joseph Hubbard.

John Elg came for examination 1 p m. Before
he left, Mr. Vale & Mrs. Adcock came & stayed
until 3:30.

Grafting is applicable only between mem-
ers of the same or closely related species,
and the grafted twig or branch must be
so implanted that its nutritive vessels
 correspond with those of the tree or other
plant receiving it. This conception was
well understood by Tagliacozzi. The il-
illustration taken from a plate in his treat-
tise depicts the relationship of vegetable
to animal grafts.

142 Days Past
223 Days to Come

MAY
Thursday

23

6:15 A m 51: 19.87; rain: SE

Thunderstorm & rain began at 3:30. I
left for town 8:30 A m for an appointment with
Mr. Carnahan. Mother had 3 teeth filled. I bought two
boards for $0.05 each. It rained all morning. The harvest
were here in time to
left Hamilton with us reached home 11:30 A m.

I made my trip to Rose Creek in spite of the rain.

Bad news. 1:30 to 5 P M. v friend the
Moore big better. Two other cases of measles
developed four

Rain fell here, to noon, 2.75 in.

All railroads in the country were tied up
this afternoon by a strike.

All that a man hath, will he give for his life—Job

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
6 A.M. 70: 29.86. Rain. 5.
Some may arrive from Celina, Ohio, 10 a.m.
They left Fort Wayne 10 a.m. Wednesday, stopped
for sleep at Lawrenceville, 30; that night, drove
without rest on sleep from 9 a.m. Thursday.
I went to Miss Murphy's 3 P.M. to see
Uncle Isley Keit, who was 92 last January for
had lived two years after a stroke of apoplexy.
Joy & shrillest sound of joy. Thunderstorm
came up from the west tonight at 8.

6 A.M. 63; 29.88. Cloudy; 5
Thunderstorm lasted most of night. 0.50 in. rain.
I went to town, alone, 9 a.m., to get Ellis
Cook's copy of congress to carry up next Monday
evening the Hunter land—end of June is time,
and home lives on the spring tract.
We hear President Truman speak to Congress
3 P.M. & ask for labor legislation. He
announced during his address that the
railroad strike had been settled,
Richard Dennis, Charles Anderson, Pat
brought & girl, Jimmy M. Roberts, Little Rose.
One from the Dennis place, 9:10 tonight, suffering
with pain in left jaw.
Mr. Kemp & George came 6:30 P.M.

Weeping may endure for a night, but joy cometh in the morning—PSALMS. XXX, 5

When mutilation of the nose was used
punishment for various criminal offenses—being considered simpler and
cheaper than a jail term—there sprang
into existence the unethical surgeon.
These men, whose methods were often
 crude and brutal, operated in hovels;
Filth was rampant; cleanliness was
known and unsought.
On the oldest and most effective methods of plastic surgery in correcting harelips was described by Paré in the sixteenth century. A needle with wax thread was thrust through the lips of the wound and left there. The thread was wrapped over the ends of the needle eight or ten times in crisscross figure-of-eight fashion. Not until perfect union of the wound had been achieved was the needle removed.

He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city—Proverbs, xv, 32

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William R. Warner & Co., Inc.—Serving Medicine Through Research and Manufacture
28 MAY
Tuesday

64 m 57; 30; clear; S
Ray Myers came for me 7 Am to go to see his
mother & 2 brothers on Rose Creek. I found the
patients about as yesterday. Homc 10:30.

148 DAYS PAST
217 DAYS TO COME

118 Days Past
217 Days to Come

29 MAY
Wednesday

64 m 62; 29.98; cloudy; S
I made my call to Rose Creek 8 to 10 Am & found
the Myers family all better. A trace of rain while I
made the trip.

Charles Keene & wife, Rose Creek, brought
their 2-year-old girl for examination.
7 P.M.

Where your treasure is, there will your heart be also—Matthew

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The noses of slaves were appropriated to
substitute for the lost members of their
superiors. Nicolas de Blemy (1679) knew
of an instance where a slave was bought for
this purpose, but he considered the story
very dubious. Some writers thought it neces-
sary to force the stump of the nose into an
incision made in the arm of the patient.
When union had taken place, a flap of
tissue was cut and shaped over the nose.
30 MAY
Thursday

54 in 62; 24.8 N; cloudy SE

Mother & I went to town 8:30 am for an appointment with Dr. Dent. Home at 11:45.

Henry & Muriel Jones' 18 month old baby was buried on the Mountain & M, & I went to the cemetery, getting there just as the people were leaving. The baby died in Little Rock.

Uncle Neil came 3 PM (before I went to the cemetery) to talk with me about destroying the curving of the timber we sold them.

The Tagliacozzi method of nose reconstruction was sometimes considered as much a form of punishment as the loss of the nose itself. A celebrated jurist, Paul Zachias (1688), announced that a malefactor who was condemned to lose his nose could have it legally restored by the Tagliacozzi method because of the time and pain it involved.
Today 61; 29.79; cloudy. At
the afternoon Nellie Belle brought her
examination. Found a tooth infection (he with an
infected finger). The Reynolds and tonight
the Allmans.

1:30 P.M. 0.25 in rain.

We saw beauty in the western sky early
tonight (7 P.M.), with a brilliant star,
probably Jupiter, very close to the moon
which was near only two days ago. The
son, Mary - it looked at it together.
5:30 A.M. 51° 30.19; cloudy; N.
This is the lowest temperature we have ever had in June. Trace of rain last night.

Don & Mary left for Conway at 12:10 P.M.
Don will enter the Hendrix Summer School tomorrow. They will live in a trailer on the campus.

5:15 A.M. 52° 30.24; clear; N

Katie Belle Paddie came for treatment at 7 P.M.

Don & Mary came up from Conway 4:30 P.M., had supper with us, loaded their car with milk, butter, eggs & other things. Mother gave them, and left for Conway at 8:30 tonight.

Van Vint came at 7:30 P.M. for medicine for Ms. Ashcraft.

Attempts at reconstructive surgery were at one time maliciously caricatured. But today the wide sphere for plastic surgery is firmly recognized. Not only is it considered imperative for war casualties and victims of industrial or transportation accidents, but for those who are afflicted with congenital defect or physical imperfection. Many an inferiority complex has disappeared with the correction of a featural defect.

The desire for fame is of two kinds: to seek it as an end or to use it as a means—Ramón y Cajal

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William R. Warner & Co., Inc.—Serving Medicine Today Research and Manufacture
A curious tale is told by Sancassani in the early eighteenth century. A woman street vendor, to demonstrate the healing powers of her salve, cut off a piece of skin from her leg and placed it on a plate. She allowed the onlookers to examine it. Then, replacing it on the leg, she covered the area with the salve. The story goes that the flesh united so perfectly as to leave barely discernible marks on the skin.

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William R. Warner & Co., Inc.—Serving Medicine Through Research and Manufacture
JUNE
Friday
4:30 am 63; 30.02; clear; s
Dr. Kemp & Young came over 2 PM.
They came up from Conway this morning for the dance.
I went to town at noon. Home 1:30.

JUNE
Saturday
8

54 n 69:30.03; cloudy; s
I cut grass in the yard with the blade all
morning - as I have the last few days - but didn't
finish it.

This afternoon: Jack & Bill & the ladies. Jack
for entertainment. Buccaneer & Phillips &
Frances & John, who is better. Frances & Caro Hanley
& children & others; Dr. Kemp; Dr. Hopkins & August.

Saw from Mary came by 3:30 PM.

Vincent & wife & Ruth came 7:30 AM on a
way to Sperry to settle with them for Greenville, Miss.

Spring is the natural frame of mind of heaven; autumn is one of
its changing moods — CHANG CH'AO

In the beginning of the eighteenth century, Charles Musitanus voiced the
conviction that a nose made from the arm would adhere to the face. He told
a story of a dueling gallant who had a new nose affixed by the Tagliacozzian method and
who hesitated to blow it for fear it would fall off. To prove his fear groundless,
the surgeon seized him by his new nose
and pulled him around the room.
June 9

Sunday

A.M. 67° 20.17; P.M. 68. Cloudy; S.

Leverone Hour came 8:30 Am. to me to go to see his mother. Mrs. John M. Ich, & Leona Rothwell. A serious condition. I took formal Neathair with me. Home at 11:15.

Near this afternoon: Mrs. Ich, Mr. Reynolds, Margaret A. Helen (7 to 8 P.M.);attered, Mr. J. John, children of John James.

Went up to Mrs. Conley, with her, 7:30 P.M.

Left for Conway 7:15 P.M.

It is more excusable for a physician to fail in acute than in chronic diseases—Celsius

In 1794, the British East India Company brought back to England reports of the Hindu method of rhinoplasty similar to that Indian version. A bullock driver who became a prisoner of war had his nose cut off. For about two months he had no nose, after which a Mahratta surgeon put on a new one. The result was entirely satisfactory.
With the advance of general surgery at the beginning of the nineteenth century, plastic repair came in for its share of attention. This art first became known to European surgeons by a letter to the Gentleman's Journal in 1794. One London physician who put the theory to practical test was Joseph Constantine Carpue. He performed the operation in 1814, and in 1816 described "Two Successful Operations for Restoring a Lost Nose."
With the work of the Swiss surgeon, Jacques-Louis Reverdin (1842-1929), the forgotten art of plastic surgery as practiced by the Branca and Tagliacozzi was revived. The modern theory and practice of skin grafting is based upon his “greffe epidermique.” When he described his procedure in 1869, it first met with skepticism. A later description modified the cutting of the purely epidermic graft to include a thin layer of corium.
15 JUNE  Saturday
5:20 A.M. 71; 20:14; Pt. cloudy; S
Joseph Hubbard brought their baby this morning. Board arrangements.
Joseph Hubbard, Jose Cruz, came 2:30 to pay
vocational greeting. Person from Oca, through his
Robert John came over to thank with Joseph.
Gano Chiu Carly came 4 P.M. By better train a
week ago.

Many others here, including Mr. Carmichael
Teach College, Conway, with three from Stetson
his wife & sister. Grain is a nephew of Kat Grif

To Louis X. E. L. Ollier (1830–1900) goes credit for
improving upon the efforts of Reverdin and of being
prior to the so-called "Thiersch method of grafting.
He initiated the use of larger skin grafts, including not
only superficial layers of the skin but part of the derma.
The method proved easy and rapid, requiring only one
operation to cover a large area and lessening the hazards
of infection by using a single transfer.

16 JUNE  Sunday
6 A.M. 71; 30:12; clear; S
I was called 11:45 last night to the scene of an
accident. Just this side of the store, in which four
boys were injured (King, Long, other names I don't
know, but from Trangville). I dressed their injuries
(More serious) at 1:15.

I went with the Taylor family to Rose Creek 10 a.m.
He stepped at Joseph Hubbard, Ollie Robinson's, o went
on to the top of the mountain above the Cove, then
we climbed up on top of one of the beautiful
finger-like rocks. Home at 12:15.

Mr. Taylor & Katherine left for Greenville this
afternoon. Mother & I had supper with Mr. Taylor.
To the boys tonight.

Medicines are nothing in themselves, if not properly used, but the very hands of
the gods, if employed with reason and prudence—HEROPHILUS

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The work of Ollier and Thiersch, though retaining some of the drawbacks of Reverdin's technique, brought reconstructive surgery another step forward. In 1875, with the work of John Reisberg Wolfe and of Fedor Krause, in 1893, this method was further improved. The full thickness or Krause-Wolfe graft, which includes all layers of the skin down to the subcutaneous tissues, is beneficial in deep, gaping wounds. (Portrait—Wolfe)
I began 10 a.m. examining the students of the Red Cross Aquatic School. Took 2 hours 45 minutes (6:15 to 8:45) and finally stopped 11:15 a.m. After leaving 100. At 8 p.m. we (also the Taylor boys) heard the broadcast of the fight in which Joe Louis knocked out Billy Conn in 8th round, in New York.

6:15 a.m. 6:30 a.m. Cloudy. NW. Thunderstorm 3 p.m. Rainfall 1.02 in.

Began 8 a.m. examining the Red Cross group. Finished at 10 a.m. Back 9:30 for sick case. Examined a few more who had come in.

I was called to Rose Ave. 2 p.m. to see Joseph Hebbard, who was delirious following a chill that began 9 a.m. High fever, macular rash in the face. Cut him an inhaler. Diagnosed typhoid fever. Found several people. Outbreak. Home 4:30 for several days. People line-up, including the famous Bynum Miller (St. Louis) came before night.

Mother went with Mrs. Taylor to the layers on a picnic, 6:30 p.m., to the Blue House.

In general, sincere opinions are expressed only in small and intimate circles. With a theatre and gallery, we are all, to some extent, play actors—RAMÓN Y CAJAL.
21 JUNE  
Friday

6:30:11 a.m.  Clear.
Mother left with Mrs. Taylor to meet 12:30.

I went to the beach for my daily visit at
the Red Cross Athletic School 1 P.M.

171 DAYS PAST  
194 DAYS TO COME

22 JUNE  
Saturday

6 a.m. 6:21.  Clear.
To the Red Cross School 1 P.M. as usual.

Then to call on Mrs. Durrell at the
Newtown cabin at 2.  Back to the Red Cross
school 3:30 for pictures on the Ralph Newtown
Beach.

Son & Mary came 5 P.M.
Mary left after that, including the Taylors, who
thought it warm and left at the
same time.  Whiteman came from the
beach 7 P.M. for treatment of burned hand.

The future demand for plastic surgeons
will be great.  World War II has
accelerated developments in plastic repair
work, advancements which will benefit
airmen whose faces have become dis-
figured in bailing out of burning planes
or in crashes.  Civilians, too, will need
the skilled efforts of the plastic surgeons
for thousands of persons are mutilated
each year by accident or fire.
23 JUNE
Sunday

5:16 a.m. 65°. 30.20°. clear. S
I finished mowing the yard this morning (which I began late yesterday afternoon, after putting new turf on the power mower).
Called to Rose Creek 10 a.m. to see
Mrs. John Till again. Robert went with
us and enjoyed the trip. I found Mrs.
Till (a delicate—depressed) much more
than two weeks ago. Home at 12:30, had a
turkey lunch and modern one-o'clock call at the
Red Cross School. From there to see Emma
Berkad & home 2:10. Mother, Mary & I
had dinner with Mrs. Taylor at 1:30.
Laid S Adler & wife & many others came
this afternoon.
Mother went with Mrs. Taylor & the children
on a picnic & home at 8:15.

Don & Mary left for Conway 7:45 a.m.

24 JUNE
Monday

6:47 a.m. 69°. 30.10°. clear. S
I made my call at the Red Cross School
12 M. Everything all right.
This morning I went with Dr. & Mrs.
Demerle to inspect the land they are buying.

A working man has no time to be an early case of pulmonary
tuberculosis—Sir James Kingston Fowler
64 m 70; 29.99; clear; S
7H. clearly after 7 am.
I went to the Red Cross School 9 am to
see Carol Owen’s x William’s first aid
To School again for lunch call 1Pm
Home 2:30. Spoke Joseph Hubbard &
Calvin Cody. Here Joseph is doing better.
But I am going to send him down to Veterans
Admission for examination.

50 Pm in 62; 30.01; pt. already; NW
Thundery rest of night. Rain 0.90 in.
I made my call to Red Cross 1 Pm.
Many of the faculty of the School
were out to see place 1 Pm. It is
remarkable that way men in the young,
about 45 were there. I went to the
School & 3 Pm I talked about the
Mountain, as I do every year. Home 10:30.
Three are more fine men in this
School.

Real need came 3 Pm. to talk with
us about extending time for cutting own timber

Face lifting is the simplest of all cosmetic procedures. Involving only the
cutaneous layer, nerves and large blood vessels are not affected. Since there is
no alteration of inherent facial contours, the term "face lifting" is not scientifi
cally correct. Redundant tissue alone is removed and this restores some
of the charm of youth by reestablishing former skin firmness.

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WILLIAM E. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
27 June

Thursday

I left 6:17; 30.01; clearly: S

Robert & I went to town 8:30 a.m. & got home at 10:15.

This afternoon, after my Red Cross call, I stopped to see Dr. & Mrs. Dunnell, at the Newtint place. I delivered the check for the 33.44 % tax they owe. I saw how the old John Morris place. Mr. Dunnell gave me a check for $167.25. I also sold him the old homestead for the same land for $25.

I called 4 P.M. to see Herman Robinson & his wife on Rose Lane. Both have measles, Mother pneumonia. Home at 11:45.

Many Red Cross students & faculty members came again 7 P.M. -- perhaps 50 or more.

6 a.m. 6:45; 30.06; cloudy: S

Robert went with me to Rose Creek 9 a.m. to see the patients at Herman Robinson. The mother, baby, both sickly bittets. Eliza Robinson, father of Herman, gave Robert some very good Indian artifacts. Home at 11:30.

To the Red Cross school 1 P.M. Home at 2:30 & found Dan & Mary here.

They left for Conway 5 P.M.

Dr. & Mrs. Dunnell, Mr. & Mrs. Taylor & children came tonight.

He who cannot classify diseases as to genera and species will be deceived as to therapeutic indications — CALEN

Cosmetic surgery cannot be expected to create structures absolutely indistinguishable from those of nature. Facial expression may be lost or skin grafted onto the face from other parts of the body may present differences. Yet restorative surgery can be remarkably effective. Two World War I doctors examined a British soldier for physical defects, all overlooking the fact that he had a rubber nose.
To the Red Cross Hospital 7:30 A.M.
Saw two patients just as they were ready to leave for their homes. This has been a good
time for a good school & a good group of men & women.

I went from the Park to Rose Court to see my patients at Herman Robinson's.

Lettie showed since yesterday. Home at 11.

The thunderstorm came up 12:15 P.M.

Mr. & Mrs. Taylor & the children came for
the afternoon.

Mother suffers greatly from a fractured rib
which occurred a week ago arising in the trip to
Youngstown with Mr. Taylor.

5:45 A.M. 69°, 240°, 43°; Partially cloudy; S
Gale followed by fog.

To Herman Robinson 7:30 A.M. in the midst of
eve of the worst storms of the year. A very
hard rain all the way there & back. Some hard
rain as far as 50 miles. Herman paid me $410
patient, somewhat better. Herman on Lorr, Iowa.

Home at 10:30; family.

The Taylors came on 10 A.M. They are leaving for
Grinnell for lunch to meet Elizabeth & Doc who will
be here in two or three days.

At 3:30 P.M. we began listening to the broadcast of
Atomic Council, at Bikini. The atomic bomb was
dropped at 7 o'clock. We heard a newsreel sound, which
may have been caused by the bomb, & much comment
about the experiment.

Ann tonight: Mr. & Mrs. Reynolds, Ruth, Mrs.
Murphy, Clark, others.
JULY 31 DAYS

Beginning with the Alban calendar, July had 36 days. Romulus reduced it to 31 and Numa to 30. Julius Caesar restored it to 31 days. After the death of this reformer of the calendar, Mark Antony changed the name to July, in honor of the Julian caesars.

JULY

1 Monday

5:05 A.M. 65°, 29°.8; Pt. cloudy; N.
To Rose Creek 9 A.M. to see Herman Robinson's wife & baby. His wife better, the baby worse. Home at 11 o'clock. Mother & I started at 12 for Morilton; Conway & Greenbrier. We spent 20 minutes with Beno May in their trailer home then on to Greenbrier, where Claude had an infected leg. Back to Morilton at 3:30, home at 5.

With the yard full of folks, I had a call back to Rose Creek 8 P.M. The Robinson baby very sick. Home at 10:30.

Had shown 5:30 P.M. 0.25 in.

At Morilton, 5:30 P.M., I bought three
$1000 E Bonds at the Bank.

Among those here when I started on the
call to Rose Creek tonight were several Red Coa
people: Ed Bell, Jeff Shumard, both Christopher &
others, back for a day or two in the Park.

2 Tuesday

6 A.M. 65°; 30°.2; Pt. cloudy; N.
To Rose Creek early & found both patients
at Herman Robinson's better. Home 10:15 A.M.

Ed Rose falls here this afternoon: Shumard, Pugh,
Mrs. Pugh, another man—all good people.
Temporary prosthesis is a boon to men suffering from several injuries. That is why many surgeons have added Hollywood makeup artists to their staffs. Patients are taught to make up their own rubber-like noses or ears during the time they are awaiting more permanent reconstruction. With such temporarily reconstructed features, men need not forego social contacts.
5 JULY  
Friday

5:20 a.m. 67; 29.99; H. cloudy, N.

Don & Mary came 4 p.m.

---

6 JULY  
Saturday

6:40 a.m. 70; 29.97; clear; S N

I met Cordie. The car to Ruthly is for hunting, 8 a.m., by Ruthly's boy, Harold.

R.M. Coleman, brother of Cordie, brought his wife, suffering from pain in neck & throat.

1:30 p.m.
It required ten painstaking operations to transplant new skin from the chest and shoulder to the bullet-torn face of this soldier. But the plastic repair was successful. It was such "cosmetic surgery" that gained impetus for the art after the first World War, focusing interest not only on rebuilding faces where functional disability existed but also where unsightly features marred an otherwise normal face.
Tuesday 9

It was 70; 29.96; H. cloudy; SW.

I went to the LCC Camp 12:30 PM & spent about 30 of the boys attending the forestry camp.

Two shows this afternoon—the second while I was milking the cows.

Mrs. Belle Reddy, Henry Merritt, Rose Carter, Joyce Judge, the Volney, were here for treatment today. Also Sergeant with a boy from the forestry camp this afternoon.

Van Vant bought a load (3 yds.) of wood

from Darkeville 7:30 PM for the building we plan.

JULY 10

Wednesday

June 65; 29.99; clear; S.

Temp 84°—highest of summer so far.

Went this morning: Henry Merritt & son, Henry in town; the boy has tonsilitis.

Van brought 15 ears and lent 1:30 PM.

He went to the Martin cabin 7:30 PM to see Dr. & Mrs. Darwell, but they were not there. He stopped, came home, to see Med & Martha Barnes. Home 8:15. Mrs. Taylor & Robert.

Said Bill came after that. Robert had spent two hours with us late in the afternoon.

Simply to enumerate all the symptoms of hysteria would take a long day, so many are they. Yet not more numerous than varied, proteiform and chameleon-like—SYDENHAM

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WILLIAM P. WARNER & CO., INC.—Serving Medicine Through Research and Manufacture
Sam 7:00; clear; NW

At home for tea. 7:15 a.m. Mother and
Dr. Taylor worked all day. Mrs. Taylor was also there.

I brought Robert to Jim's house at 8 p.m. Mrs. Taylor brought Roxy at 3:15.

I found a call to the Post when I got home.

A boy in the forestry school had a pulmonary case.

I sent him to Dr. Taylor's for a check.

This is a poorly managed camp. No provision to pay for medical services.

Vern handed food from Dardanelle. Roger

handed noon.

Showed late in afternoon.

---

If people would bear in mind that they have on occasion remarked, "He looks like a gangster," the plan of N. Y. C. Commissioner McCormack to salvage criminals by plastic surgery, especially juvenile first offenders, would not seem too fantastic. Physical malformations such as lop-ears or a crooked nose may well be a social handicap and often are a chief cause of an adolescent's faulty adjustment to society.
July 13
Saturday

3:40 AM 67°F. 30-02; clear; N.

Called 5:15 to see Joe Sturgeon. His right
fingernail was punched quite by his thumb at Tonquay.

Earl Latimer, Crow Creek, brought
his wife for examination 6:30 PM.

Mother & I took supper with the Taylor
family tonight. This is Jim's tenth birthday.

July 14
Sunday

6 AM 71°F. 30-01; Pt. cloudy; S.

Called to Crow Creek Road 7:30 a.m. to see Joe Sturgeon.

T.N. 10:30.

People here all day. Among them: Bob Harding,
Samuel, who came up with Mr. Taylor; Helen Miller,
Cora & James Matthews, a Denver medical student.

Little Rock. Harding & Matthews are fine boys.

The reparative skill of the plastic sur-
geon is often sought by criminals who
wish to avoid identification by altering
their features or fingerprints. As a
safeguard against the possibility of un-
favorable implications, surgeons re-
sort to photography. Before and after
photographs are taken of the patient
who, if he has nothing to fear, will
accede readily to this suggestion.
Ernst v. Philipp Rehbock came at 7 a.m. and began work on the house, which may include stone veneer of the walls or construction of one or two porches.

I went with Taylor v. Berndt & Robert to the Spring at High Point 10:30 to 12:30. Then I made out to the Bend to see Voring.

Robert v. Boomy Sheppard entered the Mississippi State Y.M.C.A. Camp here in the Park this afternoon.

JULY

Tuesday

F a.m. 73; 30.07; M, cloudy; 5

I went to town 8:30 a.m. to telephone Lackey, Executive Director of the Commission, about the water situation at the Lodge. (The pump is worn out)

I also saw Uncle Ned about redoing some work on your house, so applied for a permit at office of the R.R. Home at 11.

Roy Vint hauled rock from our pasture most of the day. It is as good as any we get anywhere.
Joe Morning's wife came up from Gortown and
9 a.m. for medicine for Joe, who is better.
Lloyd Vict. hauls more from the pasture
until noon. Van hauled a load of
robbing felt or cement from town at noon.
Don't say Mary came 5:30 P.M. Lift for
Conway 8:15.

11:15 a.m. 74°; 30-00; clear; S W.
Mother & Mrs. Taylor left 10 a.m for
Hamilton, Conway & Greenhills. Home at 7 P.M.
Benford came 10:30 a.m. with M. & Mrs. Barry.
Benford told me he wanted the 11.82 acre tract east
of Dr. Sunville's place.
Temp. 1 P.M. 90° - highest so far.

Extensive tissue grafting in lower animals is
more readily accomplished than in the human
species. Organ or specialized tissue transplanta-
tion is impossible in man, no doubt because cells
of the human body do not live long enough to
allow the minute blood vessels from the new
site to grow into and nourish them. Skin, carti-
lage, bone, and fat, however, are used constantly
in transplantation.
Hope for the effective healing of wounds not responsive to usual agents is held out by experiments conducted with extracts of the adult brain and heart as well as other organs and muscles. This promising experiment is based upon the principle of Alexis Carrel that organs perfused with embryonic tissue extracts can be kept alive in glass.
68°F 70°, 30.04; cloudy; N.

Light rain in night.

Mrs. Newkirk came to see me about retrieving a lost object from her by a great in the Park. She also told me that Mrs. Billie Hackley was held up by a masked man at the Boat House a few nights ago.

R. D. Reese, Little Rock, brought his wife with an arm injury (probable fracture of wrist) 10:45 a.m. I put the arm in a splint & referred the case to Dr. Smith for further examination & treatment.

Mother & I went to the Home at the Boat House 11 a.m.

I talked with Mr. Miller of Billie Brandis about the attempted hold-up, which occurred about 10:30 p.m. last Wednesday.

Accidentally amputated ears may be sutured back if both ear and patient reach a surgeon quickly enough. A striker, caught in a riot, picked up his severed ear and ran to a hospital. The ear was washed, sewed back, and became as good as ever. Often the ear is lost, in which event a plastic substitute must be obtained. Aluminum, papier-mâché, celluloid, rubber, or tissue from the patient may be used in artificial ear construction.
JULY
Tuesday

5 am 70; 29.94; clear, NW
I went to town 10:30 a.m. to see about building material. Home 1:45 P.M.
I went to see Mrs. Newton, Pearl & Karlyn Frank, to write letters for Mrs. N. After we got there, we found Dr. Williams, Chicago, and Dr. Miller, 


JULY
Wednesday

6 am 72; 30.06; clear, W
Rob Gross, from John Talton's shop, came 


A machine that has already proved its worth in restorative surgery is the Dermatome, invented by E. C. Padgett. Skill is required in its operation but at the same time it is more readily mastered than the suction box and free-knife technique. It slices flesh thinner than tissue paper and the skin may be sliced from the hips or thighs in any thickness desired.
Chimes Adler came 10 AM & got the pump working. Bob Cyrus broke a section of pipe yesterday, however, that will have to be replaced as soon as possible.

Robert, with 8 other boys from the Mississippi YMCA camp, came by 5 PM en route to the Indian Cave, where they are going to camp tonight. They came to the house again 7 PM.

A large American Airlines plane (probably a DC-3), which we think was piloted by Capt. Herbert Summell, flew over from the coast at 7:15 PM, circled the airport, and then left. Dr. Summell and family, flew back over our place then off to the southwest. It was beautiful.

Effective repair of lower jaw injury is now possible with an “external fixation.” A new jaw, made of bone taken from the hip, is grafted on and clamped in place until the fracture is consolidated. An electric drill is used to bore holes in the jawbone or, if the teeth are intact, a new facial section may be anchored by splints firmly attached to the teeth.

The Chalk of Pure Reason is a continual sermon against the use of the category of thought beyond the limits of actual experience—Helmholtz.
Sam 7.9.46; N. Cloudy; S.E.

Mrs. Henry Muriel, Lou Cune, came for examination 3 P.M. Hypochondria.

Thunderstorm came up from SW 6 P.M. No got only a light rain.

JULY 28
/day Saturday

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Full half of the quarrels of doctors are fomented by the tittle-tattle of patients—OSLER

At a recent meeting of the N. Y. State Medical Society, three people who talked without a large number were present. They were patients of the National Hospital for Speech Disorders (New York) where “speech cripples” are taught to develop a substitute (esophageal) voice. Patrons of this hospital formed the “Anamoly (I speak again) Club” for the purpose of visiting and amusing others in the same plight.
5:34 a.m. 67; 29.99; Pt. cold; s
Brooks, Pau Pau Band, brought his wife
7:30 a.m.

Rain last night, 2 in. 2. 30 in. in last 24 hours.

Mother & I had dinner with Robert & his family at noon. This is Robert's 13th birthday. He & Jim spent most of the afternoon with us. Robert & I playing a game of chess (a stalemate) while Jim had a lesson with Mother.

Douglas Clark came 5:30 P.M. with a cold which I cleared up.

Mrs. Latimer was brought up from the Bank 5:30 P.M. with two injured arms (probably both collateral fractures) which I put in splints. I also have X-ray picture made tomorrow morning.

Thundertone 6 P.M. Light rain.

Flesh contours, details of fingerprint skin folds... all can be revealed on roentgenograms if the skin is of sufficient density. This method can be of exploratory assistance to the plastic surgeon in determining the most suitable tissues for grafting. Skin patterns may easily become guiding points to the objects underneath.
5:15 a.m. 6:51 30. Clear.

Drove many miles for Conway 7:50 a.m.

Spent most of the time—more than half the night—he was here writing a paper on Shakespeare, using the typewriter.

In today's mail are receipts for $541 from B. L. Burford Jackson, Miss., in payment for 11.82 acres of the Hunter land. He has been expected to mail the deed to Burford tomorrow.

Called 4 pm to see Mr. Jackson.

To see Joe Harris. Home at 11.

By warm air in hypertrophic bronchitis (the old man's winter cough). Moist warm air in atrophic (senile) bronchitis—L. NASCHER

Tantalum, named after the mythological Tantalus because it was so difficult to extract, has proved a versatile metal for surgical procedures. It forms almost invisibly fine wire; sheets as well as plates are thin and pliable as paper. Tantalum is inert, nonconductive, and nonelectroactive. It is valuable in plate repair work because it is easily molded to body contours and living tissues are not irritated by the foreign substance.
Friday

6:41: 29.99: clear: NW.

Mother, Mrs. Taylor, Robert & Jim left for Littleton at 4:15 a.m. Home at 8:00 a.m. They were in Conway. They went to P. R. with them.

Mrs. Bird (Thelma's wife) brought her today at 3:00 p.m. with a throat & mouth infection.

Saturday

5:15 a.m. 29.99: cloudy: W.

Mother, Mrs. Taylor, Robert & Jim left for Monmouth at 9:30 a.m. Home at 7:00 p.m.

Doctor Clark came 9:30 a.m. for me to see him in his finger last Monday.

Mrs. Bird (Thelma's wife) brought Charles' sister, John, to see me to draw an infected finger.
The exigencies of war expedite surgical advancement. Russian surgeons of World War II have utilized fresh cadavers for nerve grafting to bring back to life crushed major nerve circuits. The nerve graft itself is dead but by filling the gap of the crushed nerve it encourages regeneration of both the damaged ends. As the healthy tissue is renewed, the dead nerve tissue is absorbed.

In medicine, even the most stoical intelligences have not been able to confine themselves to simple statement of fact; there is always the tendency to bring facts into relation with some theory or other—CHARCOT.
The pathologist, Julius Cohnheim, made initial investigations, in 1880, on the transplantation of tissues in the eyes. His pioneer work lay dormant until the twentieth century when J. E. Markee further developed Cohnheim’s technique. It is based on the discovery that tissue from another part of the body behaves in its original manner when transplanted into the eye. Thus investigators are enabled to make a daily study of the tissue by microscope.
8:45 A.M. 72°, 29.93; Pt. cloudy; S

Mary was today, including Roscoe.

Briny's wife, Miss Cruikshank, 3 P.M. - and with
the enclosed check so we think the best. I will
take care of the case if possible. A
patient, Betty Joe, Tinker, from Nashville.

Ben and Mary came 3:00. Stayed
for hours. Ben will graduate from
Hendrix College Saturday.

Robert has an ear infection. He
played a game of chess with him.
I left 5:00, and he beat me again.

The score is now 6 to 1, with 1 Tie game.

The appearance of a disease is swift as an arrow; its disappearance slow, like a thread—CHINESE PROVERB
5:20 A.m. 71:30; cloudy; N.W.
Thunderstorm 5:30 A.m. Very light rain.
Mrs. Tabor, Robert & Jim left for Greenville
9:30 A.m. to be seen a few days.

A preacher named F. has been here for having
each day the last 3 days. He & his family are
staying at the Lodge. The first two days he
brought his daughter with an infectious ear. Today
he wanted me to show him the boating place
a large part of which I had to walk on with
him. I have been trying to improve my
attitude toward preachers in general.

Lettie has given me a fenced
area of their house any permission or considerate.

Mrs. Henry Merritt, sister Bruce, came for
examination this afternoon. Thyroid involvement
marked tachycardia.

In the history of the human race, there have
always been numbered those who congenitally
deformed limbs or those who lost sound ones
through accidents. Just as historically factual is
the evidence that some of the victims have made
many attempts to overcome these losses by various
types of appliances. These were of many patterns and were initially of home manufacture.

JULY  |  AUGUST  |  SEPTEMBER

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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
Although the term "cork leg" has become a sort of a sobriquet for artificial limbs in general, cork has never been much used in their construction. It is too pliable and nonresistant to form part of a supporting structure. It may be that this misnomer had its origin in Cork, Ireland. Artificial limbs manufactured there were known as "Cork Legs," as those from London and New York were similarly named.
14 August
Wednesday
225 Days Past
140 Days to Come

5:20 am 69; 24.97; Pt. clearly 35.
J. A. Hove was defeated in yesterday's
primary election for county judge by Chas. Brazik.

15 August
Thursday
226 Days Past
139 Days to Come

7:15 am 71; 30.03; Clear; 35.
High temp. 92.

Huston is the instruction of the intellect in the laws of Nature, under which name I
include not merely things and their forces, but men and their ways—Huxley

Probably the oldest available record of an artificial leg
is that described in the Catalogue of the Royal College
of Physicians and Surgeons of England. The leg was
exhumed from a tomb in Capua in 1858, is Roman, and
truly depicts the form of a leg. Made with pieces of thin
bronze, it was fastened by bronze nails to a wooden core.
The latter had completely crumbled away; neither were
there traces of the foot.
5:30 AM 72° 30.06°; clear; 5

Dan and Mary arrived from Conway 12:20 PM. They left at 3:30. They are preparing to start for California in a few days.

Dan had bought Magpie Cake, Rose, and Rene 6:30 AM. Appelsicher.

Frid. AM 74°; 30.06°; clear; 5

Dan came up from Conway 12:30 PM. To buy his radio and other things, I went with him. I was thinking that when he came here we could talk this summer.

Also coming in season.

---

Apparently, this arm (Army Medical Museum) was designed to facilitate writing. A strong spring, motivating the thumb, made it possible to hold a pen or pencil. The steel skeletal device, intended to replace a forearm, had a forceps-like mechanism that could be opened and closed by manipulation of a string. It enabled the user to pick up small objects, while bundles could be carried on the hook.
b a.m. 7:30. 24. 99; P. cloudy; NW

This morning: Minnie Cory & son, the last Rose Lee, both for examination; Claude, the boy
0 Mrs. Collins; from St. John, to get me to go.

to see the Chlotes; Will Ethel &
Thelma, from Alexander & Billie Rose. Home
The black, with 5 children, and 2
cents.
Violent thunderstorm came up from NW 6 p.m.
with light rain. About 0.02 in.

This Army Medical Museum model demonstrates an artificial left hand which has been fitted to a baseball glove. It fits into the distal extremity of the artificial forearm. Another attachment shown is that of the boxing glove. The possibilities of such attachments are varied and almost unlimited.

Facts and psychotics see, hear and smell things which do not exist. Official investigators, similarly afflicted, seem to be perfectly normal—KARL MARX

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Tuesday

5:30 A.M. 64; 30.11; clear; R.

Mother proposed a birthday dinner for John today, including a fine cake, which was served at dinner.

Foreman is his last day—his 38th.

Son & Mary left 2:30 P.M. for Pasadena, California. Son has arranged for living quarters with his army friend, Capt. Joseph H. Berg, 70 East Atchison St., Pasadena. He hopes to enter University of Southern California, either in September or later, for graduate work.

AUGUST

Wednesday

10 A.M. 63; 30.14; clear; E.

 Went to town 9 A.M. Home at 10:30.

Ran to get a hammer, nails & other things for the house.

Wrote a telegram from Mrs. Taylor saying her plans were changed again. She left with the little boys August 10 to be gone 5 days.

An early model of an artificial limb is the Beaufort arm (1860). The thumb is movable, being worked by a string, but all the other digits are fixed. Buckskin and leather are essentially used in the composition of the limb above the wrist. The necessary straps to hold it in position are of course also attached.

Friedal's Manual of Surgery: The disease of the lower end of the esophagus is usually successfully treated by dilation methods. An air-inflated rubber bag is commonly used. —O.R., T. C., "Operations of General Surgery."
22 August
Thursday

5:10 a.m. (6:10 a.m.), cloud, SE.
Mrs. Joe Horning, Fair Park Band, brought
her baby (6:15 a.m.) - probably malaria.
I went to the Park (Boat House) 5:30 a.m.
to talk to a soil conservation group.
Arose 7:30, after staying for supper with
the group.

23 August
Friday

6:08 a.m. (6:30 a.m.), H. cloudy, SE.
Dr. Phil Reckten brought his patient for
examination (7 a.m.).
I went to the Park 9:30 a.m. for a short
walk with the soil conservation people.
Mother went to the Boat House 11:30 a.m.
for meeting of the Farm Demonstration Club.
Mr. Meal took Mrs. Alcorn - Mrs. Hall
brought them home at 2:30.

Edith Odlin (Pokahontas widow) came
5:07 p.m. for examination - very nervous.

The "Drake Leg" pictured here is
model manufactured between 1840 and
1850. Although it has been estimated
that leg and arm wounds of World War
II are fewer than World War I, Arm
surgeons report that limb wounds con-
stitute 70% of all battle injuries. The
use of plasma, penicillin, sulfonamide, and improved surgical technique has
enhanced the chances of saving limbs.

Holy tongue from evil, and thy lips from speaking guile—Psalms, XXXIV, 13
5:45 AM 66; 30.11; cloudy; SW 5
P.M. cloudy after 9 A.M. Tree from 5 A.M.

A card came from Dean today, written
Wednesday evening from EWC City, Oklahoma,
on the way to California.

Are this afternoon: Mary Betty Swenson
France, with a boot foot from a war story.
yesterday. Mike brought her. Also Steve
Lanc, daughter Dorothy, another girl.

24 AUGUST Saturday

25 AUGUST Sunday
5:30 am 64°, 30.08; cloudy; E

I went to town 9:30 AM to the about roofing & other material. At Whitten Union I found a telegram from Son about from Pasadena. He & they arrived there at noon Saturday.

A drizzle stopped Ernst & Philip from working on the house 1 PM, but we got no rain of importance.

Ernst & Philip feber temperature 5½ hrs.
Stopped by rain 1 PM.

During the past several decades, the demand for traumatic and plastic surgery has been steadily increasing. The leg shown here is one of the numerous models used by soldiers who sustained the loss of that limb in World War I. Since then, of course, considerable progress in prostheses has been made and undoubtedly World War II will accelerate the perfection of artificial limbs.
Tropical Diseases in Temperate Climates

Strictly speaking, the phrase "tropical disease" is descriptively misleading. A number of diseases now principally confined to the torrid zones—malaria, cholera, plague, relapsing fever, leprosy, and typhoid fever—were once prevalent in temperate climates as well. Such diseases in the postwar period—notably malaria and typhoid fever—may again become widespread when the war-stationed men and women are returned from tropical regions. Some tropical diseases are unknown in other climes because the necessary vectors had not been introduced from their original habitat or had not flourished successfully. Still others are too universally distributed to be labeled "tropical" diseases.

Be not wise in your own conceits—Romans
Tropical Diseases in Temperate Climates

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Agro-Romano peasants may have had some inkling of the "mosquito theory" in malaria. They condemned as malarious any area where mosquitoes were prevalent. Shepherds returning from the Apennines not only smoked out their cabins before reoccupying them but gave the mosquitoes a preliminary feed by putting the sheep in the cabin for a few days prior to their return.
SEPTEMBER 30 DAYS NW
Because this month was seventh in numerical sequence when the year began in March, it was properly termed September. However, since it was later agreed that the year began two months earlier, the name has become inappropriate as have October, November, and December.

The mind that is anxious about the future is miserable—SENeca
6 A.M. 60° 30.08; cloudy, S.E.

John Jones, Mayflower, came today
& gathered 25 ton. peans, for which he paid $17.50.

Mrs. Wood & daughter
Margaret came 2 P.M.

5 A.M. 60° 30.08; cloudy, S.E.

Robert and I went to town 11 A.M. I had to get some building material. As Robert and I were walking up the post office steps, a helicopter flew over—the first I had ever seen. We got home at 1 P.M.

The human brain is a world consisting of a number of explored continents and great stretches of unknown territory—Ramón y Cajal

The mosquito net—conopeum—was known to the Romans but was used only by women, men regarding it as too effeminate. In the Middle Ages it was advocated as the only means of protection against fevers in marshy districts. Islanders of Crete used mosquito nets, gauze veils and curtains. Cretan fishermen slept with their nets folded several times round them so that they were entirely covered.
Major John B. Morris, 1516 13th Ave., Columbus, Georgia, & his relative Mrs. Britt, we see 6:45 to 9 P.M. Major Morris (then Capt.) was commanding officer of the 64th Company from 1935 to 1939.

Friday

5:40 A.M. 69. 30. 11; P.M. 6:30; S.E.

Judge Fudge, Anderson & family, with Hattie & Aufie's wife came 10 A.M.


Mother went to Morristown & Conway with Mrs. Taylor, Robert & Jim 3 P.M. Home at 8.

Holman came 3 P.M. & stayed 2 hours.

Light rain 1 to 2 P.M. — enough only to keep the men from work on the farm.

Metastatic abscesses and metastatic tumors may spread to areas that do not seem to be in line of direct spread from their primary focus—TheWlis, M. W., "Metastases Medical and Surgical"
September 7, Saturday

5:15 AM: 64°  30.11° H. Cloudy: 3

I went to town at noon to try to get a carpenter to help on the house. I saw John Merritt to try to see Dr. Montgomery.

116 Days Past

I may get one of them in a week or two.

Robert, Jim, & I went to Round Mountain for the canyon 3 PM—Mrs. Taylor can't—The Canyon 3 PM—In Mrs. Taylor's car—The place where I made the picture (Sept. 9) in front of the acacia tree in 1938.

I enjoyed the trip. We brought home some interesting rocks. I stopped on way to see Roscoe Birdseye, due to be confined this month.

Jesse Brogún, Jr., brought his wife for throat treatment 5:15 PM.

After getting home from Round Mountain, I got some French bread and baseball for the boys to eat.

Robert called the dogs out to play in the street.

September 8, Sunday

6:50 AM: 59°  30.08° H. Clear

Robt came to see me this afternoon. Others who came: Ford Saddle, wife, Forrest Johnson, two girls, Mrs. Filley's some friends of hers, Otis Ruby Montgomery, and others. Mrs. Taylor, the boys came just at night, starting to see Mr. Callison.

The commonest cause of delayed union in closed fractures is inadequate splinting.—Gibbs, L. O., "Fractures and Dislocations for Practitioners"
SEPTMBER
Monday

S:30 a.m 68; 30:05; S Clancy; 5
A letter from Ben today, the first
since he reached Los Angeles.

Mrs. Taylor, Robert & Jim left
for Greenville 12:15 P.M. I went
with them as far as their house quite,
then walked back.

Met West came for me 4:30 P.M. to go
to Round Mountain to attend Thee Robertson
who had hurt his left leg in a hay baler.
I found a bad laceration, which I dressed
up. Home 6:45.

SEPTMBER
Tuesday

5:30 a.m 70; 2:42; S Clancy; NW
Due to Round Mountain 8:30 a.m 10 o'clock
The Robertson doing as well as expected.

A very bad injury. Home at 11.

A very bad injury. Home at 11.

Met Mr. & Mrs. Hurbard, Albert Neuner &
Mr. & Mrs. Neuner. Miss McNeice came from Pears today. And Calvin
Cody and Emmet Kinkade.

Of all the folklore remedies suggested for
malaria that of spiders was most popular.
Some writers considered them most effec-
tive in the form of a plaster; others be-
lieved them good only if dried, powdered
and taken internally. In India, spiders
webs were made into pills. But Irelan
topped all imaginative prescriptions, for
it was the opinion there that only spiders
swallowed alive were efficacious.
5:50 A.M. 61:30 p.m.  clear; NW
Called 9:30 a.m. to see Rev. Mr. Jones, who was last Saturday in an automobile accident.
Mr. Reynolds and Elizabeth Humphries came.

11 A.M.
John Jones, Maryland, got 7 bushels today,
the rest of the crop.

We should not impute the faults of the physician to his art—CELSUS
5:30 am 58; 30.18; clear; N
To Reveal Mountain 8:30 am off and then
Robinson doing well.

It is not without reason that Aristotle has observed that melancholy men are men of highest genius—Sydenham

It is hard to believe, but C. Chisholm (1792) claimed that none of his patients died from malaria even in its worst forms. He suggested first copious bleeding—"full three pounds of blood." This was to be repeated, accompanied by purging, followed by recourse to mercury—if the response was poor. Perhaps Chisholm was right... his patients did not die from malaria; they were dispatched by his heroic therapy.
5:45 a.m. 61°; 30.05; P. cloudy; SE
Mr. and Mrs. Morse came 3 P.M. & stayed an hour & a half. Sunset came.

5:30 a.m. 59°; 30.05; cloudy; E
The Rosharon came 8:30 A.M. I took the tube out of his leg.

John Mitchell & Ott Montgomery came this morning to begin the carpenter work on the house. Ernest & Philip Roberts are beginning their tenth week on the roof work.

Light rain began falling 4:30 P.M.

In youth we say: “I am immortal.” In age we say: “I die without having lived”—RAMÓN Y CAJAL
17 SEPTEMBER
Tuesday

5:15 A. M. 60:30 06; cloudy & foggy. E.

18 SEPTEMBER
Wednesday

A. M. in 60:30 12; cloudy; E.

I went to town 8:30 A.M. to see about material for the house. Home 11:30.

Bob Hilman & wife, R.D., came 2 P.M.

Tom Hunter & wife, Kansas City, came 3 P.M.

John was in the Red River AGS at School in June.

Cinchona ledgeriana was named after Charles Ledger, the English merchant who was killed by enraged South American natives when he found he had cured some of the seeds. However, a quantity had already been sent to his brother in England. The British Government turned down his offer of sale, and the Dutch Government bought half...
Some theories of early writers on the marshes as a cause of malaria were sound; others fantastic. Trousseau tells of a party of thirty walking toward the mouth of the Tiber when a wind from the marshes met them and all but one succumbed to the fever. Varro in 36 B.C., and Columella in 100 A.D. noted the association of marshes and fever, as did Empedocles in 480 B.C.

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It is nothing in itself. It avails only by the idea attaching to it or by the proof which it furnishes—Claude Bernard

William S. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
5:45 am 58° 29.89° cloudy: 5
stop the rally.

Melton Bird came for me 11 am to go to
the Leonard Habitat center. She had
found several times in the last few days.

Dezene Atkin brought 2 children
b 6 pm one with tetanus one with
a digestive upset.

A light rain 2 PM stopped John
Merritt & Ocie Montgomery from work
on the roof of the house.

It was the opinion of the master-clini-
cian, Trouseau, that quotidian malarial
fever often cured itself spontaneously,
that tertian was more refractory, and
quarant was worst of all. So much more
resistant to treatment was the last named
that a common imprecation was: "Quar-
tana te teneat..." "May a quarant seize
you!"
5:30 AM 55; 29.91; Lt. Rain; NW
about 0.02 in. rain before daylight.
Mother & I left home 12:30 PM for Greenbrier.
where we found Eliza & Harriet alone.
Paul is working at a gin at Augusta, when the family
is planning to move.

"Malaria," a misnomer, is a perpetuation of error. It is
from the Italian "mal'aria" meaning bad air. Horace
Walpole was said to have been the first to introduce
it into the English language when he wrote in 1740 "A
horrid thing called the 'mal'aria' that comes to Rome
every summer and kills one..." But as Sir James R.
Martin stated, "neither impure air simply, nor wet, nor
the alternations of cold and heat, nor all these combined,
can give rise to fevers of this type." (Portrait-Martin)
In 1733, Joseph de Jussieu ascribed a malaria epidemic in Paris to the contamination of water in the Seine. Ten years later, together with La Condamine, he attempted to import cinchona from Peru to Europe. A few select plants were obtained with difficulty only to be stolen by a servant who believed that the boxes in which they were kept contained money. In Jussieu's honor, a variety of Cinchona calisaya has been called "Cinchona jossi."
4:30 a.m. 60. 9.98, clear, SW
Fr. cloudy by 6 A.M.
To Rose Creek, 9 a.m., found J.J. Lady
Recovering, cleared of fever.
Mother went with Mrs. Bell to Home
Destination Church at Claire Bryant's home.
Home at 3:45.

Discussed a forest fire at the foot of the
Mountain, a mile & a half west of here, 12:30
P.M. I went to the Scott House & told
Charles Redding to get somebody to help
him fight it, then drove to the Valley
and got Cleaver Young to go to Apple
Telephone
Dragon at Penville, Redding & Murphy
Two men from Advance telepho. Ola, came 2:30
in way to fire. Dragon & Murphy also got
in way to fire, which was brought under control about
5 P.M.

An advertisement in a Philadelphia newspaper in 1793 gave suggestions for combating the mosquito swarms that were present after rains. Common oil was to be poured into the rain barrel. The quick diffusion of the oil upon the surface of water would be excluded and the whole body of insects destroyed. A gill of oil poured into a common rain-water cask was deemed to be sufficient.
5:30 a.m.; 6:30: 30.12: Pt. cloudy; N
Bill Hubbard, Pete Crum, brought thistle.
Jones, wife of 7 yr. old girl, who was sick, 57.
Clay Cody, Ray Robinson, Bob Crum, came.
12:00 P.M.—Lay with a badly cut finger.
Close to report J. F. Lether.

Other note.

Monday 30
11:47; 30.26; Clear; N
Went to town at 8 a.m. to see about
retire from time he went on to Conway to try
to find some plywood. Home at 2.
When left her watch with Nelson to be repaired.

Since 1810, when Gomez isolated cinchonine, they
have been found a score of alkaloids, as well as many
of their derivatives, in cinchona barks. Quinine was
discovered by Pelletier and Caventou in 1820. Isola-
tion of quinidine was accomplished by Henry and
Delondre in 1833, and of cinchonidine by Winckler,
1844. (Portrait—Pelletier.)

The most common indication for lobectomy is bronchiectasis. Other indications are
bronchi and certain types of malignant tumors, lung abscess, and tuberculosis—ORB. T. G.
"Operations of General Surgery"
Eighth in the old Roman calendar, October became tenth in the Julian calendar. "Wynmoneth," late "Weinmonath" or "wine month" was the Saxon name for this month.
Initial scientific studies of cinchona were made by a botanist—Weddell—in 1849. He went to Peru and Bolivia, where he observed that intensive exploitation had almost devastated the forests. This reckless collection of the cinchona barks aroused fears of shortage and efforts were made to cultivate the trees elsewhere. Weddell brought some back for planting in the Jardin des Plantes.

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No malarial epidemic was more heart-rending than the one which occurred in 1866 in Mauritius. "Fever"! was the cry on every lip, the terror in every heart. The stricken passed in distressing procession through the streets or crouched in some corner to die. Pallid, drawn features; skeletal, bloodless fingers; slow dragging steps marked the hapless victims.
Daily through the streets of Port Louis, Mauritius, funerals passed incessantly... here a group of Malabari, there a slow and stately train of one of the rich... again the simple bier of a child’s coffin. Occasionally would pass a Chinese funeral, the bier supported by stout Malagash bearers. One person preceded them, scattering pieces of paper, often gilt or silver, to frighten away spirits.

— Isaac Judaeus

Do not allow your mouth to sin in recounting what may have befallen another physician, for there is no man who has not his hour.
5:30 AM 65; 24.81; Pt. Chaudy, X M
Killed 3:45 AM to the Joe Mitchell wife of
River Creve, Home 5:30. From boys.

Mother & I went to town 8:30 AM for
Mother to have dental work done. Home at
12:20. She brought Clementine home from
Mary Hopen's. She was sick on the 5th.

Boris diploma from Hendrix College
came in today's mail. Also a good
letter from Son. He's going to move
250 S. Euclid Ave., Pasadena.

Henry &y y wife brought their girl to P.M.
Torrilhioni.
Mrs. Loomis, Paw Paw Bend.

come for examination 5 PM.

John Meirer worked on house today, after
being off nearly two weeks. More than a week.

Wind as a carrier of malaria was long
a favorite topic of discussion. Trees, tall
shrubbery, high walls or a close screen
interposed between a dwelling and the
wind were regarded by the pioneer
explorer, Henry Stanley, as a means of
mitigating the malarial influences of wind.
Emin Pasha informed Stanley that he always
used a curtain as protection against
nocturnal miasmatic exhalations.

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Ramón y Cajal

Saying is so distracting to old men as to occupy themselves with history, in other
words, with the lives and deeds of men more antique than themselves

William R. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
5 a.m. 50; 29.86; cloudy; NW
Light rain in night.
I went to town 11:30 in to try to get a
plaster, an elixir, & to telephone Mrs.
Taylor, Brunswick. Mr. Taylor doing satisfactorily.
I failed to get a plaster, but Claude Keigh will come tomorrow to wire the new rooms.

Rio Verde, Mexico, was the place where
Katherine Neel, medical missionary, hung out her shingle in 1898. The first patient
was an old woman whom the local witch
doctor had diagnosed as enchanted and
who had "... covered herself with a
poultice of ashes and cockroaches and lay
on a plank in the hot sun... to bake out the fever." Dr. Neel replaced witchcraft
with quinine and conquered the malaria.

The old man falls asleep at the sermon through excessive attention which brings on brain fog, not through inattention—L. L. Nascher
5:30 a.m. 48° 30'. 18'; clear; NW

Colburne Abbott came 10 a.m. for me to go
To see J. T. I left Miss Middleton, Mr. Reynolds,

5:30 a.m. 48° 30'. 18'; clear; NW
Down to the Valley to see J. T. Abbott 8:30 a.m.
Better.

Peter Simon Pallas, naturalist and traveller,
was the son of an eighteenth century sur-
geon as well as a student of medicine him-
self. While on a scientific expedition, Pal-
las found that the one way to protect him-
self from biting mosquitoes when walking
was to place a vessel filled with smoldering
birch bark on his back.

Science commits suicide when it adopts a creed—HUXLEY
In 1901, Sir Ronald Ross gave an object lesson in mosquito elimination in Freetown, West Africa. Lack of sanitary control had fostered malarial outbreaks, Ross formed a "Culex Gang" to collect broken bottles, pots and empty tins so that mosquito breeding might be stopped. An "Anopheles Gang" drained puddles in the streets and the yards of houses or filled them with cement.
3:50 A.M. 61; 29. 95; cloudy; S

Leaving home 6:10 A.M., I went to I R. for a meeting of the Port Committee of the Commission. Mother went as far as Conway & stayed with Millie. We got home 2:45 P.M. The Committee approved a budget of $441,000 for the triennium.

John England & Captain Marsh appeared in behalf of their applications for the concessions in Pittock State Park.

The nakedness of the indigent world may be clothed from the trimmings of the vain—Goldsmith.
S A M 50; 29.44; cloudy; S E
Light rain began 8 A M.

Tom Miller & wife, Chicago, here
2 to 3:15 P M— the first time I have
seen Tom in 14 years.

Rain became heavier 10 A M & continued all hour
about 0.10 in.

Melvin H. Knisely, by studying the blood
of malaria-infected monkeys, discovered a
way to test the effectiveness of anti-malarial
drugs. Experiments showed that the blood
changed from the normal fluid liquid into a
“muck-like sludge,” causing inadequate
nourishment of the body cells. With the ad-
ministration of drugs, large masses of agglu-
tinated blood disintegrated; the individual
cells were freed and the blood made fluid.
21 October
Monday

5:4 at 4:45; 30.28; clear.

Saw the valley.

Bishop, plaster, Perry came 6:30 a.m. to plaster the two walls of the house. John Morris vst. Montgomery till it work, as we Ernest Robson v
his two boys. Claude Kuhl came with his man. Rembert 3:10 a.m. to do more work on the wiring.

14

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22 October
Tuesday

itt


9:45 in 5:17; 30.17; cloudy; N W

Thunderstorm with light rain came up from N W is 1 in.

about 0.02 in. rain.

Ernest Robson finished the rose work on the house this afternoon. He & Philip began some July 15 & have missed working only one day. Wrote yesterday's dairy.

Futility does not show itself so much in precept as in life—a firmness of mind and mastery of appetite—Seneca

The synthesis of quinine by Robert Burns Woodward and William von Eggers Doering in 1944 made possible for the first time production of this drug outside of the life processes of the cinchona tree. Not only does this discovery open up the possibilities of the increased production of quinine but it may lead the way to the development of new quinine cousins unknown in nature which may give relief to the millions of malaria sufferers.
The visitation of tropical diseases upon temperate zones may be a future concern because of rapid inter-continental transit. Not only can the disease carriers themselves be transported in the plane, despite the almost universal practice of fumigation, but infected individuals may be conveyed within the incubation period. As an illustration, live *Anopheles gambiae* found in a plane from Africa were enough to start an epidemic in Natal, Brazil.
5 A.M. 47; 29.81; clear; NW

Mother went with Mrs. Hall to the Home Demonstration Club meeting at Mrs. Elly's. She left home 11:30, got back at 4.

John Merritt finished the carpenter work on the house today. Oll Montgomery has a few days more painting to do.

If a man went to the tropics with the thought that an attack of a tropical fever would kill him, then "it generally becomes so." This was the contention of C. Chisholm, who considered it would be far wiser to believe that under ordinary circumstances of life with the exercise of temperance and prudence, the tropical climate would be no more injurious to him than a temperate one.

Let your deeds alone praise you, and do not honor yourself by shaming a colleague—ISAAC JUDAES
The Mandingos of western Sudan, when suffering from fever, resorted to an ingenious vapor bath. Branches of *Nauclea orientalis* were spread upon hot embers and the patient placed upon them. On the branches, they sprinkled water which descended to the hot embers and from which an enveloping cloud of vapor arose. The treatment induced profuse perspiration, greatly relieving the sufferer.

"Described by the monkey, what would man be? Probably a sad case of degeneration, characterized by a contagious mania for talking and thinking." — Ramón y Cajal
October 29
Tuesday

5 AM 6:03; 10:261 clean; 5
7 AM 10:261 clean; 5
Fog in valley. Pt. cloudy after 8 AM.

Bill next came with Nels and Killam from
Round Mountain 10:30 AM — Bill for a free
consultation, Nels for an examination. Bill
has recently been to a chiropractor in L. P. 500
home to St. Louis — whom he also promised to get
out of paying a fee. He has Parkinson's disease.

October 30
Wednesday

5 AM 6:00; 20:18; Pt. healthy

Andrew J. Leary & W. B. Holman came to see
me 1:30 to 3 PM about the concessions in
the Park. The nephews came 2 PM.

Leary, Holman & I sat in the seat in the yard
and discussed the park business. They had hardly
been when Jack Williams & his mercy came.
They stayed an hour & we talked about the
Park, flood control, budgets & related things.

Death by physical violence was met with
by many a pioneer explorer. Such a fate befell
Alexandrine Tinne who explored mainly in the Sahara and along the river
Nile where she was killed by Berbers.
But treacherous tropical diseases probably ran up an equally high score. Both
the mother and aunt of Tinne, who had accompanied her, were fatally stricken
with blackwater fever.
The West Coast of Africa had an evil reputation well up to the end of the last century. There was even published a "Handbook of Useful Information" which dealt with, among other matters, "How to reach West Africa and how to return." The second part began with the statement, no doubt intended to be amusing, "If dead, this will not be needed."

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NOVEMBER 30 DAYS M.

Ninth in months in the early Roman calendar, the ancient Saxons referred to November as "Wintmonath" or wind-month. This was descriptive of the wind-gales which swept the seas and kept the boats ashore until more favorable weather.

Death, so called, is a thing which makes men weep,
And yet a third of life is pass'd in sleep—BYRON

| OCTOBER       | NOVEMBER | DECEMBER   |
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WILLIAM R. WARNER & CO., INC.—Serving Medicine Thru Research and Manufacture
5 a.m. 52; 30.09; drizzle, NE
0.38 in. rain last night.

A wildcat came out of the barn and
stood for a few minutes looking toward the house,
while we watched him from the dining room
window, 8:55 a.m. Then, lying on the front
porch, in the heavy drizzle, did not see him.

The all-day drizzle became heavier 3:30 p.m.

Ott Montgomery finished painting the house.

4 p.m. - the inside of the rear part.

There are many ship legends involving
yellow fever. After it broke out on
board the "Flying Dutchman," no port
would give her harborage. She was
doomed to haunt the seas around the
Cape of Good Hope until all her crew
perished. An authentic instance was
that of the "Huskisson." She was un-
able to leave port, her crew as well as
the townspeople infected.
Most doctors who visited Las Animas Hospital, Havana, in 1900, scoffed at the Gorgas theory of yellow fever. Walter Reed was demonstrating a lecture with a glass jar that contained *Aedes aegypti* when the cover accidentally brushed off. Released mosquitoes rose into the air and excited doctors forgot their skepticism in the stampede to make a hasty exit.
All day spent in a general meeting of the Commission with the Governor's reception room — until I left at 3 P.M. I finally got away from L.A. 3:30. (I stored the car last night at Knight Dairy Co.).

I got home 5:20 & found Mother all right. She stayed alone while I was gone.

Van Vint took a load of water to Greenville today.

I gave the Judge a commission (at the Commission meeting) to Captain Marshall's wife, Fort Smith.

Skepticism and ridicule were heaped upon Gorgas, but he knew how to retaliate. When the chief engineer of the Panama Canal, Col. George W. Goethals, protested that every mosquito killed cost the United States ten dollars, Gorgas made an apt rejoinder. "But just think," he said, "one of those ten dollar mosquitoes might bite you and what a loss that would be to the country."
7 A.M. 48; 29.81; cloudy; NW
0.75 in. rain last night.

Earl Letourne brought his mother (also his father)
8:30 A.M. departing for New York.

On one occasion, Gorgas happened upon a group of white-clad hospital doctors viewing the corpse of the latest yellow fever victim. "Take a good look, boys," said Gorgas, "That's the last case of yellow fever you'll ever see!" And finally, in 1914, Gorgas marked his complete triumph by being the first to cross the once pest-ridden Isthmus in a canoe.

Physical pain is easily forgotten but a moral chagrin lasts indefinitely—Ramón y Cajal

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William R. Warner & Co., Inc.—Serving Medicine Through Research and Manufacture
Forty years ago today I came to
Alone as contract physician for the
Fort Smith Lumber Company.

Gay Dunn was brought up from
One Poor Bend 3:30 P.M. with a
fatty cut hand, which I repaired.
The town was cut in a combine accident.

Mrs. Martin & Mrs. T. L. Haynes
come 5 P.M.

Joe Morris, from Swann's Mill,
came 6:30 P.M. for examination.

Gorgas told a story of a weary sanitary
inspector who dumped crude oil into a
hotel roof cistern. When a naval captain
tried to take a shower, he was instead cov-
ered with sticky oil. Lacking fresh water,
it could not be washed off and he was un-
able to get into his clothes. In the morn-
ing, he went forth to kill the inspector... who in due time obliged the captain by
dying of yellow fever.
5:45 A.M. 45°; 29.19°; N. cloudy; N.

Ophie Wallace came for me 10:30 a.m. to go to see his baby. Little change since I saw it last Saturday.

Theo & Rose Robertson, Paul Howard, Shanty, brought their baby 4 p.m. Abnormal disturbance.

Mrs. Reynolds & an Negro woman came 4 p.m.

5:15 a.m. 49°; 30.02°; cloudy; SE

Oll Montgomery came this morning.

I refitted the doors of the new part of the house, & helped put up the old gutter to run water into the tank. I paid him $3.25, which brings the total cost of the work done on the house since July 15 to $3492.48.

It began raining 2 a.m.

They that sow in tears shall reap in joy—Psalms. CXXVI, 5
5:45 A.M. 50° 44.43; cloudy; W.
Rain last night 0.50 in.
Earl Lattimer brought his wife to P.M.
She is due to be confined about Jan. 28.

Because he was stricken with yellow fever, "The blood of one sick black man in West Africa has been a boon to the human race." A physician of the Lagos Laboratory of the Rockefeller Foundation inoculated a rhesus monkey with a specimen of this man's blood; the animal died, the man survived. And since 1937, all the yellow fever vaccine stems from this original virus strain.

Better is a neighbour that is near than a brother far off—Proverbs. XXVII, 10
Many conquests have been thwarted by epidemic disease. In 390 B.C., plague stopped Hannibal in Sicily. If the Prussians under Frederick William II had not suffered from an attack of dysentery, the French Revolution might have had an entirely different fate. The Haitian Republic owes its very existence to yellow fever since this disease subdued all but 7,000 of Napoleon’s army of 30,000.
5:45 A.m. 50; 14.97; cloudy; S.

Lloyd & Processes brought their children 20th.

Sidney Whitcher brought by train 7:30 A.M.

I removed the stitches from the head I severed up more than a week ago.

The victor in not a few campaigns has been the grim specter of epidemic disease. Typhoid fever and dysentery influenced the high ratio of disease to injuries in the American Civil War and the Spanish American War. A reason for the loss of Bataan in World War II was that malaria felled a majority of its U.S. Army defenders.

Genius, like the inhabitants of the depths of the sea, moves by its own light—RAMÓN Y CAJAL.
A momentous medical discovery of World War II is DDT (dichlorodiphenyl-trichloroethane), which proved its efficacy against epidemic louse-borne typhus. It was extensively used in the Italian campaign where, occasionally, the delousing interrupted weddings. All was merriment as the party was sprinkled with DDT instead of rice.
The coming in season.


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Anti-typhus horse serum has proved effective against typhus. Living Rickettsiae from the intestines of infected lice were injected into the horses. The serum, taken from the blood of the horses, was given every second patient in a series of 440 typhus patients in Addis Ababa during an 18-month period. Only 3.6% of treated patients died, compared to 10.9% of controls.
5:15 A.M. 35° 29.93°; cloudy; NW. Rain last night 0.25 in.

Mother & I went to town, leaving home 8:30 A.M. Are I getting back at 12. I found Mrs. Moore's boys waiting for me. They reported Mrs. somewhat better.

Mother & I went to the Lodge to see the Marshalls 2:30—the first time we had been to see them. Going on, we stopped a few minutes at the Reservoirs. On our way home, we stopped at C.C.C. Camp to see the Reddigo, who are leaving the Park this week. Charlie has failed to please Locke & Holmes.

The chick embryo technique has made it possible for vaccines to be cultured in living tissues. The virus of typhus Rickettsia multiplies vigorously in the living cells when inoculated into a fertile egg. After that the infected embryo is "harvested." The virus is killed and extracted. Dead virus injected into the human body induces generation of the same anti-bodies which would be produced in combating invasion by the live organism.

Out of thine own mouth will I judge thee—LUKE
Typhus fever in the United States has had a sharp increase in the past five years. Milder than the European variety, and seldom fatal, it nevertheless disables a victim for work on an average of two months. Though spread by rats and rat fleas, a bite from the latter is not the only way to become infected. The germs are also discharged in the body wastes of both rats and rat fleas.
5:15 A M 53; 30.12; cloudy; S

Robert, Jim, & I went to town 9:30 A M to
send Mr. Jones violin & sheet music to him
by express. Home at 11.

Eliza Redstock came at 1 P M & said
that Ernest had threatened to kill her.
I induced her to go to Mrs.
Upchurch's. She left at 4:30.

Chaulmoogra oil, the oldest and best-
known remedy against leprosy, was used
for centuries by the Chinese. They used
it both internally and externally. Tai
Fong Chee—a favorite Chinese powder
that contained chaulmoogra—was used
with good results. It has been used as a
parasiticide in ulcers, ringworm, and
especially leprosy.
SUN 26; 30.49; clear; NE

TUE 28; 30.33; clear; S

Van Nist came 8:45 with a call to see flame. Home 9:15.

To see Sidney Wharton's baby. Home at 12.

Sr. Reynolds came 9:30 with milk. This afternoon, brought with
him his brother, Rev. J. H. Reynolds and his bride, who are
going to spend the winter here with Mrs. Reynolds.

Three Methodist preachers — Taylor, Morris, and Stewart.

Perry, v. Sanford, Conway, came in P.M. to talk
about holding a church camp in the Park next June.

Every delay is too long to one who is in a hurry — SENECA
Leprosaria, in early times, existed outside the city walls. The lepers were outcasts and subsisted on charity alone. Often as not, they fared well; their communities grew, new buildings—usually including a chapel—were erected. These chapels, in northern Germany, were dedicated to St. Jergen (St. George). That is why an old St. Jergen church or village may well have been a leprosarium.
The lot of a medieval person, pronounced a leper, was exceedingly harsh. Legally, he lost the right to inherit property or to make wills. Over him were said the rites of the dead. He was ousted from inhabited places and confined to lazarus houses. It is dubious that all were actually leprous; many may have been afflicted with tuberculosis, leukemia of the skin or other infections.

*He that maketh haste to be rich shall not be innocent—Proverbs, xxviii, 20*
It was Gerhard Hansen who discovered the microbe of leprosy in 1874. Yet the bacillus of leprosy has never been successfully passed experimentally in animals or in man, with one dubious exception. A volunteer Hawaiian convict (1884) did die of the disease six years after injection of the bacillus but he may have been latently infected since he had lived close to the disease all his life.
10 DECEMBER
Tuesday
22 DAYS TO COME

5:15 AM 63; 30.03; Rain; 6th
Corrie put out the gate when I went out to
milk her 5:30 am. After daylight I found her
at Thistle Birds (in Mr. Campbell place). I got
Thistle to bring her home, then left her to Thistle
(Chamorros place) to mend her. Full day's work took her
to mends her last July. This will probably make
it necessary to sell her & buy a fresh cow next
spring.

Called to see Dr. W. Reynolds 11 am. Found
him carrying on his retirement, but otherwise doing
fairly well.

1:20 pm. Rain last night & until noon.

11 DECEMBER
Wednesday
344 DAYS PAST
21 DAYS TO COME

5:15 AM 52; 24.97; F. rain; NE
0.10 in rain by 7 am. Struggle & joy met
of day.

I went to town to get my watch, which I left
with Mr. Brown for repair 2 weeks ago, & attendant
other things.

I left home at 11 & got here at 1.

Owe no man anything, but to love one another—Romans

Some popular opinions on leprosy are
unfounded: for instance, that it is a
rare disease and that it is highly conta-
gious. Leprosy still affects several mil-
lion people throughout the world, but
there is little danger of infection if or-
dinary precautions are observed. Lepers
are still maltreated, and they suffer
more from the stigma connected with
the word than from the disease.
12 DECEMBER
Thursday

5:15 Am 40:30: Cloudy: NE

The river is at flood stage, but is not expected to go much above.

5 Am 50:29.52: Cloudy
Rain last night 1.25 in.

I went to S. P. To a meeting of the Joint Board Committee for a discussion of the Health Division budget.

Mother went with me to spend the time with Ruth Thomas. We left home 6:30 Am and got back 1:30 Pm.

Just before we left home, Theo Roberson came for me to go to see Rhea, who had had a miscarriage last night. I gave him medicine to see Rhea immediately after we got home. Roseau Brisky took me from his place in his car. Home at 4:30 Pm, found A. C. Bryant waiting for examination.

Let him that thinketh he standeth take heed lest he fall—1 CORINTHIANS

Results were encouraging after a sulfone preparation had been injected intravenously into twenty-two patients at the National Leprosarium, Louisiana. Coppery skin patches—the “badge of leprosy”—began to resume a normal skin tone; bone sores healed; leprous eye lesions cleared; nasal and throat lesions subsided; ulcers on tongue, lip and palate healed.
14 DECEMBER
Saturday

S.54 in 40; 30.02; cloudy. I called 11 a.m. to see Mrs. Olive Robinson on Rose Creek. Found her in obvious condition from a heart attack — probably coronary thrombosis. Home at 1. Mrs. Robinson gave me a small arrowhead that Mrs. K. had found in the field last spring while being corn.

Drove home this afternoon.

5:15 a.m. 40; 29.97; clear; SE

10:44 7 to 9:30 a.m.

Mr. Moore, Rose Creek, came 3 P.M. for examination. Greatly improved since I last saw him.

D. Wallace & wife brought their baby.

3:30 P.M. Better.

Also here: Mr. Kemp, George, Phil & Martha Demers, Dr. Reynolds, brother & sister's wife.

McCoy came 10 a.m. to 12 to talk about an offer he has to manage a mixed processing plant.

Jess Dragginn brought Annie with one throat 4:30 P.M., and at 5 the Newkirk came & stayed more than an hour.

When desperate ills demand a speedy cure,
Distrust is cowardice, and prudence folly—SAMUEL JOHNSON

The cholera pandemic of 1826-1837 started, like the first, in India, spreading throughout Europe. Heinrich Heine saw it in France. It was the night of mica-réme, a masked ball. One of the harlequins collapsed with cholera. Thereafter, whole carriage loads were hurried to the Hotel Dieu to die and then to be hastily thrown into crude graves, without even the removal of their gay dominoes.
5:15 a.m. 51:29.75; cloudy; S

Leaving home 8 a.m., I started to the spring to turn the water off in the bottling house. I took Mother by the hand to stay while I was at the spring. I got the car stuck in a mud hole in the Gasaway field & had to get Bob & Musical Upham to pull it out with the farm truck. Had to jack the wheels up & put rock under them. Finally got out & went on the Spring home at 12:15. Ruined a tire & boiled radiator dry.

Earl Lawler brought his wife 2:30 p.m. Doing satisfactorily. Jeff Shoemaker brought Annie for throat treatment 4:30. Wesley Schimmel came for examination at 5. He asked me whether I thought it wise for him to marry. I answered in the affirmative.

In 1867, three million pilgrims met on the banks of the Ganges. One case of cholera broke out during “bathing hours.” Ritual demanded that they dip three or more times in water; then, while praying, drink the holy water. When they dispersed they carried the infection with them and the roads became lined with victims.
Cholera, endemic in India, caused about eight million deaths between 1904 and 1924. Almost two and a half million people died between 1923 and 1934. The disease ranged with unusual severity in India, China, and the Far East between 1937 and 1938. Again an epidemic broke out in 1943, undoubtedly furthered by the hoards of war refugees.
Even in the '70's of the last century, magic was relied upon as a prophylactic measure against cholera. In one Russian village, maidens met at the outskirts of the village. They formed a procession . . . a girl holding an ikon; her companions dragging a 'sokha'—a primitive plow. They circled the village, confident the cholera would not be able to overstep their magical ring.
22 December
Sunday

355 Days Past
10 Days to Come

Sam 40; 30.25; clear; E

Dr. Kemp came 2:30 PM for an hour's visit.

Joe Hoving, from Townsend's Mill, came
2:45 PM. Rather than when I last
saw him. Still alluminious, however.

Life is like a game of tables, the chances are not in our power,
but the playing is—TERENCE

356 Days Past
9 Days to Come

Monday 23

Sam 48; 30.15; clear; SW

Mr. and Mrs. Diamond brought their baby 1:30 PM.
An autophone from.

Dr. Warner & Co., Inc.—Serving Medicine Thru Research and Manufacture
His observations in Lima hospitals led the twenty-six year old medical student, Daniel E. Carrión, to believe that Oroya fever and the virulent verruga warts preceding it were actually the same disease. There was one certain way of obtaining proof...he inoculated himself with fluid taken from the soft, pink verruga warts of a hospital patient. Six weeks later, his death from Oroya fever bore unalterable testimony to his theory.

He alone is an acute observer, who can observe minutely without being observed—JOHANN CASPAR LAVATER
Until 1760, there was no such thing as a privy in Madrid. The King issued an ordinance that every householder build one. Physicians remonstrated, alleging that filth absorbed the unwholesome particles of air which would otherwise be taken into the human body! His Majesty persisted. But many citizens, thinking to keep the food wholesome, erected their privies close to the kitchen fireplaces.
Saturday

5 a.m. 30.12; clear; s
5 a.m. 58; 29.84; clear; s
Right rain in the night. P.M. cloudy by 10 a.m.

I went to town 9:05 a.m. to try to get groceries for the car, was delayed in getting 2 gallons from Ernest Coleman. I also had the car washed & pleaded to oil changed. I got a package of California fruit at drug store that Don's Merc sent us. Home at 12:30.

Van flash tested 50 bottles of milk this morning & took it to drug store in town.

A thunderstorm came up from SW 3 p.m., with the temperature 63.

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The art of medicine is to be properly learned only from its practice and exercise—Sydenham

Knowledge of sleeping sickness in man is century-old and antedates the discovery that trypanosomes caused the disease in animals. Al-Qalquahudi, a fourteenth century writer, spoke of sleeping sickness as a disease that befell chieftains. He cited Miri Jaza, sultan of the M Slid Kingdom, saying it was not only difficult to awaken him, but he remained in a comatose condition until death.
30 DECEMBER
Monday
363 Days Past
2 Days to Come

3 A.M. 12; 30. 33; Clear; NW
8 A.M. 11; Pt. cloudy

Light snow began falling 9 A.M. Snow
topped. Pt. cloudy remainder of day.

Here this morning, Mr. Berard, wanting a
job in the Grove for R. F. Armpur; John Johnston,
looks, wanting me to give evidence in a suit
involving the O’Meara land, which I cannot do.

At 10 A.M., Mr. Hanrahan—out at the same time.

For 7 hours. Just as they left, at noon,
Holmes came.

Mr. & Mrs. Alcorn, Merritt & Forsland
come 11:30 P.M. & a few minutes later Bob
& DeMaris Markle came.

Hugh Tomp. 23.

It is easy to get a thousand prescriptions, but hard to get
one single remedy—Chinese Proverb

An honorable place in the history of tropical med-
ecine has been accorded Jacob Bontius who gave
the first description of beriberi. It appeared in
his notable book on tropical medicine, "De medi-
cina Indorum," which was published in 1642. In
addition, he recognized the value of lemons in
certain diseases. His scientific studies were carried
on while in the employ of the East India Company.
**Micro Method for the Determination of Sulfonamides in the Blood**

**Method**

**Principle.** A fourth of a cubic centimeter of blood is mixed with saponin and trichloroacetic acid. This mixture is filtered, and to the filtrate is added Ehrlich's reagent. A yellow color will appear immediately if a sulfonamide is present in the blood in a quantity of more than 0.5 mg. per hundred cubic centimeters. The yellow color is compared with the colors of four standards.

**Reagents.**

1. Aqueous solution of 50 mg. of saponin in 100 cc. of distilled water.
2. Twenty per cent aqueous solution of trichloroacetic acid.
3. Two per cent solution of pure Ehrlich's paraphenylamino-benzaldehyde in 95 per cent alcohol. It must be stored in a glass stoppered brown bottle. It remains colorless for a long period of time but should be discarded if it becomes yellow. If only a slight yellow color develops in the presence of an acid, the reagent is still satisfactory.
4. A few powders containing accurately weighed 100 mg. portions of sulfaflanamide in each. From one of these powders a stock standard solution is made by dissolving it in 100 cc. of distilled water. This solution, placed in an ice box, will keep for several months. In the preparation of the standards a 10 mg. solution of sulfanilamide per hundred cubic centimeters is prepared by diluting 2 cc. of the stock standard to 20 cc. with distilled water. From this 10 mg. per hundred cubic centimeter solution four solutions are prepared:
   - Seven mg. per hundred cubic centimeters. Add 3 cc. of distilled water to 7 cc. of 10 mg. per hundred cubic centimeter solution.
   - Five mg. per hundred cubic centimeters. Add 5 cc. of distilled water to 5 cc. of 10 mg. per hundred cubic centimeter solution.
   - Three mg. per hundred cubic centimeters. Add 7 cc. of distilled water to 3 cc. of 10 mg. per hundred cubic centimeter solution.
   - One mg. per hundred cubic centimeters. Add 9 cc. of distilled water to 1 cc. of 10 mg. per hundred cubic centimeter solution.

From these four solutions the four standards are prepared as follows: Of each of these solutions 0.25 cc. is placed in each of four tubes. To each tube 4 cc. of the saponin solution and 4 cc. of trichloroacetic acid solution is added. Filtration is necessary only if there is the slightest cloudiness. Into each of four other very clean tubes, having the same diameter as has the "unknown" tube, is transferred 4 cc. of the mixtures and 2 cc. of Ehrlich's reagent. These four tubes are placed in the colorimeter. These standards keep well in an ice box certainly for two weeks.

5. A simple so-called "tube support" for color comparison. It is a piece of wood with seven holes, so that the tube with the unknown can be placed between any two standard tubes. A light blue glass is used as a background at the openings in the colorimeter, because some eyes can distinguish slight color differences in yellow-blue better than in yellow. Duboscq types of colorimeters and a photoelectric colorimeter may be used.

**Procedure.** Take with an adequate pipet 0.25 cc. of blood from an ear lobe or finger tip. If oxalated venous blood is available for other examinations, one may use this blood. Blow the blood out in a small mortar. Add 4 cc. of saponin solution. Rub with a pestle and wait four minutes (for hemolysis). Add 4 cc. of trichloroacetic acid solution. Rub again with the pestle. Filter through a retentive filter (No. 5 Whatman) of about 6 cm. diameter. Transfer 4 cc. of the filtrate in a very clean tube. Add 2 cc. of Ehrlich's reagent. Put the tube in the colorimeter. Compare with the standards. If the color of the unknown is more intense than the standard of 7 mg. per hundred cubic centimeters take 1 cc. of the filtrate, dilute it four times (by adding 3 cc. of distilled water). Treat this solution just as the undiluted filtrate. The result of the reading is multiplied by 4.

**Conversion Factors.** These are factors by which the reading must be multiplied if sulfonamides other than sulfanilamide are used. The conversion factor for sulfathiazole is 1.7 and for sulfadiazine 1.5. For other sulfonamides which survive the crucial clinical tests, one may calculate the conversion factor as follows. Because the solubility in water of the sulfonamides differs widely, it is advisable to make a 5 mg. per cent solution from the new sulfonamide. Up to the present this has been possible with all sulfonamides. For example, in 100 cc. of distilled water at 37.5°C the solubility of the free drug is 1,370 mg. of sulfanilamide, 92 mg. of sulfathiazole and 11 mg. sulfadiazine.

**Procedure.** Take three tubes. In the first tube put 5 cc. of a 5 mg. per hundred cubic centimeter solution of the new sulfonamide. In the second tube put 3 cc. of the 5 mg. per hundred cubic centimeter solution plus 2 cc. of distilled water. In the third tube put 1 cc. of the 5 mg. per hundred cubic centimeter solution plus 4 cc. of distilled water; 0.25 cc. of each tube is treated just as the blood filtrate. Compare the standards. Example: The color developed by a 3 mg. per hundred cubic centimeter solution of sulfadiazine corresponds with the color of a 2 mg. per hundred cubic centimeter solution of sulfanilamide. Therefore the conversion factor is 1.5.

*Peters, J. T., J.A.M.A., 124:31-33 (Jan. 1), 1944*
DETERMINATION OF SULFONAMIDES
IN BLOOD AND URINE

Reagents—
1. A solution of trichloroacetic acid containing 15 gm. dissolved in water and diluted to 100 cc.
2. A 0.1 per cent solution of sodium nitrite.
3. An aqueous solution of N-(1-naphthyl)ethylenediamine dihydrochloride containing 100 mg. per 100 cc. This solution should be kept in a dark colored bottle.
4. A solution of saponin containing 0.5 gm. per liter.
5. 4 N hydrochloric acid.
6. A solution of ammonium sulfamate, containing 0.5 gm. per 100 cc.
7. A stock solution of sulfanilamide (or other sulfonamide drugs) in water containing 200 mg. per liter. This solution can be kept for several months in the ice box. The most convenient standards to prepare from the stock solution are 1, 0.5, and 0.2 mg. per cent. To prepare these 5, 2.5, and 1 cc. of the stock solution plus 18 cc. of the 15 per cent solution of trichloroacetic acid are diluted to 100 cc.

Procedure for Blood—2 cc. of oxalated blood are measured into a flask and diluted with 30 cc. of a saponin solution, and after 1 or 2 minutes precipitated with 8 cc. of the solution of trichloroacetic acid. The free sulfanilamide (or other sulfonamide drugs) is determined in the filtrate as follows: 1 cc. of the sodium nitrite solution is added to 10 cc. of the filtrate. After 3 minutes standing, 1 cc. of the sulfamate solution is added, and after 2 minutes standing, 1 cc. of the solution of N-(1-naphthyl)ethylenediamine dihydrochloride is added. The unknown is compared with an appropriate standard which has been treated as above. This comparison can be made immediately and no change in color is observed for 1 hour or more. To determine the total sulfanilamide, (or other sulfonamide drugs) 10 cc. of the filtrate are treated with 0.5 cc. of 4 N hydrochloric acid, heated in a boiling water bath for 1 hour, cooled, and the volume adjusted to 10 cc. The subsequent procedure is as stated above for determining free sulfanilamide.

Procedure for Urine—Protein-free urine is diluted to contain about 1 to 2 mg. per cent of sulfanilamide (or other sulfonamide drugs) and 50 cc. of the diluted urine plus 5 cc. of the 4 N hydrochloric acid are diluted to 100 cc. 10 cc. of the product of this second dilution are treated as a blood filtrate for free sulfanilamide, (or other sulfonamide drugs) and 10 cc. heated without further addition of acid for total sulfanilamide (or other sulfonamide drugs). If the urine contains protein, it is diluted and treated by the procedure for blood.

Note: A standard sulfanilamide solution may be used in determining the concentration of sulfapyridine, sulfathiazole or sulfadiazine, providing the results obtained are multiplied by suitable conversion factors. These are as follows: for sulfapyridine and sulfadiazine, the results should be multiplied by 1.45; and for sulfathiazole by 1.48.

3. The reagents can be obtained from LaMotte Chemical Products Co., Baltimore.
4. Sample and reagent volumes can be proportionately reduced to give the minimal amount of filtrate necessary for an accurate color comparison.

# THE DOSAGE FOR SULFONAMIDES AND ADJUVANT ALKALIES

<table>
<thead>
<tr>
<th>The Sulfonamide</th>
<th>Infections for Which the Sulfonamide Is Considered Most Effective</th>
<th>Initial and Subsequent Doses* (Oral)</th>
<th>‘Alka-Zane’** Alkaline Effervescent Compound Dosage for Adjunct Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sulfathiazole</strong></td>
<td>Staphylococcic, pneumococcic, and urinary tract infections.</td>
<td>Adults: Initial: 4 Gm. Subsequent: 1 Gm. every 4 hours until temperature has been normal for 72 hours</td>
<td>(To alkalize urine and promote diuresis) Adults: 5 Gm. (1 heaping teaspoonful) in water 4 times daily Children: 1-3 Gm. (1/4 to 1/2 teaspoonful) in water 4 times daily</td>
</tr>
<tr>
<td><strong>Sulfadiazine</strong></td>
<td>Streptococcic, staphylococcic, pneumococcic, meningococcic, gonococcic and urinary tract infections.</td>
<td>Adults: Initial: 0.10 Gm/Kg Subsequent: 1 Gm. every 4 hours until temperature has been normal for 72 hours</td>
<td>(To alkalize urine and promote diuresis) Adults: 5 Gm. (1 heaping teaspoonful) in water 4 times daily Children: 1-3 Gm. (1/4 to 1/2 teaspoonful) in water 4 times daily</td>
</tr>
<tr>
<td><strong>Sulfamerazine</strong></td>
<td>Streptococcic, staphylococcic, pneumococcic, meningococcic, gonococcic and urinary tract infections.</td>
<td>Adults: Initial: 3 or 4 Gm. Subsequent: 1 Gm. every 8 hours. Continued for 72 hours after the temperature, pulse, respiration rates return to normal Infants under 6 mos. Initial: 0.5 Gm. Subsequent: 0.25 Gm. every 12 hours Infants 6 mos.-3 yrs. Initial: 1.0 Gm. Subsequent: 0.5 Gm. every 12 hours Children 3-10 yrs. Initial: 1.5 Gm. Subsequent: 1.0 Gm. every 12 hours</td>
<td>(Although incidence of crystalluria is reduced, alkalization is recommended) Adults: 5 Gm. (1 heaping teaspoonful) in water 4 times daily Children: 1-3 Gm. (1/4 to 1/2 teaspoonful) in water 4 times daily (Prophylactically for dehydration and acidosis) Adults: 5 Gm. (1 heaping teaspoonful) in water 4-6 times daily</td>
</tr>
<tr>
<td><strong>Sulfaguanidine</strong></td>
<td>Bacillary dysentery.</td>
<td>Adults: Initial: 0.05 Gm/Kg Subsequent: 0.05 Gm/Kg every 4 hours day and night until number of stools is 5 or less daily; then 0.05 Gm/Kg every 8 hours for at least 3 days</td>
<td></td>
</tr>
</tbody>
</table>
### THE DOSAGE FOR SULFONAMIDES AND ADJUVANT ALKALIES

<table>
<thead>
<tr>
<th>The Sulphonamide</th>
<th>Sucrose-uha-in-thiazole</th>
<th>Initial and Subsequent Doses* (Oral)</th>
<th>Adults:</th>
<th>Preoperatively:</th>
<th>Subsequently:</th>
<th>Postoperatively:</th>
<th>Children:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alka-Zene</strong></td>
<td></td>
<td>Preparatively: 0.5 Gm/Kg daily</td>
<td></td>
<td></td>
<td></td>
<td>0.25 Gm/Kg daily</td>
<td></td>
</tr>
<tr>
<td><strong>Injection for Intra-abdominal surgery</strong></td>
<td></td>
<td>Preparatively: daily for 3 to 5 days</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Dosage statements based on New and Nonofficial Remedies, 1944.

**Alka-Zene** is a granular combination of basic bicarbonate, citrates, and phosphates, administered in water as recommended, it provides the alkaline reserve for increasing fluid intake, prevents diarrhea and retards the urine alkaline.

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### DOSES PROPORTIONATE TO AGE

#### SCALE OF GUY'S HOSPITAL, LONDON

<table>
<thead>
<tr>
<th>Age</th>
<th>Dose</th>
<th>Age</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Month</td>
<td>½</td>
<td>7 and 8 Years</td>
<td>½</td>
</tr>
<tr>
<td>3 Months</td>
<td>½</td>
<td>10 to 12 Years</td>
<td>½</td>
</tr>
<tr>
<td>6 Months</td>
<td>½</td>
<td>13 to 15 Years</td>
<td>¼</td>
</tr>
<tr>
<td>9 Months</td>
<td>½</td>
<td>18 to 20 Years</td>
<td>½</td>
</tr>
<tr>
<td>1 Year</td>
<td>½</td>
<td>21 to 45 Years</td>
<td>1</td>
</tr>
<tr>
<td>2 Years</td>
<td>½</td>
<td>50 Years</td>
<td>½</td>
</tr>
<tr>
<td>3 Years</td>
<td>½</td>
<td>60 to 70 Years</td>
<td>¼</td>
</tr>
<tr>
<td>4 Years</td>
<td>¼</td>
<td>80 to 90 Years</td>
<td>¼</td>
</tr>
<tr>
<td>5 and 6 Years</td>
<td>¼</td>
<td>100 Years</td>
<td>¼</td>
</tr>
</tbody>
</table>

One is used as the unit in this table.

The dose for children may also be calculated by the following methods:

1. Divide the age by the age plus 12; the result will be the proportionate dose. For instance, a child three years old would receive 3 divided by 3 plus 12, that is, one divided by 15, result is ⅕. A child three years old would receive one-fifth of the adult dose. (Young's Rule)

2. Clark's rule:

   \[
   \text{weight of child} \div 150 = \text{X adult dose}
   \]

3. Cowling's rule:

   \[
   \text{age of child at next birthday} \div 24 = \text{X adult dose}
   \]

These rules should not be applied to drugs the action of which is influenced specifically by age nor should they be applied to extremely young children. Doses for infants should be learned as such and not calculated by formula.
<table>
<thead>
<tr>
<th>Substance</th>
<th>Dosage (average)</th>
<th>Source</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estrogens:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketohydroxyestrin (Estrone)</td>
<td>0.2 to 1.0 mg. (2000-10,000 I.U.) intramuscularly one or more times weekly</td>
<td>Human pregnancy urine Placenta Pregnant mare's urine</td>
<td>Menopausal syndrome Senile vaginitis Gonorrheal vaginitis Suppression of lactation Female hypogonadism Menstrual irregularities</td>
</tr>
<tr>
<td>Dihydroxyestrin (Estradiol)</td>
<td>0.083-0.167 mg (10,000-20,000 I.U.) intramuscularly one or more times weekly</td>
<td>Hydrogenation of estrone</td>
<td></td>
</tr>
<tr>
<td>Trihydroxyestrin (Estriol)</td>
<td>0.06 to 0.12 mg. orally one to four times a day</td>
<td>Human pregnancy urine</td>
<td></td>
</tr>
<tr>
<td><strong>Progestrone:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corpus luteum hormone</td>
<td>1.0 to 10.0 mg. (1-10 I.U.) intramuscularly</td>
<td>Animal ovaries Synthetic</td>
<td>Dysmenorrhea Menorrhagia Habitual abortion</td>
</tr>
<tr>
<td><strong>Androgens:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testosterone propionate</td>
<td>5.0 to 25.0 mg. intramuscularly</td>
<td>Testicular tissue Synthetic</td>
<td>Male Eunuchoidism Delayed puberty Falling libido Male climacteric Female Memomotorrhagia Inhibition of lactation After-pains</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Substance</th>
<th>Dosage (average)</th>
<th>Source</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gonadotropic:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chorionic gonadotropin (P.U.)</td>
<td>200-500 I.U. intramuscularly two or three times weekly</td>
<td>Human pregnancy urine Pregnant mare's serum</td>
<td>Cryptorchidism Functional uterine bleeding Amenorrhoe Female sterility Male sterility</td>
</tr>
<tr>
<td>Equine gonadotropin (P.M.S.)</td>
<td>200 to 400 I.U. intramuscularly two or three times weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anterior Pituitary Lobe:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extract Desiccated powder</td>
<td>Not standardized, Preparations are injected intramuscularly</td>
<td>Pituitary body anterior lobe</td>
<td>Symptomatic</td>
</tr>
<tr>
<td>Lactogenic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adrenotropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gonadotropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thyrotropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>—Postulated—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketogenic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycotropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetogenic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parathyrotropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancreatropic hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### HORMONES

**Posterior Pituitary Lobe:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Dosage (average)</th>
<th>Source</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posterior pituitary injection, U.S.P.</td>
<td>Obstetrical, 0.2 to 1.0 cc. (2-10 U.S.P. units)</td>
<td>Pituitary glands</td>
<td>Obstetrical</td>
</tr>
<tr>
<td></td>
<td>Surgical, 1.0 to 2.0 cc. (10-20 U.S.P. units)</td>
<td></td>
<td>Uterine atony</td>
</tr>
<tr>
<td>Alphahypophysamine (oxytocic)</td>
<td>0.3 to 1 cc. (3-10 U.S.P. units)</td>
<td></td>
<td>Postpartum hemorrhage</td>
</tr>
<tr>
<td>Betahypophysamine (pressor)</td>
<td>0.3 to 1 cc. (6-20 pressor units)</td>
<td></td>
<td>Surgical</td>
</tr>
<tr>
<td></td>
<td>The above preparations for hypodermic or intramuscular injection.</td>
<td></td>
<td>Postoperative intestinal paresis and distention</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obstetrical</td>
</tr>
<tr>
<td>Thyroid:</td>
<td></td>
<td></td>
<td>Hypotension</td>
</tr>
<tr>
<td>Thyroid U.S.P.</td>
<td>60 to 120.0 mg., orally</td>
<td>Thyroid glands</td>
<td>Intestinal atony</td>
</tr>
<tr>
<td>Thyroxin U.S.P.</td>
<td>0.2 to 2.0 mg., intravenously</td>
<td>Synthetic</td>
<td>Diabetes insipidus</td>
</tr>
</tbody>
</table>

### Parathyroid:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Dosage (average)</th>
<th>Source</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parathyroid injection U.S.P.</td>
<td>Maintenance: 0.2 to 0.4 cc. (20-40 U.S.P. units)</td>
<td>Parathyroid glands</td>
<td>Hypoparathyroidism</td>
</tr>
<tr>
<td></td>
<td>Critical: 1.0 to 3.0 cc. (100-300 U.S.P. units) For subcutaneous injection</td>
<td></td>
<td>Parathyroid tetany</td>
</tr>
<tr>
<td>Adrenal Medulla:</td>
<td>Epinephrine U.S.P.</td>
<td>Suprarenal glands</td>
<td>Asthmatic paroxysms</td>
</tr>
<tr>
<td></td>
<td>0.06 to 1.0 cc. of 1:1000 solution by subcutaneous injection</td>
<td>Synthetic</td>
<td>Anaphylactic reactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Locally—hemorrhage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Catarhal congestion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glaucoma</td>
</tr>
<tr>
<td>Adrenal Cortex:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adrenal Cortex Extract</td>
<td>Symptomatic (100 to 2500 Dog Units, 2-50 cc. by subcutaneous or intramuscular injection)</td>
<td>Suprarenal glands</td>
<td>Addison's disease</td>
</tr>
<tr>
<td>Desoxycorticosterone</td>
<td>Symptomatic (5.0 to 15.0 mg. by intramuscular injection)</td>
<td>Synthetic</td>
<td>Other adrenal cortex hormone deficiencies</td>
</tr>
<tr>
<td>Insulin</td>
<td>Average Gm. of d-glucose excreted = 1.5 Sufficient units to render aglycosuric (1 unit = 1/22 mg. of zinc insulin crystals) For subcutaneous administration</td>
<td>Fresh pancreatic glands</td>
<td>Shock</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Malnutrition (selected cases)</td>
</tr>
</tbody>
</table>

### Insulin:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Dosage (average)</th>
<th>Source</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Gm. of d-glucose excreted = 1.5 Sufficient units to render aglycosuric (1 unit = 1/22 mg. of zinc insulin crystals)</td>
<td>Fresh pancreatic glands</td>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td></td>
<td>For subcutaneous administration</td>
<td></td>
<td>Malnutrition (selected cases)</td>
</tr>
<tr>
<td>Substance</td>
<td>Therapeutic Indications</td>
<td>Dosage</td>
<td>Sources</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
<td>-------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Estrogen</td>
<td>Menorrhagia</td>
<td>0.1 to 1.0 mg. orally per day</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Estradiol</td>
<td>Menorrhagia</td>
<td>0.5 to 1.5 mg. orally per day</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Progesterone</td>
<td>Menorrhagia</td>
<td>5.0 to 10.0 mg. orally per day</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Anhydrogestrone</td>
<td>Menorrhagia</td>
<td>10.0 to 50.0 mg. orally per day</td>
<td>Synthetic</td>
</tr>
</tbody>
</table>

**For Vitamin Production of Vitamin A, see pages 543-544.**
### THE VITAMINS
For Vitamin Products of William R. Warner & Co., Inc. see pages 440-441

<table>
<thead>
<tr>
<th>Name</th>
<th>Therapeutic Indication</th>
<th>Sources</th>
<th>Daily Requirements*</th>
<th>Therapeutic Doses</th>
</tr>
</thead>
</table>
| **Riboflavin**  
(vitamin B₂ or G)  
Water Soluble. | Facial seborrheic dermatitis, photophobia, cheilitis, specific glossitis. | Bran  
Enriched white bread.  
Yeast  
Milk and dairy products.  
Liver  
Green vegetables  
Crystalline riboflavin. | Man (70 Kg.) 2.2-3.3 mg.  
Woman (56 Kg.) 1.8-2.7 mg.  
Pregnancy (latter half) 2.5 mg.  
Lactation 3.0 mg.  
Children:  
under 1 year 0.6 mg.  
1-12 years 0.9-1.8 mg.  
Girls 13-20 years 2.0-1.8 mg.  
Boys 13-20 years 2.4-3.0 mg. | 5-15 mg. daily. |
| **Niacin**  
(nicotinic acid, nicotinamide, anti-pellagra vitamin)  
Water Soluble. | Characteristic symptoms of pellagra such as anorexia, dermatitis, stomatitis, diarrhea and mental disturbances. Alcoholic pellagra. | Bran  
Liver  
Yeast  
Enriched bread  
Peanuts  
Crystalline niacin and niacinamide. | Man (70 Kg.) 15-23 mg.  
Woman (56 Kg.) 12-18 mg.  
Pregnancy (latter half) 18 mg.  
Lactation 25 mg.  
Children:  
under 1 year 4 mg.  
1-12 years 6-12 mg.  
Girls 13-20 years 14-12 mg.  
Boys 13-20 years 16-20 mg. | 50-500 mg. daily. |
| **Pyridoxine**  
(vitamin B₆)  
Water Soluble. | In treatment of Parkinsonism, amyotrophic lateral sclerosis, muscular dystrophy and atrophy. Well defined symptoms have not been described in man. | Egg yolk  
Wheat germ  
Yeast  
Rice polishings  
Whole grains  
Crystalline pyridoxine hydrochloride. | Not determined. | 10 to 15 mg. by oral or parenteral administration. |
| **Pantothenic Acid**  
Water Soluble. | Human deficiency symptoms have not been described. Clinical observations, however, indicate that pantothenic acid is essential to human nutrition. | Liver  
Molasses  
Peanuts  
Yeast  
Wheat bran  
Wheat germ  
Crystalline calcium pantothenate. | Not determined. | Daily doses of 10 to 50 mg. have been suggested. |
| **Vitamin C**  
(ascorbic acid, cevamic acid)  
1 U.S.P. or I.U. = 50 micrograms of ascorbic acid. | Manifestations of scurvy such as hemorrhages, edema, loosening of the teeth, gingivitis, interference with wound healing. Mild symptoms such as spongy gum, malaise and weakness. | Fresh fruits  
Fruit juices  
Green vegetables  
Cabbage  
Peppers  
Crystalline ascorbic acid. | Man (70 Kg.) 75 mg.  
Woman (56 Kg.) 70 mg.  
Pregnancy (latter half) 100 mg.  
Lactation 150 mg.  
Children:  
under 1 year 30 mg.  
1-12 years 35-75 mg.  
Girls 13-20 years 80 mg.  
Boys 13-20 years 90-100 mg. | 100 mg. daily in addition to amount supplied by the diet. |
### The Vitamins

**For Vitamin Products of William R. Warner & Co., Inc. see pages 440-441**

<table>
<thead>
<tr>
<th>Name</th>
<th>Therapeutic Indication</th>
<th>Sources</th>
<th>Daily Requirements*</th>
<th>Therapeutic Doses</th>
</tr>
</thead>
</table>
| **Vitamin D**  
(antirachitic vitamin)  
1 U.S.P. or I.U.= 0.025 micrograms of calciferol  
Fat Soluble. | Rickets, enlarged joints, curved spine, beaded ribs, soft bones, tetany, osteoporosis, osteomalacia, low blood phosphorus or serum phosphatase, defective teeth. | Fish liver oils and concentrates.  
Calciferol  
Irradiated 7-dehydrocholesterol.  
Irradiated milk and foods. | Children under 1 year......400-800 I.U.  
Pregnancy (later half)......400-800 I.U.  
Lactation ..................40-800 I.U. | 1,000 to 20,000 I.U. units daily. |
| **Vitamin E**  
Fat Soluble. | Vitamin E deficiency in human beings has not been described. In experimental animals vitamin E deficiency produces sterility and muscular dystrophy. | Wheat germ oil  
Corn oil  
Cottonseed oil  
Lettuce  
Crystalline alpha-tocopherol acetate. | Not determined. | 50-100 mg. daily for treatment of certain types of ovarian failure, threatened abortion and muscular dystrophy. |
| **Vitamin K**  
(2 methyl-3-phytyl 1,4-naphthoquinone)  
Fat Soluble.  
Menadione  
(2 methyl 1,4 naphthoquinone) | Prolongation of prothrombin clotting time. Hemorrhagic disease of newborn and in cases of obstructive jaundice. | Cabbage  
Cauliflower  
Kale  
Spinach and other green vegetables. | Not determined. | In obstructive jaundice 1 to 2 mg. of Menadione orally or intramuscularly.  
For prevention of hypoprothrombinemia of newborn 1 to 2 mg. of Menadione. |

---

### Newer Factors of the "B" Complex

**Biotin**—Anti-egg white injury factor, role in human nutrition has not been determined.

**Choline**—Hydroxyethyl trimethyl ammonium hydroxide. Essential for normal fat metabolism in experimental animals.

**Folic Acid**—Required by certain lactic acid forming bacteria. Role in human nutrition not established.

**Inositol**—Hexahydroxy cyclohexane. Prevents loss of hair in mice. Role in human nutrition not established.

**Para-aminobenzoic acid**—Growth factor for chicks and bacteria. Role in human nutrition not established.

### Vitamin Units

**Vitamin A**
One I.U. or U.S.P. unit=0.6 microgram of beta carotene

**Vitamin B₁**
One I.U. or U.S.P. unit=3.0 micrograms of thiamine hydrochloride

**Vitamin C**
One I.U. unit=0.05 milligrams of ascorbic acid

**Vitamin D**
One I.U. or U.S.P. unit=0.025 micrograms of calciferol

**Note:** 1000 micrograms=1 milligram  
1 International Unit (I.U.)=1 U.S.P. unit

### Minimum Daily Adult Vitamin Requirements

- **Vitamin A**..................4000 U.S.P. units  
- **Vitamin B₁**..................1.0 milligrams  
- **Vitamin B₂**..................2.0 milligrams  
- **Vitamin C**..................30.0 milligrams  
- **Vitamin D**..................400 U.S.P. units

†Official regulations for the labeling of special dietary foods as announced by the Food and Drug Administration in the Federal Register (Nov. 22, 1941).
### TABLES OF APPROXIMATE EQUIVALENTS OF DOSES, APOTHECARY'S AND METRIC SYSTEMS

<table>
<thead>
<tr>
<th>Apothecary</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td></td>
</tr>
<tr>
<td>1 ounce</td>
<td>30 grams (Gm.)</td>
</tr>
<tr>
<td>4 dram</td>
<td>15 grams (Gm.)</td>
</tr>
<tr>
<td>2 1/2 drams</td>
<td>10 grams (Gm.)</td>
</tr>
<tr>
<td>2 dram</td>
<td>8 grams (Gm.)</td>
</tr>
<tr>
<td>75 grains</td>
<td>5 grams (Gm.)</td>
</tr>
<tr>
<td>1 dram</td>
<td>4 grams (Gm.)</td>
</tr>
<tr>
<td>45 grains</td>
<td>3 grams (Gm.)</td>
</tr>
<tr>
<td>30 grains</td>
<td>2 grams (Gm.)</td>
</tr>
<tr>
<td>15 grains</td>
<td>1 gram (Gm.)</td>
</tr>
<tr>
<td>10 grains</td>
<td>6.65 gram (Gm.)</td>
</tr>
<tr>
<td>7 1/2 grains</td>
<td>6.5 gram (Gm.)</td>
</tr>
<tr>
<td>7 grains</td>
<td>6.46 gram (Gm.)</td>
</tr>
<tr>
<td>6 grains</td>
<td>0.64 gram (Gm.)</td>
</tr>
<tr>
<td>5 grains</td>
<td>0.62 gram (Gm.)</td>
</tr>
<tr>
<td>4 grains</td>
<td>0.62 gram (Gm.)</td>
</tr>
<tr>
<td>5 grains</td>
<td>0.6 gram (Gm.)</td>
</tr>
<tr>
<td>2 1/2 grains</td>
<td>0.61 gram (Gm.)</td>
</tr>
<tr>
<td>2 grains</td>
<td>0.6 gram (Gm.)</td>
</tr>
<tr>
<td>1 1/2 grains</td>
<td>0.61 gram (Gm.)</td>
</tr>
<tr>
<td>1 grain</td>
<td>0.65 milligrams (mg.)</td>
</tr>
<tr>
<td>5/6 grain</td>
<td>0.62 milligrams (mg.)</td>
</tr>
<tr>
<td>7/8 grain</td>
<td>0.57 milligrams (mg.)</td>
</tr>
<tr>
<td>1/2 grain</td>
<td>0.54 milligrams (mg.)</td>
</tr>
<tr>
<td>1/4 grain</td>
<td>0.3 milligrams (mg.)</td>
</tr>
<tr>
<td>1/6 grain</td>
<td>0.15 milligrams (mg.)</td>
</tr>
<tr>
<td>1/8 grain</td>
<td>0.075 milligrams (mg.)</td>
</tr>
</tbody>
</table>

| Liquid Measures | Apothecary | Metric |
|-----------------|------------|
| 1 pint          | 480 cubic centimeters (cc.) |
| 12 fluid ounces | 360 cubic centimeters (cc.) |
| 8 fluid ounces  | 240 cubic centimeters (cc.) |
| 6 fluid ounces  | 200 cubic centimeters (cc.) |
| 4 fluid ounces  | 120 cubic centimeters (cc.) |
| 3 fluid ounces  | 100 cubic centimeters (cc.) |
| 2 fluid ounces  | 80 cubic centimeters (cc.)  |
| 1 1/2 fluid ounces| 50 cubic centimeters (cc.)  |
| 1 fluid ounce   | 30 cubic centimeters (cc.)  |
| 5/6 fluid ounce | 25 cubic centimeters (cc.)  |
| 5 1/2 fluid ounces| 20 cubic centimeters (cc.)  |
| 4 fluid drams   | 15 cubic centimeters (cc.)  |
| 2 1/2 fluid drams| 10 cubic centimeters (cc.)  |
| 2 fluid drams   | 7 1/2 cubic centimeters (cc.) |
| 1 fluid dram    | 5 cubic centimeters (cc.)   |
| 65 minims       | 4 cubic centimeters (cc.)   |
| 1 fluid dram    | 3.7 cubic centimeters (cc.) |
| 50 minims       | 3 cubic centimeters (cc.)   |
| 45 minims       | 2.8 cubic centimeters (cc.) |
| 32 minims       | 2 cubic centimeters (cc.)   |
| 30 minims       | 1.8 cubic centimeters (cc.) |
| 20 minims       | 1.2 cubic centimeters (cc.) |
| 16 minims       | 1 cubic centimeter (cc.)    |
| 15 minims       | 0.5 cubic centimeter (cc.)  |
| 12 minims       | 0.75 cubic centimeter (cc.) |
| 10 minims       | 0.6 cubic centimeter (cc.)  |
| 8 minims        | 0.5 cubic centimeter (cc.)  |
| 5 minims        | 0.3 cubic centimeter (cc.)  |
| 3 minims        | 0.18 cubic centimeter (cc.) |
| 1 1/2 minims    | 0.1 cubic centimeter (cc.)  |
| 1 minim         | 0.06 cubic centimeter (cc.) |

### EQUIVALENTS OF GREATER ACCURACY

<table>
<thead>
<tr>
<th>1 Gm. = 15.43 grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gm. = 0.3572 dram</td>
</tr>
<tr>
<td>1 Gm. = 0.03215 Troy ounce</td>
</tr>
<tr>
<td>1 Gm. = 0.03527 Avoirdupois ounce</td>
</tr>
<tr>
<td>1 Gm. = 0.0022 Avoirdupois pound</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 grain = 0.068 gram (Gm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 grain = 64.8 milligrams (mg.)</td>
</tr>
<tr>
<td>1 dram = 3.888 grams (Gm.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 Troy or Apothecary ounce = 31.1 grams (Gm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Avoirdupois ounce = 28.35 grams (Gm.)</td>
</tr>
<tr>
<td>1 Avoirdupois pound = 453.6 grams (Gm.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 cubic centimeter = 16.23 minims</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 milliliter = 0.2705 fluid dram</td>
</tr>
<tr>
<td>1 milliliter = 0.0288 fluid ounce</td>
</tr>
<tr>
<td>1 milliliter = 0.00211 pint</td>
</tr>
<tr>
<td>1 milliliter = 0.000264 gallon</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 minim = 0.06161 cubic centimeters (cc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 fluid dram = 2.6966 cubic centimeters (cc.)</td>
</tr>
<tr>
<td>1 fluid ounce = 29.57 cubic centimeters (cc.)</td>
</tr>
<tr>
<td>1 pint = 473 cubic centimeters (cc.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 teaspoon holds 4 to 7 cc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 dessert spoon holds 9 to 14 cc.</td>
</tr>
<tr>
<td>1 tablespoon holds 15 to 22 cc.</td>
</tr>
<tr>
<td>1 wine glass holds 50 to 90 cc.</td>
</tr>
<tr>
<td>1 teacup holds 125 to 240 cc.</td>
</tr>
<tr>
<td>1 tumbler holds 200 to 300 cc.</td>
</tr>
</tbody>
</table>

*J.A.M.A., 124:569 (Feb. 19), 1944*
### Formulæ for Feeding

<table>
<thead>
<tr>
<th>Age</th>
<th>Whole Milk, Ounces</th>
<th>Boiled Water, Ounces</th>
<th>Sugar, Ounces</th>
<th>Feedings in 24 Hours</th>
<th>Number of Feedings in 24 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 week</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2 weeks</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>1 month</td>
<td>14</td>
<td>10</td>
<td>1½</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>3 months</td>
<td>18</td>
<td>7</td>
<td>1½</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>4 months</td>
<td>22</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6 months</td>
<td>26</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>8 months</td>
<td>32</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>12 months</td>
<td>32</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

After the first month, the juice of an half orange, diluted with boiled water, may be given every morning. Cod liver oil every morning between the first and second feedings.

After the second month, raw carrot juice, one or two tablespoonsfuls, made by extracting the juice of ground carrots, added to the milk at the 2 o'clock feeding. Between the fourth and sixth months, cereals, green vegetables, purées, and meat broths are added to the diet.

Boiled water between feedings, two or more times daily.

**Feeding hours:**
- 6 times daily—6, 10 A.M.; 2, 6, 10 P.M.; 2 A.M.
- 5 times daily—Omit 2 A.M.
- 4 times daily—8 A.M., 12 Noon, 3, 6 P.M.

Two level tablespoonsfuls equal 1 oz. of sugar. Two level tablespoonsfuls of dextroitolose or brown Karo syrup correspond to one level tablespoonsful of sugar. To avoid constipation, it is advisable to use at least one half of the required quantity of sugar, and only the other half in the form of a sugar substitute.

### Diagnostic Indications from the Stools of Infants

**ODOR:**
- Aromatic—breast milk.
- Putrefactive—cow’s milk.
- Foetid—excess of protein.
- Offensive sour—excess of starch.
- Acid—excess of sugar.

**COLOR:**
- Dark brown—starvation, malt soup extract, swallowed argyrol, changed blood.
- Foamy gray—high starch.
- Green—sugar.
- Mucus—frequency due to use of castor oil.
- Curds indicate only rapid peristalsis.
- Undigested masses, especially of vegetables, are merely indigestible cellulose fibers.
### FOODS THAT PROVIDE A BLAND DIET IN PEPTIC ULCER

Obviously, a specific dietary regimen which will reduce epigastric pain and permit healing can be devised only by the attending physician, after due consideration of the individual patient’s particular condition. So many variable factors must be considered in each case that only a somewhat general list of foods that provide a bland diet can be given here:

**SOUPS:**  
Cream or purée of all vegetables except tomatoes.

**FISH:**  
Fresh cod, halibut or bass boiled or broiled, with cream sauce.

**MEATS:**  
Once daily, scraped beef, broiled lamb or mutton chop, roast lamb, chicken or turkey—no gravy.

**EGGS:**  
Any style except fried.

**FARINACEOUS:**  
Fine-grained cereals such as Cream of Wheat, Wheatena, Farina, with cream and sparingly of sugar; rice; tapioca; spaghetti; toast, dry bread or hard rolls.

**VEGETABLES:**  
Potatoes baked, mashed or creamed; rice, all soft-boiled green vegetables except cabbage, cauliflower, onions, Brussels sprouts and turnips.

**FRUITS:**  
Orange juice (strained), stewed or cooked fruits with small amount of sugar.

**FATTY FOODS:**  
Plentifully of milk, cream and butter; olive oil and mayonnaise.

**DESSERTS:**  
All cream and egg desserts such as junket, custard, rice, tapioca and bread puddings; Jello; stewed or cooked fruit.

**BEVERAGES:**  
Plentifully of plain water; milk, cocoa, malted milk. Coffee and tea may be used in moderation if desired.

**AVOID:**  
Condiments, all sour, spicy and peppery foods. All fried foods and rich gravies. Pastry and sweets of all kinds; hot breads. Foods with roughage such as bran, fruit skins and fruits containing seeds. Carbonated or alcoholic beverages. Tobacco.

In the treatment of peptic ulcer the administration of ‘Gelusil’* Adsorbent Antacid in conjunction with a bland diet has been found effective. This preparation, which is composed of specially prepared nonreactive aluminum hydroxide and magnesium trisilicate, has the important advantage of being nonconstipating.

REDUCING DIET

Soups: Clear soups and broths, vegetable soup, made with little fat.
Cereals: Occasionally, the coarse kind, served with skimmed milk.
Bread: One slice at a meal.
Eggs: Boiled or poached, not fried or prepared with butter, cream or fat.
Dairy Products: Cheese made with skimmed milk: Swiss cheese, cottage cheese.
Fish and Meats: Lean beef and pork, roasted or boiled. Lean chicken and turkey roasted or boiled. Lamb chops. Boiled or broiled fish. All small portions.
Vegetables: Greens, asparagus, string beans, green peas, cabbage, cauliflower, Brussels sprouts, onions, turnips, rutabagas, spinach, parsnips, carrots, mushrooms, watercress, green olives. Potatoes once or twice a week. Only enough butter for seasoning. No gravies.
Desserts: Fresh fruits only. Ices and gelatins sweetened with saccharin or very little sugar.
Fruits: All raw fruits, except bananas. Very little cooked fruit.
Beverages: Buttermilk, skimmed milk, coffee or tea or cereal coffee without sugar or cream.
To Be Avoided: Butter, cream, oily salad dressings, unless made with mineral oil. Fats of all kinds, cereal foods, potatoes, sweets of all kinds. All these must be taken very sparingly.

FOODS THAT INCREASE WEIGHT

<table>
<thead>
<tr>
<th>Portions to give 100 calories</th>
<th>Portions to give 100 calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacon, fat 1 tablespoonful</td>
<td>Honey 1 tablespoonful</td>
</tr>
<tr>
<td>Butter 1 tablespoonful</td>
<td>Maple sugar 4 tablespoonfuls</td>
</tr>
<tr>
<td>Cheese, American 1 1/4 inch cube</td>
<td>Maple syrup 1 1/4 tablespoonfuls</td>
</tr>
<tr>
<td>Corn syrup 1 1/2 tablespoonfuls</td>
<td>Oleomargarine 1 tablespoonful</td>
</tr>
<tr>
<td>Cream, thick 1 1/4 tablespoonfuls</td>
<td>Olive oil or other</td>
</tr>
<tr>
<td>Cream, thin 1/4 cup</td>
<td>Vegetable oil 1 tablespoonful</td>
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<tr>
<td>Cream, whipped 2 tablespoonfuls</td>
<td>Pecans 10 to 13</td>
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<tr>
<td>Dates 3 or 4</td>
<td>Raisins 1/4 cup</td>
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<tr>
<td>Eggs 1 3/4 small—1 large</td>
<td>Rice, steamed 3/4 cup</td>
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<tr>
<td>English walnuts About 12 medium size</td>
<td>Sugar, brown 2 tablespoonfuls</td>
</tr>
<tr>
<td>Figs 2 medium size</td>
<td>Sugar, white 2 tablespoonfuls</td>
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<tr>
<td>Hickory nuts 16 average size</td>
<td>Whole milk 3/4 cup</td>
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</tbody>
</table>

DENTITION TABLE

ORDER OF APPEARANCE

Central incisors 1 6th to 8th month
Lateral incisors 2 8th to 12th month
Canines 4 16th to 20th month
1st molars 3 12th to 16th month
2d molars 5 20th to 30th month

MILK TEETH

The first teeth begin to appear at the sixth to eighth month and are completed by the second year. There are wide variations as to time, and considerable irregularity in the order of appearance of the teeth. The lower teeth generally come first; the corresponding upper teeth next.
The full primary dentition is twenty teeth; ten in each jaw.

ORDER OF APPEARANCE

Central incisors 2 6th to 9th year
Lateral incisors 3 7th to 10th year
Canines 6 or 5 9th to 14th year
1st bicuspids 4 9th to 13th year
2d bicuspids 5 or 6 11th to 14th year
1st molars 1 5th to 8th year
2d molars 7 10th to 14th year
3d molars 8 16th to 22nd year

PERMANENT TEETH

The full permanent dentition is thirty-two teeth; sixteen in each jaw.
IDEAL WEIGHTS FOR MEN—AGES 25 AND OVER

<table>
<thead>
<tr>
<th>HEIGHT (with shoes)</th>
<th>WEIGHTS IN POUNDS (as ordinarily dressed)</th>
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<tbody>
<tr>
<td>Feet</td>
<td>Inches</td>
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IDEAL WEIGHTS FOR WOMEN—AGES 25 AND OVER

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<th>HEIGHT (with shoes)</th>
<th>WEIGHTS IN POUNDS (as ordinarily dressed)</th>
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Metropolitan Life Insurance Company, Statistical Bureau, June 1943

AVERAGE WEIGHTS AND MEASURES OF ADULT HUMAN ORGANS

Brain: Weight: male, 50 ounces; female, 44 ounces.
Heart: Weight: male, 10 to 12 ounces; female, 8 to 10 ounces. Measurements: 5 inches long, 3 1/2 inches broad, 2 1/2 inches thick.
Lung: Weight: right, 23 ounces; left, 19 ounces. Very variable.
Stomach: Weight: 4 1/2 to 5 ounces. Measurements: 10 to 12 inches long, 4 to 5 inches wide.
Liver: Weight: 45 to 60 ounces. Measurements: transverse, 10 to 12 inches; antero-posterior, 6 to 7 inches.
Pancreas: Weight: 3 ounces. Measurements: 6 to 8 inches long, 1 1/2 inches broad.
Spleen: Weight: 5 to 7 ounces. Measurements: 5 inches long, 3 inches broad, 1 1/2 inches thick.
Kidney: Weight: 4 1/2 to 5 1/2 ounces. Measurements: 4 inches long, 2 1/2 inches broad, 1 1/2 inches thick.
The average weight and size of all these organs are less in the female than the male.

Metropolitan Life Insurance Company, Statistical Bureau, June 1943
## BOYS FROM 6 TO 16 YEARS

Average weight in pounds for each specified age (with clothes)

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U. S. Department of Labor  
Children's Bureau  

## GIRLS FROM 6 TO 16 YEARS

Average weight in pounds for each specified age (with clothes)

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U. S. Department of Labor  
Children's Bureau  
### Boys Under 6 Years

Average weight in pounds for each specified age (without clothes)

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U. S. Department of Labor
Children's Bureau

### Girls Under 6 Years

Average weight in pounds for each specified age (without clothes)

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U. S. Department of Labor
Children's Bureau
NORMAL FINDINGS

BLOOD

Erythrocytes (red cells) 4,500,000,000-5,000,000,000 per cubic mm.
Leukocytes (white cells) 5,000-8,000 per cubic mm.
Hemoglobin 90-105 per cent (14-17 gm. per cent)
Color index 0.9-1.05
Coagulation time 4-6 min
Bleeding time 1-2 min

DIFFERENTIAL WHITE COUNT

Polymorphonuclears 60-70 per cent
Segmented polys 50-66 per cent
Stab cells (rod nuclei) 3-5 per cent
Juveniles (metamyelocytes) 0-1 per cent
Myelocytes 0 per cent
Small lymphocytes 20-22 per cent
Large lymphocytes (monocytes) 3-6 per cent
Eosinophiles 1-2 per cent
Basophiles 0.5-1 per cent

BLOOD CHEMISTRY

Urea nitrogen (w.b.) 10-15 mg. per 100 cc.
Glucose (w.h.) 80-110 mg. per 100 cc.
Uric acid (w.b.) 2-4 mg. per 100 cc.
Non-protein nitrogen (w.b.) 25-35 mg. per 100 cc.
Creatinine (w.b.) 1.2 mg. per 100 cc.
Calcium (s) Milli-equivalents per liter 4.3-5.5
Sodium (s) Milli-equivalents per liter 135-148
Potassium (s) Milli-equivalents per liter 4.5-6
Phosphorus (s, inorganic) 3.4 mg. per 100 cc.
Chlorides (s, as NaCl) 570-620 mg. per 100 cc.
Bilirubin (s, Van den Bergh method) Direct: negative
Indirect: 0.10-0.25 mg. per 100 cc.
Albumin (s) 200-450 mg. per 100 cc.
Globulin (s) 40-50 mg. per 100 cc.
Total protein (s) 6.0-7.5 gm. per 100 cc.
Phosphatase (s, Bodansky) . acid: 0.0-1.2 units
. alkaline: 2.0-9.0 units
CO2 capacity (p) 50-70 volume %
Hydrogen ion concentration (s) pH 7.35

URINE

Amount in 24 hours 1200-1500 cc.
Color Light to amber
Specific Gravity 1.017-1.020
Reaction to litmus pH 4.8-7.5 (mean 5.3)
Total acidity 554-669 cc. N/10 NaOH in 24-hr. spec.
Urea 25.0-35.0 (mean 30) gm. in 24-hr. spec.
Organic solubles 30-40 (mean 35) gm. in 24-hr. spec.
Inorganic solubles 20-30 (mean 25) gm. in 24-hr. spec.
Uric acid 0.4-1.0 gm. in 24-hr. spec.
Ammonia 0.5-1.0 gm. in 24-hr. spec.
Chlorides 10-15 (mean 13) gm. in 24-hr. spec.
Phosphates 2.5-3.5 gm. in 24-hr. spec.
Sulfates 1.5-3.5 gm. in 24-hr. spec.
Total solids 53-70 (average 60) gm. in 24-hr. spec.
Phenolsulfonephthalein test 40-50 per cent by end 1st hr.
Phenolsulfonephthalein test 60-75 per cent by end 2nd hr.

GASTRIC CONTENTS

Quantity (one hour after Ewald meal) 40-800 cc.
Total acidity 0.40-70 deg. (cc. N/10 NaOH per 100 cc.)
Free HCl 0.30-40 deg. (cc. N/10 NaOH per 100 cc.)
Combined HCl 0.15-20 deg. (cc. N/10 NaOH per 100 cc.)
Organic acids and acid salts 3.5 deg. (cc. N/10 NaOH per 100 cc.)

CEREBROSPINAL FLUID

Color Clear-colorless
Reaction Slightly alkaline
Calcium 2.5-11.6 mg. per 100 cc.
Magnesium 3.0 mg. per 100 cc.
Chlorides 740 mg. per 100 cc.
Glucose 0.04-0.07 gm. per 100 cc.
Protein Trace
Total solids 0.876-1.2 gm. per 100 cc.
Cytology 1 to 7 (max. 10) cells per cubic mm.
Pressure 60-100 mm. (water manometer)
Specific Gravity 1.001-1.010
### Average Normal Blood Pressure

<table>
<thead>
<tr>
<th>Age</th>
<th>Systolic</th>
<th>Diastolic</th>
<th>Pulse Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 years</td>
<td>103</td>
<td>70</td>
<td>33</td>
</tr>
<tr>
<td>15 years</td>
<td>113</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>20 years</td>
<td>120</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>25 years</td>
<td>122</td>
<td>81</td>
<td>41</td>
</tr>
<tr>
<td>30 years</td>
<td>123</td>
<td>82</td>
<td>41</td>
</tr>
<tr>
<td>35 years</td>
<td>124</td>
<td>83</td>
<td>41</td>
</tr>
<tr>
<td>40 years</td>
<td>126</td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>45 years</td>
<td>128</td>
<td>85</td>
<td>43</td>
</tr>
<tr>
<td>50 years</td>
<td>130</td>
<td>86</td>
<td>44</td>
</tr>
<tr>
<td>55 years</td>
<td>132</td>
<td>87</td>
<td>45</td>
</tr>
<tr>
<td>60 years</td>
<td>135</td>
<td>89</td>
<td>46</td>
</tr>
</tbody>
</table>

### Pulse Rate at Different Ages

In health the pulse varies according to certain conditions, such as age, sex, temperament, exercise, excitement, food and temperature. The heart's action is generally more frequent in females than in males.

<table>
<thead>
<tr>
<th>Age</th>
<th>Per minute</th>
<th>Age</th>
<th>Per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>130 to 150</td>
<td>2 to 4 years</td>
<td>90 to 110</td>
</tr>
<tr>
<td>1st month</td>
<td>120 to 140</td>
<td>6 to 10 years</td>
<td>90 to 100</td>
</tr>
<tr>
<td>1 to 6 months</td>
<td>About 130</td>
<td>10 to 14 years</td>
<td>80 to 90</td>
</tr>
<tr>
<td>6 to 8 months</td>
<td>About 120</td>
<td>Adult age</td>
<td>Average 72</td>
</tr>
<tr>
<td>1 to 2 years</td>
<td>110 to 120</td>
<td>Old age</td>
<td>Average 67</td>
</tr>
</tbody>
</table>

### Respiration Rate at Different Ages

- Newborn: 30 to 50
- Balance of 1st year: 25 to 35
- 1 to 2 years: About 28

### Temperatures

- Hyperpyrexia: 105°F. and over
- High fever: 103°F. to 105°F.
- Moderate fever: 101°F. to 103°F.
- Low fever: 100°F. to 101°F.
- Subfebrile: 99°F. to 100°F.
- Normal: 98.6°F.
- Subnormal: 97°F. to 98.6°F.
- Collapse: 95°F. to 97°F.
- Algid collapse: Below 95°F.

### Centigrade and Fahrenheit Equivalents

To convert centigrade degrees into Fahrenheit degrees—Multiply the number of centigrade degrees by 9/5 and add 32 to the result.

To convert Fahrenheit degrees into centigrade degrees—Subtract 32 from the number of Fahrenheit degrees and multiply the difference by 5/9.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>-17</td>
<td>+1.4</td>
<td>7</td>
<td>44.6</td>
<td>31</td>
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<td>55</td>
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<td>48.2</td>
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<td>50.0</td>
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<td>8.6</td>
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<td>51.8</td>
<td>35</td>
<td>95.0</td>
<td>59</td>
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<td>53.6</td>
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<td>102.2</td>
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<td>32.0</td>
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<td>48</td>
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<td>72</td>
<td>161.6</td>
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<td>+1</td>
<td>33.8</td>
<td>25</td>
<td>77.0</td>
<td>49</td>
<td>120.2</td>
<td>73</td>
<td>163.4</td>
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<tr>
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<td>26</td>
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<td>74</td>
<td>165.2</td>
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<td>37.4</td>
<td>27</td>
<td>80.6</td>
<td>51</td>
<td>123.8</td>
<td>75</td>
<td>167.0</td>
</tr>
<tr>
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<td>39.2</td>
<td>28</td>
<td>82.4</td>
<td>52</td>
<td>125.6</td>
<td>76</td>
<td>168.8</td>
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<tr>
<td>5</td>
<td>41.0</td>
<td>29</td>
<td>84.2</td>
<td>53</td>
<td>127.4</td>
<td>77</td>
<td>170.6</td>
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<tr>
<td>6</td>
<td>42.8</td>
<td>30</td>
<td>86.0</td>
<td>54</td>
<td>129.2</td>
<td>78</td>
<td>172.4</td>
</tr>
</tbody>
</table>

### Table of pH Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>pH Range</th>
<th>Color Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl orange</td>
<td>2.9-4.0</td>
<td>Red-yellow</td>
</tr>
<tr>
<td>Bromphenol blue</td>
<td>2.8-4.6</td>
<td>Yellow-blue</td>
</tr>
<tr>
<td>Methyl red</td>
<td>4.4-6.0</td>
<td>Red-yellow</td>
</tr>
<tr>
<td>Bromcresol purple</td>
<td>5.2-6.8</td>
<td>Yellow-purple</td>
</tr>
<tr>
<td>Bronthymol blue</td>
<td>6.0-7.6</td>
<td>Yellow-blue</td>
</tr>
<tr>
<td>Phenol red</td>
<td>6.8-8.4</td>
<td>Yellow-red</td>
</tr>
<tr>
<td>Thymol blue</td>
<td>8.0-9.6</td>
<td>Yellow-blue</td>
</tr>
<tr>
<td>Thymolphthalein</td>
<td>9.3-10.5</td>
<td>Colorless-blue</td>
</tr>
</tbody>
</table>
### Symptoms and Treatment of Acute Poisoning

Unless otherwise stated, oral poisoning is to be understood.

The **lethal dose for adults**—taken in a single dose—is of course an indefinite figure.

It is to be understood that smaller doses have been taken with lethal effect, while larger quantities have not proved fatal.

<table>
<thead>
<tr>
<th>Poison</th>
<th>Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACIDS</strong>&lt;br&gt;Sulfuric acid.&lt;br&gt;Lethal dose 1 to 2½ drams.&lt;br&gt;Nitric acid.&lt;br&gt;Lethal dose 1½ to 2 drams.&lt;br&gt;Hydrochloric acid.&lt;br&gt;Chromic acid.&lt;br&gt;Lethal dose up to 5 drams.</td>
<td>Erosion of the corners of the mouth, the mucous membrane of the mouth, pharynx, esophagus and stomach; white, later black, erosion (nitric acid leaves yellow spots; chromic acid leaves orange-yellow spots in mouth). Severe pain on swallowing. Vomiting of brownish-black matter (if nitric acid, yellowish). Strong salivation. Edema of the glottis, from inhalation of fuming nitric acid; bloody, dysenteric stools, perforation of the stomach, hema-turia, collapse, small, rapid pulse, cramps. In severe cases rapid death from acidosis.</td>
<td>For erosion of the esophagus and stomach, see caustic alkalies. For injury to air passages, inhalation of very dilute vinegar or lemon juice solutions, hot vapor.</td>
</tr>
<tr>
<td><strong>ALCOHOL</strong>&lt;br&gt;Lethal dose undetermined.&lt;br&gt;Adults, from 10 ozs. up; children, 1½ ozs.</td>
<td>Restlessness, excitement, eventually delirium and raging, staggering, stupor, coma, small, slow pulse, lowered temperature, general paralysis. Delirium tremens.</td>
<td>Wash out stomach. Tea; tannic acid or tannin, magnesia, charcoal, mucilaginous drinks, charcoal.</td>
</tr>
<tr>
<td><strong>ALKALIES</strong>&lt;br&gt;Caustic soda.&lt;br&gt;Liquor potassae.&lt;br&gt;Lethal dose about 150 to 300 grains.</td>
<td>Little or no erosion of the lips and mucous membrane of the mouth, difficulty in swallowing, salivation, bloody vomiting, bloody stools, increased pulse rate. Urine alkaline.</td>
<td>Gastric lavage, charcoal, artificial respiration, oxygen inhalation, blood transfusion. Camphorated oil. For nitrobenzol, no oily or alcoholic substances. Rest in cool, dark place.</td>
</tr>
<tr>
<td><strong>AMMONIA</strong>&lt;br&gt;Lethal dose of caustic ammonia solution 1 oz.</td>
<td>Drink freely of lukewarm water until vomiting is induced. Magnesium oxide, chalk, soap water, muclage, oil, milk, milk-albumin, gelatin, and other protective substances as acacia, eggs. Morphia, stimulants. For acid vapor inhalation: Spray or gargoyle of sodium bicarbonate solution.</td>
<td>Same as caustic alkalies. When inhaled, erosion of the air passages. Urine not alkaline.</td>
</tr>
<tr>
<td><strong>ANILINE</strong>&lt;br&gt;Acetanilid, nitrobenzol.&lt;br&gt;Lethal dose of aniline less than 1 oz.</td>
<td>Gray-blue cyanosis, methemoglobinemia, anxiety, dyspnea, disturbance of consciousness.</td>
<td>Gastric lavage, charcoal, artificial respiration, oxygen inhalation, blood transfusion. Camphorated oil. For nitrobenzol, no oily or alcoholic substances. Rest in cool, dark place.</td>
</tr>
<tr>
<td><strong>ANTIMONY</strong>&lt;br&gt;Tartar Emetic.&lt;br&gt;Lethal dose 50 grains.</td>
<td>Gastroenteritis, vomiting, colic, diarrhea, dyspnea, cramp in the calves of the legs, general paralysis, unconsciousness.</td>
<td>Wash out stomach. Tea; tannic acid or tannin, magnesia, mucilaginous drinks, charcoal.</td>
</tr>
<tr>
<td><strong>ARSENIC</strong>&lt;br&gt;Arsenous acid, Fowler’s solution, sodium arsenate, sodium cacodylate, Paris green.&lt;br&gt;Lethal dose of arsenic trioxide ½ to 3½ grains.</td>
<td>Gastralgia, vomiting, colic, severe diarrhea, later constipation, headache, cyanosis, arsenic dermatitis, cardiac weakness, small, frequent pulse, rapid respiration, coma. From organic combinations of arsenic, temporary visual disturbances.</td>
<td>Gastric lavage, emetics (zinc sulfate, iron oxide in teaspoonful doses). Magnesium oxide, iron sulfate, albumin, milk, mucilage. Moderate doses of fat. Intravenously: suprarenal.</td>
</tr>
<tr>
<td><strong>ARSEPHEMEINE</strong>&lt;br&gt;<strong>ATROPINE</strong>&lt;br&gt;Lethal dose 1½ grains.</td>
<td>Gastric lavage, heat. Cold applications to head, cutaneous irritants, camphorated oil, caffeine. Delirium: Lavage, strychnine, chloral hydrate or paraldehyde (with care); phenobarbital is safer.</td>
<td>Same as Salvarsan.</td>
</tr>
<tr>
<td><strong>BELLODONNA</strong>&lt;br&gt;Lethal dose 3 to 10 berries.</td>
<td>Vinegar water, sour wine, tartaric acid, citric acid, lemons, apple juice, mucilaginous drinks, protective substances, milk. Eventually careful washing of the stomach with acidulated water. In the eye: Washing with water, boracic acid. For lime, weak sulfuric acid solution.</td>
<td>Emetics, gastric lavage, charcoal, strong coffee, morphia; pilocarpin, tannin, chloral hydrate, camphorated oil, cold sponge, opium, physostigmine.</td>
</tr>
<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Barium</td>
<td>Vomiting, diarrhea, dysphagia, cramps, paralysis of the legs, visual disturbances, arrest of heart action, increased blood pressure.</td>
<td>Gastric lavage, sodium sulfate, 320 to 800 grains to a quart or 20 c.c. of a ½ to 1% solution subcutaneously or intravenously; milk, albumin, tannin, atropine.</td>
</tr>
<tr>
<td>Barium nitrate</td>
<td>Lethal dose 48 to 64 grains.</td>
<td></td>
</tr>
<tr>
<td>Barium carbonate</td>
<td>Lethal dose 64 grains.</td>
<td></td>
</tr>
<tr>
<td>Bella-Donna</td>
<td>Same as atropine.</td>
<td></td>
</tr>
<tr>
<td>Benzine</td>
<td>Headache, dizziness, drunkenness, cyanosis, tachycardia, cramps, coma, renal irritation.</td>
<td>Gastric lavage, tannin, milk, heart stimulants, camphor-treated oil.</td>
</tr>
<tr>
<td>Lethal dose ½ to 1 oz.</td>
<td>Kerosene.</td>
<td></td>
</tr>
<tr>
<td>Benzonol</td>
<td>Acute poisoning: Drunken excitement, narcosis, coma.</td>
<td>Acute poisoning: Gastric lavage, tannin, heart stimulants.</td>
</tr>
<tr>
<td>Lethal dose one ounce.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bismuth</td>
<td>Same as mercury.</td>
<td></td>
</tr>
<tr>
<td>Botulism</td>
<td>Same as meat poisoning.</td>
<td></td>
</tr>
<tr>
<td>Bromides</td>
<td>Gastric irritation, nausea, apathy, headache, slow respiration and pulse, somnolence or maniacal excitement.</td>
<td>Gastric lavage, caffeine, sodium chloride.</td>
</tr>
<tr>
<td>Cocaine</td>
<td>Lethal dose 16 grains.</td>
<td></td>
</tr>
<tr>
<td>Carbolic acid</td>
<td>Phenol, lyeol, compound cresol solution.</td>
<td>Cyanosis, myosis, strong carbolic odor of the breath, whitish erosion of the lips and mouth, diarrhea, colic, increased frequency of pulse, stertorous respiration, narrow pupils, urine greenish-brown, dizziness, cramps, coma, nephritis. If external poisoning, dry gangrene from bandaging with a 2% phenol solution.</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>Lethal dose by mouth ¼ to ½ ounce.</td>
<td></td>
</tr>
<tr>
<td>Carbon tetrachloride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloral hydrate</td>
<td>Lethal dose 1 ounce.</td>
<td></td>
</tr>
<tr>
<td>Chlorine gas</td>
<td>Severe spasmodic cough, bloody expectoration, spasm of glottis, dyspnea, stabbing pain in the chest, sneezing, flowing of tears, pneumonia.</td>
<td>Hot vapor inhalations, weak ammonia fumes or inhalation of vapor from a solution of sodium hyposulfite 48 grains, sodium carbonate 12 grains, water 5 ounces.</td>
</tr>
<tr>
<td>Chloroform</td>
<td>Lethal dose 1 ounce.</td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td>Restlessness, dizziness, cramps, increased pulse and respiratory rate, dilated pupils, collapse, impaired consciousness, pallor, tremor.</td>
<td>Gastric lavage, tannin, atropine, amyl nitrite, potassium bromide, chloral hydrate, artificial respiration, stimulants (camphor, coffee), barbital, phenobarbital, avertin.</td>
</tr>
<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>COLCHICINE</strong></td>
<td>Vomiting, colic, diarrhea, polyuria, hematuria, anuria, numbness, paralysis, collapse, irregular, slow pulse, muscular tremor, dyspnea.</td>
<td>Enemas, emetics, mucilage, camphor, external stimulation.</td>
</tr>
<tr>
<td>Lethal dose ½ grain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COPPER</strong></td>
<td>Vomiting of green or blue masses, salivation, colic, irregular breathing and pulse, dizziness, headache, delirium, paralysis.</td>
<td>Gastric lavage with ferro-cyanide of potash, 1:1000 solution. Tablespoonful of albumin every 4 hours; 1 oz. of magnesium oxide, milk, powdered iron, potassium iodide, camphor, charcoal.</td>
</tr>
<tr>
<td>Copper sulfate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lethal dose 160-192 to 320 grains.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CORROSIVE SUBLIMATE</strong></td>
<td>Same as mercury.</td>
<td></td>
</tr>
<tr>
<td><strong>CROTON OIL</strong></td>
<td>Stomatitis, vomiting, pharyngitis, gastroenteritis, dysenteric diarrhea, general weakness, exhaustion.</td>
<td>Muclaginous and oily substances, opium, tannin, ether, camphor.</td>
</tr>
<tr>
<td><strong>CRUDE PETROLEUM</strong></td>
<td>Same as benzine.</td>
<td></td>
</tr>
<tr>
<td><strong>CYANIDE</strong></td>
<td>Odor of bitter almonds. Slowly progressive cyanosis, dizziness, giddiness, vomiting, strong dilatation of the pupils, cramps, coma, arrest of respiration and heart action.</td>
<td>If swallowed: Apomorphine subcutaneously. If cramps are present, no apomorphine but gastric lavage should be tried. After vomiting, thorough gastric lavage with 1 to 2000 potassium permanganate or 2% hydrogen peroxide and charcoal. Methylen blue, 50 c.c. intravenously, 50 c.c. of a 2% solution of sodium hypo-sulfite slowly injected intravenously. Insulin, colloidal sulfur. Artificial respiration (with oxygen). Heart and respiratory stimulants, cutaneous stimulation. If inhaled: Emetics and washing out the stomach are omitted.</td>
</tr>
<tr>
<td>Lethal dose of hydrocyanic acid 1 grain.</td>
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<tr>
<td>Lethal dose of potassium cyanide 3½ grains.</td>
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<tr>
<td><strong>DIGITALIS</strong></td>
<td>Vomiting, retching, colic, diarrhea, irregular, slow pulse; dyspnea, excitement, cold extremities, muscular tremor, somnolence.</td>
<td>Gastric lavage, emetics, charcoal, tannin, rest in bed, camphor, atropine, alcohol, tea, coffee.</td>
</tr>
<tr>
<td>Lethal dose 40 grains of the leaves, 1 ounce of the tincture.</td>
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<tr>
<td><strong>ERGOT</strong></td>
<td>Nausea, vomiting, colic, diarrhea, necrosis of individual parts of the body, abortion, numbness, stupor, dilated pupils, cramps, blindness, coma.</td>
<td>Gastric lavage, emetics, amylnitrite, nitroglycerin, camphor, opium.</td>
</tr>
<tr>
<td>Secale cornutum.</td>
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</tr>
<tr>
<td>Lethal dose 16 to 64 grains of ergotamine.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ETHER</strong></td>
<td>Same as narcotics.</td>
<td></td>
</tr>
<tr>
<td><strong>FORMALDEHYDE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formalin.</td>
<td>Redness of the conjunctiva and of the pharynx, gastric pain, dizziness, unconsciousness, cyanosis, cardiac weakness, albuminuria, hematuria, anuria.</td>
<td>Gastric lavage, 6-12 raw eggs, urea in massive doses, ammonium acetate solution in drop doses, purgatives, enemas. Skin injuries to be washed with dilute ammonia or ammonium carbonate. In the eye, weak ammonia vapors.</td>
</tr>
<tr>
<td>Lethal dose one ounce of the 4% to 90% solution.</td>
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</tr>
<tr>
<td><strong>HEMLOCK</strong></td>
<td>Conium. Conium.</td>
<td>Convulsions, creeping paralysis, irregular pulse, dizziness, visual disturbances, respiratory difficulties.</td>
</tr>
<tr>
<td>Lethal dose of plant 450 grains.</td>
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<tr>
<td>Lethal dose of canina 8-16 grains.</td>
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<tr>
<td><strong>HYDRO-FLUORIC ACID</strong></td>
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<tr>
<td>Lethal dose ½ ounce.</td>
<td>Dysphagia, gastric pain, vomiting, finally arrest of heart action, severe localized skin and bone necrosis.</td>
<td>Calcium intravenously: lime water, milk, magnesium oxide; for lung irritation, inhalation of sodium bicarbonate vapor.</td>
</tr>
<tr>
<td><strong>HYPNOTICS</strong></td>
<td></td>
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</tr>
<tr>
<td>Solfonial.</td>
<td>Insensibility, twitching, deep sleep, cardiac and respiratory paralysis, Hema-toporphyrinuria from sulfonal.</td>
<td>Gastric lavage, laxatives, diuretics, artificial respiration, stimulants, camphor, epinephrine, picrotoxin.</td>
</tr>
<tr>
<td>Lethal dose 160 to 480 grains.</td>
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<tr>
<td>Barbituric acid preparations.</td>
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<tr>
<td>Lethal dose 80 to 321 grains.</td>
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<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
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<tr>
<td><strong>COLCHICINE</strong></td>
<td>Vomiting, colic, diarrhea, polyuria, hematuria, anuria, numbness, paralysis, collapse, irregular slow pulse, muscular tremor, dyspnea.</td>
<td>Enemas, emetics, muclilage, camphor, external stimulation.</td>
</tr>
<tr>
<td><em>Lethal dose</em> 1/2 grain.</td>
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</tr>
<tr>
<td><strong>COPPER</strong></td>
<td>Vomiting of green or blue masses, salivaion, colic, irregular breathing and pulse, dizziness, headache, delirium, paralysis.</td>
<td>Gastric lavage with ferrocyanide of potassium, 1:1000 solution. Tablespoonful of albumin every 4 hours; 1 oz. of magnesium oxide, milk, powdered iron, potassium iodide, camphor, charcoal.</td>
</tr>
<tr>
<td>Copper sulfate.</td>
<td><em>Lethal dose</em> 160-192 to 320 grains.</td>
<td></td>
</tr>
<tr>
<td><strong>CORROSIVE</strong></td>
<td>Same as mercury.</td>
<td></td>
</tr>
<tr>
<td><strong>SUBLIMATE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CROTON OIL</strong></td>
<td>Stomatitis, vomiting, pharyngitis, gastroenteritis, dysenteric diarrhea, general weakness, exhaustion.</td>
<td>Muclilaginous and oily substances, opium, tannin, ether, camphor.</td>
</tr>
<tr>
<td><strong>CRUDE</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>PETROLEUM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CYANIDE</strong></td>
<td>Odor of bitter almonds. Slowly progressive cyanosis, dizziness, giddiness, vomiting, strong dilation of the pupils, cramps, coma, arrest of respiration and heart action.</td>
<td>If swallowed: Apomorphine subcutaneously. If cramps are present, no apomorphine but gastric lavage should be tried. After vomiting, thorough gastric lavage with 1 to 2000 potassium permanganate or 2% hydrogen peroxide and charcoal. Methylene blue, 50 c.c. intravenously, 50 c.c. of a 2% solution of sodium hyposulfite slowly injected intravenously. Insulin, colloid sulfur. Artificial respiration (with oxygen). Heart and respiratory stimulants, cutaneous stimulation. If inhaled: Emetics and washing out the stomach are omitted.</td>
</tr>
<tr>
<td><em>Lethal dose of hydrocyanic acid 1 grain.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lethal dose of potassium cyanide 3 1/2 grains.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIGITALIS</strong></td>
<td>Vomiting, retching, colic, diarrhea, irregular, slow pulse; dyspnea, excitement, cold extremities, muscular tremor, somnolence.</td>
<td>Gastric lavage, emetics, charcoal, tannin, rest in bed, camphor, atropine, alcohol, tea, coffee.</td>
</tr>
<tr>
<td><em>Lethal dose</em> 40 grains of the leaves, 1 ounce of the tincture.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ERGOT</strong></td>
<td>Nausea, vomiting, colic, diarrhea, necrosis of individual parts of the body, abortion, numbness, stupor, dilated pupils, cramps, blindness, coma.</td>
<td>Gastric lavage, emetics, amyl nitrite, nitroglycerin, camphor, opium.</td>
</tr>
<tr>
<td>Secale cornu.</td>
<td><em>Lethal dose</em> 16 to 64 grains of ergotamine.</td>
<td></td>
</tr>
<tr>
<td><strong>ETHER</strong></td>
<td>Same as narcotics.</td>
<td></td>
</tr>
<tr>
<td><strong>FORMALDEHYDE</strong></td>
<td>Redness of the conjunctiva and of the pharynx, gastric pain, dizziness, unconsciousness, cyanosis, cardiac weakness, albuminuria, hematuria, anuria.</td>
<td>Gastric lavage, 6-12 raw eggs, urea in massive doses, ammonium acetate solution in drop doses, purgatives, emesis. Skin injuries to be washed with dilute ammonia or ammonium carbonate. In the eye, weak ammonia vapors.</td>
</tr>
<tr>
<td><strong>Formalin.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HEXAMETHYLLERMOL</strong></td>
<td>Convulsions, creeping paralysis, irregular pulse, dizziness, visual disturbances, respiratory difficulties.</td>
<td>Gastric lavage, emetics, tannin, strychnine, artificial respiration, camphor, caffeine.</td>
</tr>
<tr>
<td><em>Conium.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HEXAMETHYLHEXAMOR</strong></td>
<td></td>
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<tr>
<td>Lethal dose of plant 490 grains.</td>
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<td></td>
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<tr>
<td>Lethal dose of cyanine 8-16 grains.</td>
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<tr>
<td><strong>HYDROFLUORIC ACID</strong></td>
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<tr>
<td><em>Lethal dose</em> 1/2 grain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ACID</strong></td>
<td>Dysphagia, gastric pain, vomiting, finally arrest of heart action, severe localized skin and bone necrosis.</td>
<td>Calcium intravenously; lime water, milk, magnesium oxide; for lung irritation, inhalation of sodium bicarbonate vapor.</td>
</tr>
<tr>
<td><strong>HYPNOTICS</strong></td>
<td>Insensibility, twitching, deep sleep, cardiac and respiratory paralysis. Hematoporphyrinuria from sulfonal.</td>
<td>Gastric lavage, laxatives, diuretics, artificial respiration, stimulants, camphor, ephedrine, picrotoxin.</td>
</tr>
<tr>
<td>Saloanal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lethal dose</em> 160 to 480 grains.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbituric acid preparations.</td>
<td><em>Lethal dose</em> 80 to 320 grains.</td>
<td></td>
</tr>
<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
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</tr>
<tr>
<td>ILLUMINATING GAS</td>
<td>Same as carbon monoxide.</td>
<td></td>
</tr>
<tr>
<td>INSECT BITES Bees, wasps, etc.</td>
<td>Swelling, urticaria, sometimes edema of the glottis.</td>
<td></td>
</tr>
<tr>
<td>INSULIN</td>
<td>General: Fatigue, muscular weakness, hunger sensation, sweating. Hypoglycemic symptom complex: Dizziness, stupor, collapse, delirium, cramps. Local: If exceptionally susceptible, necrosis of adipose tissue.</td>
<td></td>
</tr>
<tr>
<td>IODINE Lethal dose 48 to 64 grains. Tincture of iodine, 7 to 1 ounce. Iodoform, 123 grains.</td>
<td>Pain in the mouth, esophagus and stomach; irritation in the throat, salivation, vomiting, depression, headache, small pulse, tachycardia, renal irritation, albuminuria, hemoglobinuria, dyspnea. Tincture of iodine causes brown coloration of the vomitus and of the mucous membranes.</td>
<td></td>
</tr>
<tr>
<td>LEAD SALTS Lead acetate, white lead, lead oxide, red lead.</td>
<td>Acute poisoning: Severe gastroenteritis.</td>
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<tr>
<td>LYSOL</td>
<td>Same as phenol.</td>
<td></td>
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<tr>
<td>MEAT POISONING Phtomaine poisoning, botulism.</td>
<td>Acute gastroenteritis, vomiting, diarrhea, high fever, extreme weakness and prostration, dizziness, mydriasis, ptoisis, collapse.</td>
<td>Emetics, gastric lavage, enemas, castor oil, charcoal, camphor, botulism serum.</td>
</tr>
<tr>
<td>MERCURY Corrosive sublimate. Lethal dose of corrosive sublimate 8 grains.</td>
<td>Ulcerating stomatitis, erosion of the mucous membranes; acute gastroenteritis and dysenteric symptoms, bloody diarrhea, tenesmus, coughing, bronchopneumonia, skin eruption, paralytic weakness, nephritis, anuria, albuminuria, cardiac weakness.</td>
<td>Washing the mouth with sodium perborate, gastric lavage, emetics, milk, albumin, sodium hyposulfite, potassium or sodium iodide, theobromine. Dextrose and sodium bicarbonate. Infusion of hypertonic dextrose solution.</td>
</tr>
<tr>
<td>METHYL ALCOHOL Methanol, wood alcohol. Lethal dose 3½ ounces.</td>
<td>Vomiting, abdominal pains, dizziness, visual disturbances, blindness, delirium, cardiac weakness.</td>
<td>Gastric lavage, vescensection, heat, oxygen inhalations, stimulants, camphor, caffeine, strychnine.</td>
</tr>
<tr>
<td>MOPHINE Opium, codine, dionine, etc. Lethal dose about 7 grains by mouth, about 4 grains subcutaneously; children, 1/15 grain.</td>
<td>Gastric lavage, flour, starch, mucilage, albumin, emetics, laxatives, sodium hyposulfite, sodium bicarbonate, calcium preparations.</td>
<td>Emetics, gastric lavage with 1:1000 solution of potassium permanganate, tannin, charcoal, black coffee, atropine, strychnine, camphor, stimulants, artificial respiration.</td>
</tr>
<tr>
<td>MUSHROOMS</td>
<td></td>
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<tr>
<td>NARCOTICS Ether. Lethal dose uncertain. Chloral hydrate. Lethal dose 16 to 48 grains. Chloroform. Lethal dose uncertain. Carbon tetrachloride. Lethal dose 2½ to 5 drams.</td>
<td>Lowered blood pressure, weak and intermittent pulse, dilated pupils, stupor or coma, asphyxia, arrest of heart action and respiration, possibly liver damage.</td>
<td>Gastric lavage, flour, starch, potassium permanganate solution. Intravenously: Dextrose in Ringer’s solution. Opium, mucilage, tannin, charcoal, vescensection, camphor, sometimes atropine or strychnine, diuretics. Artificial respiration, carbon dioxide inhalation, strychnine, epinephrine, physiological salt solution intravenously. If avertin poisoning, 3 c.c. or more thyroxine; coramine intramuscularly, 3 c.c. or more, once or twice; 1 to 2 c.c. of 1% cocaine solution subcutaneously.</td>
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<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
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<tr>
<td>NICOTINE</td>
<td>Small pulse, fainting, salivation, vomiting,</td>
<td>Atropine, chloroform, chloral hydrate, morphine.</td>
</tr>
<tr>
<td>Tobacco</td>
<td>diarrhea, cramp, tachycardia, stenocardia,</td>
<td></td>
</tr>
<tr>
<td>Lethal dose</td>
<td>visual disturbances, pallor.</td>
<td></td>
</tr>
<tr>
<td>Snuff</td>
<td>Lethal dose 64 to 192 grains.</td>
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<td></td>
<td>Lethal dose 32 to 45 grains.</td>
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<tr>
<td>NITRATES</td>
<td>Restlessness, vomiting, colic, polyuria,</td>
<td>Gastric lavage, emetics, diuretics, camphor,</td>
</tr>
<tr>
<td>Potassium nitrate</td>
<td>fainting, tremors, giddiness, cramps, coma,</td>
<td>external stimulants.</td>
</tr>
<tr>
<td></td>
<td>angina pectoris, heart palpitation.</td>
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<tr>
<td>OPIUM</td>
<td>Same as morphine.</td>
<td></td>
</tr>
<tr>
<td>OXALIC ACID</td>
<td>Black vomitus, colic, shortness of breath,</td>
<td>Emetics, gastric lavage, calcium preparations,</td>
</tr>
<tr>
<td>Acid potassium oxalate</td>
<td>collapse, cardiac arrest, paresthesia,</td>
<td>chalk lime water, magnesium oxide, diuretics,</td>
</tr>
<tr>
<td>Lethal dose</td>
<td>cramps, trismus, tetanus, later paralysis.</td>
<td>phenobarbital.</td>
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<td>Calcium oxalate crystals in vomited matter,</td>
<td>Subeutaneously or intravenously, 30 to 60</td>
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<td></td>
<td>in feces and urine.</td>
<td>grains of calcium chloride in a quart of</td>
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<td></td>
<td>Oliguria, anuria, hemorrhagic nephritis.</td>
<td>normal saline solution.</td>
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<tr>
<td>PHENOL</td>
<td>Same as carbolic acid.</td>
<td></td>
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<tr>
<td>PHOSPHORUS</td>
<td>Nausea, headache, epigastric pain, vomiting</td>
<td>Thorough washing out of the stomach with</td>
</tr>
<tr>
<td>Lethal dose</td>
<td>(odor of phosphorus and phosphorescence of</td>
<td>1:1000 potassium permanganate solution, then</td>
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<td>vomitus in the dark); later icterus, severe</td>
<td>emetics: copper sulfate or carbonate, 15</td>
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<td></td>
<td>abdominal pains, hepatic enlargement,</td>
<td>grains to a dose. Magnesium sulfate,</td>
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<td></td>
<td>bradycardia, small, soft pulse, gastric and</td>
<td>sodium sulfate, sodium bicarbonate, lime</td>
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<td></td>
<td>intestinal hemorrhage, skin hemorrhage,</td>
<td>water, camphor, epinephrine. Insulin with</td>
</tr>
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<td></td>
<td>renal hemorrhage, nosebleed, metrorrhagia,</td>
<td>dextrose may be tried. Crudeturpentin, 30 to</td>
</tr>
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<td>fainting, cardiac weakness, stupor, coma,</td>
<td>40 drops in mucilaginous solution. Avoid</td>
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<td>cardiac arrest, phosphorus necrosis of the</td>
<td>milk, egg yolk, castor oil. Phosphorus burns</td>
</tr>
<tr>
<td></td>
<td>lower jaw.</td>
<td>should be painted with a 10% solution of</td>
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<tr>
<td></td>
<td></td>
<td>silver nitrate.</td>
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<tr>
<td>PHOSGENE</td>
<td>Lung irritation, hemorrhagic pneumonia.</td>
<td>Calcium chloride injections, inhalations of</td>
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<td></td>
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<td>the vapor from 1/4% sodium bicarbonate</td>
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<td></td>
<td></td>
<td>solution, venescence. Intravenously: dextrose,</td>
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<td></td>
<td>Atropine. Mustard plaster to neck and chest.</td>
</tr>
<tr>
<td>PICRIC ACID</td>
<td>Yellowish-red vomitus, yellow discoloration</td>
<td>Gastric lavage, diuretics. Stains from the</td>
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<td></td>
<td>of skin and mucous membranes, yellow vision.</td>
<td>skin may be removed with ether or alcohol.</td>
</tr>
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<td></td>
<td>Headache, slow pulse, albuminuria, hematuria.</td>
<td></td>
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<tr>
<td>POTASSIUM CHLORATE</td>
<td>Lethal dose 80 to 240 grains.</td>
<td>Methemoglobinemia, methemoglobinuria,</td>
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<td></td>
<td></td>
<td>hemoglobinuria, dryness in the throat,</td>
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<tr>
<td></td>
<td></td>
<td>vomiting, thirst, diarrhea, icterus, cyanosis,</td>
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<tr>
<td></td>
<td></td>
<td>cardiac weakness, uremia.</td>
</tr>
<tr>
<td>QUININE</td>
<td>Tinnitus, excitement, hemorrhage from mucous</td>
<td>Gastric lavage, emetics, charcoal, stimulants.</td>
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<tr>
<td></td>
<td>membranes, disturbance of vision and hearing,</td>
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<tr>
<td></td>
<td>blindness, disturbance of consciousness,</td>
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<tr>
<td></td>
<td>collapse, reduced pulse rate.</td>
<td></td>
</tr>
<tr>
<td>SALVARSAN</td>
<td>Same as arsenic.</td>
<td>For angioneurotic crises: epinephrine. For</td>
</tr>
<tr>
<td>Arephena-</td>
<td></td>
<td>skin eruption: sodium hyposulfite, calcium</td>
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<tr>
<td>mine</td>
<td></td>
<td>preparations.</td>
</tr>
<tr>
<td>Arsenobenzol</td>
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</tr>
<tr>
<td>SANTONINE</td>
<td>Lethal dose 1 1/2 to 5 grains.</td>
<td>Vomiting, numbness, cramps, mydriasis, collapse,</td>
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<tr>
<td></td>
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<td>salivation, mild colicky pains, paralysis,</td>
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<td>visual disturbances, reddish discoloration of</td>
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<td></td>
<td>the urine, increased libido, polyuria, strangu-</td>
</tr>
<tr>
<td>SCOPOLAMINE</td>
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<td>ry.</td>
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<tr>
<td>SERUM</td>
<td>Same as atropine.</td>
<td>Pituitrin, epinephrine, calcium preparations.</td>
</tr>
<tr>
<td>SICKNESS</td>
<td>Urticaria: 7 to 12 days later eruption</td>
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<td></td>
<td>resembling measles; fever, pain in the joints,</td>
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<td></td>
<td>general indisposition.</td>
<td></td>
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<tr>
<td>Poison</td>
<td>Symptoms</td>
<td>Treatment</td>
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<td>---------------------</td>
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<tr>
<td><strong>SILVER</strong>&lt;br&gt; Silver nitrate.</td>
<td>First white then black patches on the mouth; gastric pain, vomiting, diarrhea. In chronic cases, argyria.</td>
<td>Gastric lavage with salt solution (10 to 20 grams to 1000). Potassium or sodium iodide. Mucilaginous drinks, castor oil.</td>
</tr>
<tr>
<td><strong>SNAKE BITES</strong></td>
<td>Localized phlegmonous, hemorrhagic inflammation, lymphangitis, vomiting, fever, dyspnea, cardiac and respiratory paralysis.</td>
<td>Immediate sucking out of the wound or cauterization. Ligation above the injury. Subcutaneously around the wound 3% to 5% tincture of iodine or 1% to 5% potassium permanganate. Lime water, iron chloride, sodium or potassium hypochlorite, ammonia, 1% alcohol, ether, camphor, pilocarpine, venesection, antivenom serum.</td>
</tr>
<tr>
<td><strong>STRYCHNINE</strong>&lt;br&gt; Lethal dose ¼ to 20 grains.</td>
<td>Trismus, tetanic cramps, extremities and neck rigid, terrorized expression, dyspnea, cyanosis.</td>
<td>Emetics (apomorphine subcutaneously), chloroform inhalations, atropine, morphine, alcohol, camphor, tannin, artificial respiration, phenobarbital; if necessary: venesection, saline infusion.</td>
</tr>
<tr>
<td><strong>SULFUR</strong>&lt;br&gt; Sulfides.</td>
<td>Unconsciousness, dyspnea, cyanosis, convulsions, paralysis, sulfo-hemoglobinemia.</td>
<td>Artificial respiration, oxygen, venesection, salt infusion, camphor, iron oxide or carbonate.</td>
</tr>
<tr>
<td><strong>TOBACCO</strong></td>
<td>Same as nicotine.</td>
<td></td>
</tr>
<tr>
<td><strong>ZINC</strong>&lt;br&gt; Zinc chloride, zinc sulfate.</td>
<td>Gastroenteritis, vomiting, albuminuria.</td>
<td>Gastric lavage, albumin, milk, tannin, sodium or potassium carbonate.</td>
</tr>
</tbody>
</table>
Antipyrine. Avoid tannin plant extracts containing tannic acid, iodine, quinine, sublimated mercury (precipitation). Nitric acid; also sweet spirits of nitre, sodium nitrite, amyl nitrite, nitrous acid, iron salts, ammonia discoloration and dissociation). Acetanilid, acetyl salicylic acid, caffeine-salicylate, formaldehyde and formaldehyde-containing substances, methenamine, sodium salicylate, salol, chloral hydrate, phenol, naphthal, menthol (liquefaction). Mercuric chloride, calomel (liquefaction of the mercury, making it easily absorbable and poisonous).


Atropine. Same as alkaloids.

Biichloride of Mercury. (Corrosive Sublimate). Avoid alkaloids, alcohols, tannins and tannic acid-containing plant extracts, as well as most organic substances (precipitation). Metals and metal salts (dissociation or amalgamation). Water containing lime, soap, carbonates, ammonia (precipitation). Lime water (explosion).


Caffeine-Sodic-Benzoate and Salicylate. Avoid acid and acidulated fruit juices, such as syrup of lemon, syrup of raspberry (precipitation). Antipyrine, amphetamine (liquefaction).

Calomel. Avoid albumin, hydrocyanic acid, laetic acid, hydrochloric acid, carbonates, alcohol, alcohols, such as magnesium oxide (formation of corrosive mercury). Especially important: organic substances, light, sugar (conversion into corrosive sublimate). Calomel powder should be prescribed with milk sugar, because milk sugar is not hygroscopic and the moisture necessary for conversion is not present. Antipyrine (poison).

Camphor. Avoid phenol, chloral hydrate, naphthal, thymol, salol, resorcin (liquefaction).


Chlorinated Lime. Avoid ammonia and ammonium salts, sulfur, glycercin, fats and oils, also essential oils (explosion).

Chlorine Water. Avoid silver salts, lead and mercury salts (oxides), alcohols, and all easily oxidizable organic substances, sugar, plant extracts, plant mucilage.

Chromic Acid. Avoid lead salts, silver salts (precipitation): Oxidizable salts (oxidation). Iodine, sulfur, phosphorus, carbon, collodion, sugar, lycoper- dium, starch, alcohol, ether, phenol, glycercin, tannin, all easily oxidizable substances (explosion).

Citric Acid. Avoid double salts of sodium salicylate: for instance, theobromin; licorice and extract of licorice (precipitation).

Cocaine. Same as alkaloids.

Codeine. Same as alkaloids.

Collargol. Avoid free acids and hydrogen peroxide. (See colloidal silver.)

Colloidal Silver. Develops oxygen with hydrogen peroxide and explosive manifestations.

Digitalis Preparations. Avoid tannic acid, metallic salts (lead acetate), iodine, alcohols.

Extracts. Many contain tannin—see tannic acid. Alkaloidal extracts—see alkaloids.

Formaldehyde Solution. Avoid ammonia (methenamine formation; consequently removal of odor after disinfection).

Glucosides. Avoid acids, tannates, iodine, lead salts.

Glycerin. Potassium chloride, chromic acid, picric acid, potassium permanganate, chlorinated line (explosion).

Glycerrhiza (Licorice). Avoid acids.

Heroin. Avoid alkaloids.

Ichtythol. Avoid acids, iodides, alcohols, alkaloidal solutions.

Infusions and Decoctions. Avoid metallic salts, alkaloids.


Iodine. Avoid alkaloids, mucilage, metallic salts, tannin (precipitation). Starch, starch-containing powders from plants (blue discoloration). Essential oils, chloral hydrate (decomposition). Ammonia and its salts, as well as all ammonia combinations, such as ammoniated mercury (explosion from iodide of nitrogen).

Iron Salts. Avoid alkaloids (precipitation). Readily oxidizing substances such as iodides (iodine liberation). Tannin and plant extracts and tinctures containing tannic acid (ink). Salicylic acid, phenol, antipyrine, amphetamine, suprarenalin, resorcin, alkaloids (discoloration).

Lead Acetate. Avoid salts of other acids, hydrochloric acid, sulfuric acid, phosphoric acid, carbonates (precipitation). Alkaloids, alkaloids, mucilage, albumin, opium, tannin and plant extract containing tannic acid (precipitation). Iodides and bromides (precipitation).
INCOMPATIBILITIES OF DRUGS—(Continued)

Lead Acetate Solution. Avoid hydrochloric acid, sulfuric acid, phosphoric acid, iodides, bromides, opium, tannin, iodine, mucilage (precipitation).

Liniments. Acids and acid salts, aluminum, calcium and magnesium salts. In liniments containing ammonia avoid also free iodine.

Lysol (Compound Solution of Cresol). Avoid zinc sulfate because of the liberation of fatty acid or oleic acid of zinc.

Magnesium Oxide. Avoid calomel (decomposition).

Magnesium Sulfate. Avoid alkalies (precipitation). Carbonates (precipitation).

Menthol. Avoid phenol, chloral hydrate, naphthal, thymol, resorcin, salol (liquefaction).

Mercury Oxycyanide. Avoid triturations in a mortar, especially with organic substances (explosion).

Mercury Salts. Mercury salts are precipitated by numerous other salts. Soluble mercurial salts are thrown down by chlorides, bromides, iodides, and alkalies; precipitate with iodides, alkalies and ammonia.

Methenamine. With antipyrine forms an inactive compound in the stomach.

Morphine Salts. Avoid iron salts, silver salts, mercury salts, potassium permanganate, alkalies, nitrates, tannic acid.

Mucilage (Acacia). Avoid alcohol, ether, tinctures, metallic salts, especially lead acetate solution, ferric oxide, borax (precipitation).

Naphthal. Avoid phenol, antipyrine, camphor, menthol (liquefaction).

Nitric Acid. Avoid glycerin, carbohydrates, phenols, resins and ethereal oils. Cellulose, such as powdered plants, wood, cork, and rubber stoppers (explosions).

Nitrous Acid. Avoid antipyrine, alkaloids, iodides, bromides. (Present in sweet spirits of nitre, amyl nitrite and sodium nitrite.)

Novocaine (Procaine). Avoid alkaline carbonates, calomel, tannin, silver salts.

Opium. Same as alkaloids.

Paraldehyde. Avoid bromides and iodides (decomposition).

Pepsin. Avoid alcohol, also tinctures, alkalies, metallic salts (precipitation).

Phenacetin. Avoid chloral hydrate, salicylic acid (liquefaction).


Phenyl Salicylate. Avoid antipyrine, camphor, chloral hydrate, menthol, thymol (liquefaction).

Physostigmine. Avoid tannic acid, iron salts, mercury salts, alkalies.

Picric Acid. Avoid iodine, sulfur, charcoal, powdered plants, sugar, starch, lycopodium, resins and oils, alcohols, phenols (explosion).

Potassium Arsenite Solution (Fowler’s Solution). Avoid iron salts, iodides (precipitation).

Potassium Bromide. Avoid paraldehyde, calomel (decomposition).

Potassium Chlorate. Avoid all easily oxidizing substances because they may explode. Iodine, sulfur, glycerin, alcohol, ether, phenol, lycopodium; especially important: charcoal, tannin, sugar (explosion: for instance, not to be used in tooth powder, or as internal medication with sugar).

Potassium Iodide. Potassium chloride, potassium permanganate, iron oxide (liberation of iodine). Alkaloids, metallic salts, such as silver, lead and mercury salts; also calomel, potassium arsenite solution (Fowler’s solution)—(precipitation).

Potassium Permanganate. Alkaloids (oxidation of the latter in solution). Iodine, sulfur, glycerin, alcohol, ether, phenol, charcoal, lycopodium, sugar, tannin (explosion).


Quinine. Same as alkaloids.

Resorcin. Avoid antipyrine, salicylic acid, camphor, menthol, aminopyrine (liquefaction). Metallic salts, iodides (dissolution).

Salicylic Acid. Avoid iron salts (dissolution). Alkaloids (precipitation).

Salts, Inorganic. Care must be exercised that no insoluble salt results from the combination of two salts, such as chlorides and silver nitrate, zinc sulfate and lead acetate.

Salts, Organic. (For instance, sodium benzoate, sodium salicylate.) Avoid strong free acids.

Silver Salts. Avoid chlorides, bromides, iodides, cyanides, alkalies, sulfides, tannic acid, especially organic substances (albumin, mucilage, sugar, etc.).

Soaps. Avoid acids, acid salts, salts of aluminum, calcium, magnesium, especially metallic salts.

Sodium Arsenate. Avoid cocaine (precipitation; for instance, when used for subcutaneous injection).
Sodium Bromide. Same as potassium bromide.

Sodium Iodide. Same as potassium iodide.

Sodium Nitrate. Avoid chlorides, bromides, iodides, cyanides, acetates, alkalies, tannin (precipitation). Alkaloids, glucosides, carbohydrates, sugar, phenols, albumin, mucilage, as well as other organic substances (explosion when mashed, as in pill-making). Should be always prescribed alone, or in pill form with kaolin.

Sodium Nitrite. Avoid antipyrine, alkaloids, iodides, bromides (decomposition).

Sodium Perborate. Avoid acids.

Sodium Salicylate. Avoid antipyrine, aminopyrine (deliquescence).

Sulfur. Avoid potassium chloride, potassium permanganate, chlorinated lime, picric acid (explosion). Metallic salts (black discoloration).

Sulfuric Acid. Care during admixture of water, alcohol, turpentine, etc. (heat and possible explosion). Avoid lead, barium calcium salts (precipitation).

Suprenalin, Adrenaline. Avoid alkalies, metallic salts, such as iron (iron chloride solution), mercury (discoloration).

Syrups. Most alkalies discolor syrups; also some acids. The reaction should be watched.


Theoubromine (Double Salts). Avoid acids.

Theoubromine Sodiosalicylate. Avoid acids, alkalies, metallic salts, phosphates (precipitation).

Thymol. Avoid camphor, chloral hydrate, menthol, salol, antipyrine, aminopyrine (liquefaction).

Tinctures. The tinctures containing tannic acid should be diluted only with alcohol (precipitation). Those containing alkaloids should not be mixed with tinctures containing tannic acid (precipitation).

Tincture of Iodine. Avoid ammonia and its salts (explosion, generation of nitrogen iodide).

Tincture of Opium. Avoid tannic acid, iodine, metallic salts, such as lead salts (precipitation). See also alkaloids.

Urethane. Avoid chloral hydrate, sodium salicylate, camphor, naphthol, phenol, salol (liquefaction).

Zinc Sulfate. Avoid lead acetate (precipitation).

Acids. In colored fabrics, acid stains are treated with ammonia or sodium bicarbonate and thoroughly washed.

Adhesive Plaster. Benzine, benzol, chloroform or fatty oils.

Alkalies. Soften with water. Colored fabrics; wash with vinegar or a ten per cent solution of citric acid. White fabrics: a one half per cent solution of hydrochloric acid may be used, followed by thorough rinsing with water. Test with litmus to see if all alkali is removed.

Aniline Dyes, Methylene Blue. Lye solution. Dilute hydrochloric acid is also good. Both methods must be followed by thorough rinsing with water. Very resistant dyes must be soaked for several hours in a 1 to 1000 permanganate solution, rinsed and treated with oxalic acid solution.

Argyrol and Mild Silver Solution. When fresh, can be removed with soap and water. Old stains disappear if treated with a warm solution of sodium thiosulfate, 10 to 20 per cent.

Balsam of Peru. Very difficult to remove. Old stains should be first softened with benzyl benzoate. Fresh stains may be removed from white clothes by persistent treatment with chloroform, acetic ether or amyl alcohol.

Blood. Same as hemoglobin.

Bromides. As soon as possible, aromatic spirits of ammonia should be applied, then washed with clear water.

Canada Balsam. Fresh or dried stains may be removed with ether, amyl alcohol, chloroform, oil of turpentine, carbon tetrachloride, carbon bisulfide, and toluol; in most instances also with alcohol, acetone, methanol, acetic ether, and benzene.

Castor Oil. Absolute alcohol, ether, chloroform, benzol. Benzine or gasoline not effective.

Chlorophyll. For fresh stains (grass, etc.) warm alcohol; for old stains sodium perborate, ammoniated hydrogen peroxide, dilute aromatic spirits of ammonia, dilute zinc chloride solution. For resistant stains, chlorinated lime, bleaching fluid, sulfuric acid, hyposulphite, and other sulfites.

Chromic Acid. Dilute sulfuric acid in watery solution or concentrated sodium thiosulfate solution mixed with a few drops of sulfuric acid. When the fabric is suitable, the acid may be precipitated into lead chromate with lead acetate, and this, after washing in distilled water, dissolved with lye.

Chrysalobin. Most easily removed with benzol, but chloroform, tetraline and absolute alcohol are also effective. Warming these solutions renders them more efficient.

Cod Liver Oil. Carbon tetrachloride, benzol, and gasoline. The best solvent is methylol. A final washing with soap, preferably tincture of green soap, is necessary.

Coffee and Cocoa. Washing in concentrated salt water and rinsing thoroughly with water. Sometimes softening the stain with glycerin is helpful.
Collodion. Ether or sweet spirits of nitre.

Copaiba. Ether, chloroform, oil of turpentine, benzol, acetic ether, benzine, alcohol, carbon disulfide.

Copper Sulfate. A 30% solution of potassium iodide, or the stains are moistened with a 10% solution of acetic acid, followed by a lukewarm solution of 20% sodium chloride; furthermore, potassium cyanide can be used.

Fluidextracts. In most instances alcohol is sufficient, perhaps followed by tincture of green soap or soapsuds.

Fruit. Washing with lukewarm sweet milk. If this does not succeed, a brief application of sodium bisulfite, slightly acidified with hydrochloric acid. The garment must then be well washed in cold and in warm water.

Gold, Colloidal. Easily removed from clothes or hands with a concentrated (about 20%) solution of potassium cyanide.

Grass. Same as chlorophyll.

Hemoglobin. Fresh stains (blood) should be washed with lukewarm water; older stains should be softened with borax solution, dilute ammonia or tincture of green soap, and finally treated with a 2% solution of oxalic acid. For resistant stains, solutions of pepsin with hydrochloric acid or other enzyme preparations may be used.

Ichthyol. Warm soapsuds.

Ink, Methyl Violet. From the skin, it may be removed with glycerin, acetic or citric acid. Fabrics require similar applications. Resistant stains must be treated as Tar Coloring Products.

Iodine. Hands or clothes are moistened with ammonia or sodium thiosulfate solution.

Iodoform, Vioform. The article is soaked for two hours in a 2% acetic acid solution; then rinsed and wrung out. The article is then placed for one hour in a 2% solution of hyposulfite, washed thoroughly in water, boiled for about ten minutes in soapsuds, and rinsed out in cold water.

Lanolin (Wool Fat). Ether, acetone, benzol, benzine, chloroform. Alcohol is ineffective.

Lead Acetate. After applying peroxide, the remaining yellow stain is removed with lye or acetic acid.

Linseed Oil. The best solvents are tetranil, hexalin, and warm amyl alcohol. For white or naturally colored objects, aromatic spirits of ammonia is added.

Mercuricnicchrome. A 2% solution of potassium permanganate followed by a 5% solution of oxalic acid, which is then rinsed out thoroughly. Hypochlorites are also effective.

Mercury. (Corrosive Sublimate). Tincture of iodine is applied to the stain; the resulting mercuric iodide is then removed with strong iodide of potash.

A solution of potassium cyanide or potassium iodide may be left to dry on the stain. The stain can then be washed out with warm sodium hyposulfite.

Mildew. First, the stain is covered with ammonia water, then carefully saturated (by means of absorbent cotton) with a 20% solution of oxalic acid and thoroughly rinsed in water. In white fabrics, mildew or urine stains can be removed by wetting with dilute hydrochloric acid, followed by hydrogen peroxide.

Milk. The fatty constituents are removed with a mixture of equal parts of ether and alcohol, the casein with diluted ammonia water, and the lactose, by repeated washings with water.

Mineral Oil. Ether, benzine, benzol, chloroform, dichloroethyl, trichloroethyl, carbon tetrachloride.

Oils and Fats. Same as mineral oil. Blotting paper, layer of cotton or other absorbent material should be placed under the stain, while treating it.

Picric Acid. For about a minute, the stain is left to dissolve in an alkaline sulfite such as potassium sulfate, then it is thoroughly washed with soap and water. The following is also recommended for fresh stains: the stain is covered with a paste made of magnesium carbonate and water; then after a while the paste is rubbed into the stain.

Potassium Perpermanganate. Dilute sulfuric acid, dilute hydrochloric acid, oxalic acid, hyposulfite or alkaline sulfates. For susceptible fabrics and marble which cannot be treated with acids, the stains should be moistened with ammonium sulfite solution, which is then washed away. The manganese sulfate formed is dissolved with a 10% solution of potassium cyanide.

Protargol. While fresh, protargol stains are easily washed away with soap and water. Old stains can be removed with a solution of potassium iodide, sodium hyposulfite or ammonium persulfate, also with hydrogen peroxide and ammonia.

Pyrogallol. Old stains cannot be removed. Fairly recent stains can be removed or made less conspicuous by applying a warm 5 to 10% iron sulfate solution to the stain until it changes to a deep blue color. After thorough washing with water, the remaining stain is promptly treated with a solution of oxalic acid. When the color disappears, the stained article is carefully rinsed. The procedure is repeated as often as necessary.

Reagents. Easbach's reagent; same as picric acid; Fehling's or Haines' solution; same as copper sulfate; Guenzburg's solution; same as pyrogallol; Giesen's solution, Löffler's methylene blue, carbolfuchsin, gentian violet; indicator stains; same as aniline dyes; Lugol's solution; same as iodine; Mayer's and Nessler's reagent: same as mercuric; Weigert's solution as well as Stock's fluid; same as iron salts.

Red Wine. Sodium perborate or hydrogen peroxide solution.

Resins. Strong alcohol. (See also Canada Balsam.)

Resorcin. Fresh stains are treated with glycerin, dichlorhydrin, ether, alcohol; older stains with citric acid solution; very old stains, as analine dyes.
Rhurbab. From light colored fabrics stains may be removed with hot benzol. For cleaning the hands, vinegar or pumice stone should suffice.

Rust, Iron Salts. Ferric chloride, tinctures of iron salts, and rust yield to treatment with a 10% zinc chloride solution, or a 10% citric acid solution, or a warm 5% solution of oxalic acid to which about 5% glycerin is added; also hot sodium pyrophosphate solution. Weak, watery solutions of ammonium fluoride or potassium fluoride (lead, gutta-percha, paraffin or wooden vessels should be used). White fabrics may also be treated with hydrosulfitc, such as sodium hydrosulfite (sprinkled on the stain and moistened). In all instances, thorough rinsing with water should follow.

Salvarsan. Fresh stains can be washed away. Old stains cannot be removed.

Silver Nitrate. A simple method is to moisten the stain with iodine, then wash out immediately in cool or lukewarm water. Or, fresh stains are quickly removed with a 10% solution of potassium cyanide. This should be followed by bichloride of mercury and thorough rinsing with water. Or a 10% solution of potassium iodide may be used. The resulting yellow stains are then removed with thiosulfate solution. For removing caustic silver nitrate (lunar caustic) from the skin the following mixture may be used: Bichloride of mercury 10, ammonium chloride 10, distilled water 80. Covering the spots with concentrated copper chloride and washing this away with thiosulfate solution is also recommended. Before using any of these methods, oiliness of the skin should be removed with carbon tetraochloride or ether.

Soot. May be rubbed out with a 50% solution of tartaric acid.

Tannin. Dilute acetic acid or a solution of oxalic acid, or a mixture of equal parts of alcohol, glycerin or dichlorhydrin and water. Deep stains need also hyposulfite. Lead acetate is also effective. Sulfate of iron may also be used, and the resulting ink removed with oxalic acid.

Tar and Tar Products. Dried stains should be softened with warm oil, then benzol, xylol, chloroform, carbon tetrachloride, trioctyl, tetratin for dissolving the stain (a blotter should be placed under the stain for absorption). Next washing with tincture of green soap or with soap and water.

Tar Coloring Products. Hydrogen peroxide, perborates, peroxides (oxygen preparations for silk and delicate fabrics); chlorinated lime, hypochlorite solutions, etc. Lime for linen, cotton and paper. (Sodium hyposulfite or weak ammonia as follow-up treatment.) Sulfurous acid, potassium sulfate, bisulfitc, hydrosulfite (for all fabrics, as wool, silk, mixed weaves, wood, paper). Frequently, hot glycerin or acetic or citric acid suffices. Sometimes strong tincture of soap is resulfural. Fabric should first be tested to see if it will withstand such applications. Invariably washing with water should follow the application.

Trypanflavine. Woolen garments should be treated promptly. After the stain has dried, the garment should be washed in warm water. Then water is heated to about 125 degrees F. and to every quart of water one-half dram of hydrochloric acid is added. The stain is soaked in this for 15 minutes.

The garment is then thoroughly rinsed in clear water and dried.

Urine. Same as mildew.

REMOVING MICROSCOPIC STAINS FROM THE SKIN

<table>
<thead>
<tr>
<th>Stain</th>
<th>Remover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ehrlich's triacid solution</td>
<td>Peroxide of hydrogen (3%)</td>
</tr>
<tr>
<td>Esbach's reagent</td>
<td>Strong ammonia water, equal parts</td>
</tr>
<tr>
<td>Giemsa stain</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Hematoxylin-safranine solution</td>
<td>Peroxide of hydrogen (3%)</td>
</tr>
<tr>
<td>Carbol-fuchsin solution</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Carbol-gentian violet solution</td>
<td>Absolute alcohol</td>
</tr>
<tr>
<td>Carbolthionin blue solution</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Methyl violet solution</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Leishman's blood stain</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Löffler's methylene blue solution</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Aqueous borax-carmine solution</td>
<td>Tincture of green soap</td>
</tr>
<tr>
<td>Polychrome methylene blue solution</td>
<td>Tincture of green soap</td>
</tr>
</tbody>
</table>

Saturated solutions at 25°C

<table>
<thead>
<tr>
<th></th>
<th>Gm. of Salt</th>
<th>cc. of Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric Acid</td>
<td>5.1</td>
<td>97.0</td>
</tr>
<tr>
<td>Magnesium Sulfate</td>
<td>72.0</td>
<td>58.5</td>
</tr>
<tr>
<td>Potassium Chlorate</td>
<td>6.0</td>
<td>98.0</td>
</tr>
<tr>
<td>Potassium Iodide</td>
<td>99.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>7.0</td>
<td>97.0</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>8.5</td>
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</tr>
<tr>
<td>Sodium Chloride</td>
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<td>89.0</td>
</tr>
<tr>
<td>Sodium Iodide</td>
<td>122.0</td>
<td>68.0</td>
</tr>
<tr>
<td>Sodium Thiosulfate</td>
<td>93.0</td>
<td>46.0</td>
</tr>
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</table>

426

427
ABBREVIATED LATIN WORDS

<table>
<thead>
<tr>
<th>Latin</th>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad</td>
<td>Ad</td>
<td>To; up to</td>
</tr>
<tr>
<td>Adde</td>
<td>Add</td>
<td>Add</td>
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<td>Ad libitum</td>
<td>Ad lib</td>
<td>At pleasure</td>
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<tr>
<td>Agitata vas.</td>
<td>Agit. vas.</td>
<td>Shake or stir</td>
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<td>Alb</td>
<td>Alb</td>
<td>White</td>
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<td>Ana</td>
<td>aa</td>
<td>Of each</td>
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<td>Ante</td>
<td>Ante</td>
<td>Before</td>
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<tr>
<td>Aqua</td>
<td>Aq</td>
<td>Water</td>
</tr>
<tr>
<td>Bis in die</td>
<td>B.i.d.</td>
<td>Twice daily</td>
</tr>
<tr>
<td>Capiat</td>
<td>Cap</td>
<td>Let the patient take</td>
</tr>
<tr>
<td>Capsule</td>
<td>Caps</td>
<td>Capsule</td>
</tr>
<tr>
<td>Cola</td>
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<td>Strain</td>
</tr>
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<td>Compositus</td>
<td>Comp</td>
<td>Compound</td>
</tr>
<tr>
<td>Da; detur</td>
<td>D; det</td>
<td>Give; let be given</td>
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<tr>
<td>Dies</td>
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<td>Day</td>
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<tr>
<td>Dilue</td>
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<td>Dilute</td>
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<td>Dispense</td>
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<tr>
<td>Divide</td>
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<td>Extractum</td>
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<td>An extract</td>
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<tr>
<td>Fluidus</td>
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<td>Filter</td>
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<tr>
<td>Gramme</td>
<td>Grm</td>
<td>Fluid</td>
</tr>
<tr>
<td>Granum</td>
<td>gr</td>
<td>Gram</td>
</tr>
<tr>
<td>Guitta</td>
<td>gt</td>
<td>A drop</td>
</tr>
<tr>
<td>Hora Somni</td>
<td>Hor. som.</td>
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<td>Modo praescripto</td>
<td>M p</td>
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<td>Vinum</td>
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SERVING MEDICINE THROUGH RESEARCH AND MANUFACTURE

Service through Manufacture. It is difficult to appreciate the magnitude of the advances made in the medical sciences since William R. Warner opened his retail drugstore in Philadelphia in 1856. Practice of the healing art itself was confined largely to the exercise of various time-honored, empiric procedures and the judicious administration of certain well-tried medicaments.

Pharmacology and the pharmacist's art were therefore limited essentially to technical refinements of traditional devices, and it was in this direction that William R. Warner displayed abilities of an exceptionally high order which rapidly gained the respect and confidence of a large medical clientele.

In 1866, after ten years' success as a retail pharmacist, Warner entered wholesale drug manufacture and soon acquired prominence as the first who "manufactured pills in which sugar was used as a coating." In 1879 Warner introduced "parvules," small pills produced on a large scale, and his firm also gained recognition for the excellence of its effervescent products and tonic elixirs.

Thus service to the medical profession through manufacture of exceptionally pure, uniform and reliable pharmaceuticals was the foundation on which William R. Warner based his success.

Service through Research. William R. Warner's ideal of service to the medical profession through refinement and control of materials and manufacturing techniques was supplemented in 1938 by a concept of equal importance: Service through Research. In June of that year the Warner Institute for Therapeutic Research was established with the purpose of conducting fundamental investigations for development and improvement of medicinal and biologic preparations and the discovery of new measures for diagnosis, treatment and prophylaxis.

The research activities of the Warner Institute are given additional scope through Research Fellowships and Scholarships maintained by William R. Warner & Co., Inc., in medical schools, hospitals and other scientific institutions co-operating on research problems with the Institute.

Moreover, recognizing that progress in the medical sciences is dependent to a considerable extent upon the availability of new, initially rare substances for diagnostic, prophylactic and therapeutic uses. William R. Warner & Co., Inc., gladly accepts the responsibility, whenever possible, of making such materials available through the Warner Institute at nominal cost to qualified clinical investigators and to institutions engaged in the teaching of medicine or pharmacy.

WILLIAM R. WARNER & CO., INC., 113 West 18th Street, New York 11, N. Y.
'AGAROL'
Emulsion of Mineral Oil with Phenolphthalein and an Agar-Gel

Description: Highly emulsified mineral oil in an aqueous agar-gel containing tragacanth, acacia, egg albumen, and glycerin. Particles of insoluble phenolphthalein in a state of extremely fine subdivision are uniformly distributed throughout the emulsion. Thus uniform dosage of phenolphthalein and miscibility of the emulsified mineral oil with the contents of the gastro-intestinal tract are assured.

Actions and Uses: ‘Agarol’ Emulsion relieves constipation smoothly and efficiently by providing moisture, lubrication, and peristaltic stimulation, three factors essential to normal evacuation. Moisture is retained in the stool by means of an aqueous, osmotically active agar-gel. Lubrication is supplied by highly emulsified mineral oil and indigestible, colloidal gums comparable to mucin. Gentle peristaltic stimulation is initiated by pure, white phenolphthalein, U.S.P.

The emulsified oil droplets remain dispersed throughout the fecal column and do not form pools of free mineral oil to collect in the sigmoid colon and rectum. Anal seepage of mineral oil and interference with defecation reflexes are thereby reduced to a minimum. Moreover, the hydrophilic, aqueous agar-gel component of the emulsion resists absorption of fluid in the lower bowel and thus retains moisture in the stool.

Dosage: The average adult dose is ½ to 1 tablespoonful upon retiring and may be repeated if necessary the following morning, two hours after eating. The dose for children three to six years old is ½ to 1 teaspoonful. Children under three years of age are given proportionately smaller doses. Administration should be avoided at meal times or during gastric digestion. Absorption of oil-soluble vitamins by ‘Agarol’ Emulsion is negligible when the preparation is administered in therapeutic doses two hours after meals, as directed. The required dose of ‘Agarol’ Emulsion actually contains a relatively small amount of oil (0.64 cc. to 4.8 cc.) which is not apt to absorb food factors because the larger, continuous phase of the emulsion is aqueous.

Packaging: Bottles containing 6, 10, and 16 fluidounces.

‘ALKA-ZANE’
Alkaline Effervescent Compound

Description: An effective and well-tolerated alkalinizing preparation. This snow-white, granular combination of basic bicarbonates, citrates and phosphates, administered in water as recommended, creates a refreshing, effervescent drink that replenishes the alkaline reserve, insures increased fluid intake, promotes diuresis and renders the urine alkaline.

†Subsidiary of William R. Warner & Co., Inc.

In solution, one heaping teaspoonful provides:
Sodium citrate ........... 41.00 grains (2.70 Gm.)
Sodium bicarbonate ...... 25.30 grains (1.60 Gm.)
Calcium phosphate ........ 3.80 grains (0.25 Gm.)
Magnesium phosphate ....... 3.30 grains (0.25 Gm.)
Calcium glycerophosphate .. 1.80 grains (0.10 Gm.)

The alkaline salts formed when ‘Alka-Zane’ Alkaline Effervescent Compound is dissolved in water are readily absorbed and efficiently utilized as systemic alkali. In contrast to many preparations for systemic alkalinization, ‘Alka-Zane’ Alkaline Effervescent Compound contains no tartrates or sulfates which exert little or no alkaline effect and may promote fluid loss through laxative action.

Actions and Uses: Since sulfonamides and their acetyl derivatives are sparingly soluble in acid urine there is a tendency toward crystalluria during unmodified sulfonamide treatment. For this reason adjuvant alkali therapy with ‘Alka-Zane’ Alkaline Effervescent Compound is indicated when sulfonamides are administered. The solubility of these substances in the urine was to be minimal at pH 5.6 to 6.6 whereas it was doubled or tripled at pH 7.5 and increased tenfold at pH 8.0.

‘Alka-Zane’ Alkaline Effervescent Compound is especially valuable in preventing sulfonamide crystalluria because it not only efficiently raises the pH of the urine, but its very mode of administration, which requires solution in water, insures the increased fluid intake which is usually essential.

‘Alka-Zane’ Alkaline Effervescent Compound may be used alternately with acid-forming salts in the treatment of certain urinary tract infections in which successive changes of urinary pH are desirable. Alkalinization of the urine is also recommended during treatment of gout in order to prevent deposition of urates in the urinary tract.

Dosage: For adults, one heaping teaspoonful of ‘Alka-Zane’ Alkaline Effervescent Compound is a class of water three or four times daily about an hour after meals and upon retiring. For children over 6 years of age, one-half teaspoonful three or four times daily one hour after meals and upon retiring. For children under 6 years of age, proportionately smaller doses, as indicated. ‘Alka-Zane’ Alkaline Effervescent Compound makes a refreshing drink when mixed with water or fruit juices.

Packaging: Bottles containing 1½ ozs., 4 ozs. and 8 ozs.

‘ANUSOL’ HEMORRHOIDAL SUPPOSITORY

Description: A slim, elongated, rectal suppository designed for painless insertion past the anal ring and comfortable retention within the rectum. ‘Anusol’ Hemorrhoidal Suppositories do not contain anesthetic, hemostatic or vasoconstricting drugs which may mask the symptoms of serious disease and produce systemic side effects by repeated application. Effective, but safe, therapeutic action is provided by the following rational formula:

Bismuth subgallate .................. 2.25
Bismuth resorcin compound ...... 1.75

Nicol guan balsam (medicinal) .......... 3.00
Zinc oxide ................................ 11.00
Acid boric .................................. 18.00
Base of pure cacao butter, benzoinated lard
and bees wax q.s. ad .................. 100.00

**Actions and Uses:** In hemorrhoids and in uncomplicated inflammatory rectal states, the decongestive action of 'Anusol' Hemorrhoidal Suppositories acts to allay the inflammation. With improvement in circulation, the edema fluid is further reduced with consequent progressive alleviation of both distention and pressure upon nerve endings. Direct removal of the cause thus achieves freedom from the symptoms of pain. Concurrently, the emollient ingredients of 'Anusol' Hemorrhoidal Suppositories soothe the irritated mucosa, coat it to protect it from further trauma, soften retained rectal contents and provide lubrication to facilitate their evacuation. Healing may then proceed as rapidly as venous stasis is reduced and evacuation of blood is checked.

When hemorrhoids are still amenable to palliative therapy; when surgery is inadvisable as in pregnancy, and in certain disease conditions; or when operation is refused, 'Anusol' Hemorrhoidal Suppositories afford a safe measure for quick relief, speedier healing and protection against further insult. 'Anusol' Hemorrhoidal Suppositories will effect urgently desired relief in uncomplicated hemorrhoidal conditions yet will not mask the presence of more serious disease.

When surgery is indicated, preoperative preparation of the field and reduction of congestion may be readily undertaken with 'Anusol' Hemorrhoidal Suppositories. Then following hemorrhoidectomy, or incision of a thrombosed pile, or injection therapy, the decongestive, soothing protection of 'Anusol' Hemorrhoidal Suppositories will serve to assure greater comfort for the patient and speed uncomplicated healing.

Continuing rectal discomfort, unalleviated by change in position, uneasiness on walking, and pain on defecation, when associated with simple cryptitis, papillitis or proctitis, may also be controlled with 'Anusol' Hemorrhoidal Suppositories.

**Dosage:** One suppository is inserted at bedtime and after each defecation.

**Packaging:** Boxes of 6 and 12 suppositories.

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**ELIXIR 'OMNI-BETA'**

**Vitamin B Complex**

**Description:** Elixir 'Omni-Beta' provides every therapeutic advantage of the complete B complex in a pleasantly flavored, concentrated form. It is quantitatively and qualitatively rich in the unfractinated aqueous extracts of yeast, liver, and rice polishings which are the best natural sources of the B vitamins. Balancing proportions of crystalline thiamine, riboflavin and niacinamide are added so that the minimum daily adult requirements of thiamine and riboflavin are supplied in each teaspoonful.

Elixir 'Omni-Beta' is not limited to one natural source of the B complex. A blend of the three richest sources insures high potency of all B factors. This therapeutic advantage is not obtainable from simple mixtures of the crystalline B vitamins or preparations based on small proportions of one or two natural B complex sources.

Yeast, liver, and rice polishings, respectively, vary quantitatively in vitamin assay. For example, liver is rich in riboflavin but yields comparatively smaller amounts of pantothenic acid whereas the reverse is true of rice polishings. Both yeast and rice polishings yield larger proportions of thiamine and niacin than liver. This quantitative variation in the chemically identified vitamins is probably reflected by the unidentified, yet nutritionally important, B complex factors. Combination of all three natural B complex sources in Elixir 'Omni-Beta' levels off the peaks and valleys of quantitative variation, providing uniformly high potency of all the B vitamins.

The quantity of the rich natural B complex extractives in Elixir 'Omni-Beta' makes it unnecessary to add large amounts of synthetic vitamins to the formula. A single teaspoonful of 'Omni-Beta' contains:

- Thiamine hydrochloride (B1) .......... 1.5 mg.
- Riboflavin (B2) ............................ 2.0 mg.
- Niacinamide (nicotinic acid amide) .... 10.0 mg.
- Pantothenic acid ........................ 1.4 mg.
- Pyridoxine hydrochloride ............... 0.4 mg.
- Natural folic acid, inositol, choline, biotin, para-aminobenzoic acid, and other nutritionally important B complex factors present in such teaspoonful, are derived from unfractinated aqueous extracts of approximately 7 Gm. of fresh liver, 7 Gm. of rice polishings, and brewers' yeast equivalent to 13 Gm. of fresh yeast.

**Actions and Uses:** To prevent and correct vitamin B complex deficiency states due to dietary inadequacies or caused by increased utilization of the B vitamins, Elixir 'Omni-Beta' is particularly indicated as a dietary supplement in the following conditions: anorexia, pregnancy and lactation; convalescence; neurasthenia and asthenia; infancy; old age; before and after surgical procedures; after sulfonamide administration; constipation due to B complex deficiency; restricted dietary regimes, and to supplement specific thiamine, riboflavin or niacin therapy.

**Dosage:** One teaspoonful of Elixir 'Omni-Beta' supplies the minimum daily requirements of the essential B vitamins for an adult, all other B complex factors concentrated and blended from three natural sources. The dose may be increased according to therapeutic indications. One-half to one teaspoonful, one or more times daily, is recommended for infants and children.

**Packaging:** Elixir 'Omni-Beta' is supplied in light-proof amber bottles containing 4 fluidounces and 8 fluidounces, each provided with a standardized, plastic teaspoon measure.

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**'GELUSIL' ANTACID ADSORBENT**

**Description:** 'Gelusil' Antacid Adsorbent (fluid) is an exceptionally palatable preparation of a uniquely acid-resistant aluminum hydroxide gel, 6.5 %, containing 7 - 8 grains of uniformly dispersed and suspended magnesium trisilicate per teaspoonful.

'Gelsul' Antacid Adsorbent (tablets) have proved particularly convenient for ambulant patients. Each grain, pleasantly flavored tablet is equivalent to one teaspoonful of the liquid and provides 7 ½ grains of magnesium trisilicate with partially dehydrated, acid-resistant aluminum hydroxide gel corresponding to 4 grains of aluminum hydrate.

**Actions and Uses:** An especially prepared aluminum hydroxide gel, uniquely resistant to hydrochloric acid in physiologic concentrations, is the basis of 'Gelsul' Antacid Adsorbent. Thus, the antispasmodic, demulcent, colloid character of 'Gelsul' Antacid Adsorbent is not altered by contact with the gastric contents.

The protective action of the special, activated aluminum hydroxide gel forming the basis of 'Gelsul' Antacid Adsorbent is predominantly physical. Hydrochloric acid is inactivated by adsorption and the proteolytic activity of pepsin is diminished as a result of decreased acidity, adsorption, and precipitation. Inflamed or ulcerated areas of the gastro-intestinal mucosa are mechanically protected by a film of the gel.

Moreover, since aluminum hydroxide is not absorbed, the danger of systemic alkalosis is obviated regardless of the dose administered.

Magnesium trisilicate slowly inactivates hydrochloric acid by chemical reaction as well as by physical adsorption. Protective, demulcent silica gel and magnesium chloride are formed. Antacid activity is prolonged.

One teaspoonful or one tablet of 'Gelsul' Antacid Adsorbent inactivates approximately 100 cc. of N/10 HCl within 3½ hours at body temperature, as measured with Topfer's reagent. The inactivation does not produce a pH higher than 6 regardless of the amount of acid present; i.e., pronounced alkalinity, such as might evoke a secondary acid rise, is not created.

'Gelsul' Antacid Adsorbent is indicated for the treatment of gastric hyperacidity and peptic ulcer. It is also an excellent vehicle for other medication such as phenobarbital and belladonna. 'Gelsul' Antacid Adsorbent provides all the benefits to be desired of this type of therapy as well as unique stability, uniform composition and practical freedom from constipating effects.

**Dosage:** Two teaspoonfuls of 'Gelsul' Antacid Adsorbent (fluid) or two tablets may be given between meals as often as necessary to relieve symptoms and promote recovery.

**Packaging:** Bottles containing 6 and 12 fluidounces.

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**MEDINAL SOLUBLE BARBITAL**

**Description:** Soluble, rapidly absorbed, long-acting sedative and hypnotic. Available as an exceptionally palatable elixir and tablet, suppository and powder form.

**Actions and Uses:** 'Medinal'**†** Soluble Barbital is an effective sedative and hypnotic. It is used as such in simple insomnia, hysteria, neurasthenia, thyroid disease and chorea; in the intervals between epileptic seizures, in mental disturbances and in impending delirium tremens. 'Medinal' Soluble Barbital may be used in combination with the analgesics such as aminopyrine, acetophenetidin and acetyl salicylic acid to augment their action in the relief of pain, especially of neuralgic character. The therapeutic effects of 'Medinal' Soluble Barbital are exerted on the higher centers of the brain, and therapeutic doses do not usually cause any apparent injury to the heart, circulation or kidneys.

In the absence of pain, sleep is usually induced by the administration of 'Medinal' Soluble Barbital within half an hour and lasts for four to eight hours, varying with individuals and the dosage. The patient generally awakes refreshed, but occasionally experiences lassitude, vertigo, headache, nausea and diarrhea on the following day. Patients known to be sensitive to any form of barbital should not receive 'Medinal' Soluble Barbital.

**Dosage:** One tablet of 'Medinal' Soluble Barbital, or three teaspoonfuls of 'Medinal' Elixir Soluble Barbital in hot water or hot milk, provides an average hypnotic dose.

One-half to one teaspoonful of 'Medinal' Elixir Soluble Barbital may be administered three or four times a day for mild, continuous sedation. One 'Medinal' Suppository provides effective, prolonged hypnosis when rectal administration is indicated.

**Packaging:** 'Medinal' Elixir Soluble Barbital, containing 0.33 Gm. (2 grains) of soluble barbital in each teaspoonful, is supplied in bottles containing six fluidounces and one gallon.

'Medinal' Tablets Soluble Barbital, 0.32 Gm. (5 grains), are provided in boxes of 12 and bottle of 50 and 100.

'Medinal' Suppositories Soluble Barbital, containing 0.65 Gm. (10 grains) of soluble barbital in each slim, easy-to-insert cacao butter suppository, are supplied in boxes of six.

'Medinal' Soluble Barbital (powder), is packed in bottles containing 30 Gm. (1 ounce).

'Medinal' Soluble Barbital Tablets are compressed without added excipient. They are completely soluble and suitable for both oral and hypo-dermic administration. The solution for injection should be prepared in distilled water and sterilized by heat.

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**PENICILLIN Sodium (WARNER)**

**Description:** Penicillin Sodium* (Warner) is the water-soluble, sodium salt of an exceptionally potent, nontoxic, antibiotic substance obtained from the mold, penicillium notatum.

**Actions and Uses:** Penicillin is the best therapeutic agent available for the treatment of:

1. All *staphylococcus infections* with and without bacteremia:
   - Acute and chronic
   - Osteomyelitis
   - Carbuncles—soft tissue
   - Abscesses
   - Meningitis
   - Cavernous or lateral sinus thrombosis
   - Pneumonia—empyema
   - Carbuncle of kidney
   - Wound infections—burns
   - Endocarditis

†Accepted by the Council on Pharmacy and Chemistry of the A.M.A.
2. All cases of clostridal infections: Gas gangrene
   Malignant edema
3. All hemolytic streptococcal infections with bacteremia and all serious local infections: Pneumonia and empyema
   Cellulitis
   Mastoiditis with intracranial complications, i.e., meningitis, sinus thrombosis, etc.
   Endocarditis
4. All anaerobic streptococcal infections: Puerperal sepsis
   Localized infections elsewhere
5. All pneumatic infections of: Pneumococcal infections
   Meninges
   Pleura
   Endocardium
   All cases of sulfonamide-resistant pneumatic pneumonia.
6. All gonococcal infections.
7. All cases of chronic pulmonary suppuration in which surgical treatment is contemplated.
8. All meningococcal infections failing to respond to sulfonamides.
9. All cases of bacterial endocarditis due to susceptible organisms.

Penicillin has also been found to be an effective agent in the following diseases but its position has not been definitely defined and will require additional experimental work:
1. Syphilis
2. Actinomycosis
3. Diphtheria, especially in horse serum sensitive patients.

Penicillin is of questionable value in mixed infections in which the predominant organism is of the gram-negative flora:
1. Ruptured appendix with peritonitis.
2. Liver abscesses.
3. Urinary tract infections due to B. coli.
4. It is also of questionable value in rat-bite fever due to streptobaussus moniliformis.

Penicillin is contraindicated in the following cases because it is ineffective:
1. All gram-negative bacillary infections:
   Typhoid paratyphoid B. pyocyaneus
   Dysentery
   E. coli
   H. influenzae
   P. vulgaris
   B. proteus
2. Tuberculosis
3. Toxoplasmosis
4. Histoplasmosis
5. Acute rheumatic fever
6. Lupus erythematosus
7. Infectious mononucleosis
8. Pemphigus
9. Hodgkin's disease
10. Acute and chronic leukemia

Inasmuch as Penicillin Sodium (Warner) is very soluble, it may be dissolved in small amounts of sterile, distilled, pyrogen-free water, or in sterile, normal saline solution. When large unit sizes are used in hos-
sulfonamides per se. 'Sulfathiazole' Ointment is bactericidal for Staphylococcus aureus, Streptococcus hemolyticus and Escherichia coli as well as for the highly resistant, spore-forming anaerobic Clostridium perfringens (vulvulii) and Clostridium tetani. The uniquely potentiated antibacterial quality of 'Sulfathiazole' Ointment tends to prevent septic contamination of the ointment and increases its therapeutic efficiency.

Finally, the specially designed, water-washable ointment base facilitates utilization of the microcrystalline sulfathiazole at the site of application and permits easy removal of crusts and surface debris.

**Actions and Uses:** For the local treatment of pyogenic skin infections, including impetigo; erythema; postular acne vulgaris; bacterial folliculitis; furunculosis; infected eczema; infected seborrhoeic dermatitis, and infected wounds. 'Sulfathiazole' Ointment is also useful in treating secondary pyogenic infections of pre-existing dermatoses caused by poison ivy, fungi, etc. Its use as a dressing is a valuable prophylactic measure against infection of open wounds, superficial burns and minor surgical procedures. The self-sterilizing property guards against reinfection of the lesion.

**Application:** 'Sulfathiazole' Self-Sterilizing Sulfathiazole Ointment is applied externally at the site of the lesion.

**Packaging:** One-ounce tubes and one-pound jars.

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**UROTOPIN** URINARY ANTISEPTIC

**Description:** Urotropin**†, Urinary Antiseptic, the original methenamine, a condensation product of formaldehyde and ammonia, is absorbed from the intestinal tract and circulates unchanged in the body fluids. It is rapidly excreted by the kidneys, releasing formaldehyde in urine of the proper degree of acidity.

**Action and Uses:** Urotropin Urinary Antiseptic has the marked advantage of being nontoxic even when not excreted. It is thus of unique value in patients with renal insufficiency. Urotropin Urinary Antiseptic is bacteriostatic for many strains of E. coli and is useful in the treatment of genitourinary infections due to strains of this organism resistant to the sulfonamides. Helmholz found that cultures of E. coli, resistant to sulfonamide, high urinary acidity and mandelic acid, were destroyed in urine containing a concentration of 200 mg. of methenamine per 100 cc.

Urotropin Urinary Antiseptic is especially useful in the treatment of refractory urinary tract infections where it is desirable to change therapeutic agents in order that the infecting organisms do not become unduly resistant to a specific drug. It is also useful in the treatment of urinary tract infections in patients exhibiting systemic side effects from sulfonamide therapy. Administration of Urotropin Urinary Antiseptic is a valuable prophylactic measure before instrumentation of, or operation on, the urinary tract.

Urotropin Urinary Antiseptic may, in exceptional cases, produce urticaria or vesical irritation.

†Accepted by the Council on Pharmacy and Chemistry of the A.M.A.

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**Dosage:** The effective dose of 'Urotropin' Urinary Antiseptic for adults is 4 to 5 grains (60 to 75 grains) daily, administered every 6 hours in four equal doses to secure uniform concentration in the urine.

The dose for infants is 0.13 to 0.2 gram (2 to 3 grains); for children four to five years old, 0.32 to 0.5 gram (5 to 7½ grains), and for children of six to fifteen years, 0.65 to 1.0 gram (10 to 15 grains), four times daily. 'Urotropin' Urinary Antiseptic should be administered well-diluted in water.

The therapeutic effectiveness of 'Urotropin' Urinary Antiseptic is dependent upon the acidity of the urine which, for optimal formaldehyde release, should approximate pH 5.5. Therefore, it is usually necessary to administer acidifying salts such as acid sodium phosphate, ammonium nitrate, ammonium chloride or acid ammonium phosphate. The usual adult dose of either of these acidifiers is 2 grams four times daily. The dose for children is from one-fourth to one-half the adult dose. Administration may be regulated by frequent estimations of the urinary pH with strips of nitrazine or chlorphenol red papers which exhibit characteristic colors at approximately the desired degree of acidity.

**Packaging:** 'Urotropin' Urinary Antiseptic (tablets); 5 grains, boxes of thirty, and 7½ grains, boxes of twenty, individually sealed in transparent tape. Available in bottles containing fifty, one hundred and five hundred.

'Urotropin' Urinary Antiseptic (5 grains) with Acid Sodium Phosphate (5 grains); bottles containing one hundred, five hundred and one thousand tablets.

'Urotropin' Urinary Antiseptic (crystals), bottles containing one ounce and one pound.

WARNER VITAMIN PREPARATIONS

VITAMIN A
Vitamin A tablets, 10,000 U.S.P. units. Bottles of 100.
Vitamin A tablets, 25,000 and 50,000 U.S.P. units. Bottles of 50 and 100.

VITAMIN A and D (Combined)
Vitamins A and D in oil, 1 cc. ampuls, containing not less than 25,000 U.S.P. units of vitamin A and 2,500 U.S.P. units of vitamin D. Boxes of six ampuls.

VITAMIN B COMPLEX
'Omn-Beta' Vitamin B Complex—see "Prescription Specialties," page 432.

THE B VITAMINS IN CRYSTALLINE FORM
Thiamine Hydrochloride* (Vitamin B₁): Tablets, 1 mg. (333 U.S.P. units). Bottles of 25, 100, 500 and 1,000.
Tablets, 5 mg. (1,665 U.S.P. units). Bottles of 50, 100, 500 and 1,000.
Tablets, 10 mg. (3,330 U.S.P. units). Bottles of 50 and 100.
Solution for injection, 5 mg. (1,655 U.S.P. units), 1 cc. Boxes of 6, 25 and 100 ampuls.
Solution for injection, 10 mg. (3,330 U.S.P. units), 1 cc. Boxes of 6, 25 and 100 ampuls.
Solution for injection, 50 mg. (16,650 U.S.P. units), 1 cc. Boxes of 6 ampuls.
Solution for injection, 50 mg. (16,650 U.S.P. units), in each cc., 10 cc. multiple-dose vials.

Riboflavin (Vitamin B₂ or G): Tablets, 1 mg. (400 B.S. units). Bottles of 25 and 50.
Tablets, 5 mg. Bottles of 40 and 100.

Calcium Pantothenate: Tablets, 5 mg. Bottles of 50.
Solution for injection, 25 mg., 1 cc. Boxes of 6 ampuls.

Niacin (Nicotinic Acid): Tablets, 50 mg. Bottles of 50, 100, 500 and 1,000.
Tablets, 100 mg. Bottles of 50 and 100.

Niacinamide* (Nicotinic Acid Amide): Solution for injection, 100 mg., 1 cc. Boxes of 6 ampuls.

Pyridoxine Hydrochloride (Vitamin B₆): Tablets, 5 mg. Bottles of 50.
Solution for injection, 25 mg., 1 cc. Boxes of 6 ampuls.

*Accepted by the Council on Pharmacy and Chemistry of the A.M.A.

WARNER VITAMIN PREPARATIONS—(Continued)

VITAMIN C
Ascorbic Acid* (Vitamin C): Tablets, 25 mg. (500 U.S.P. units); 50 mg. (1,000 U.S.P. units); 100 mg. (2,000 U.S.P. units). Bottles of 40 and 100. Solution for injection, 100 mg. (2,000 U.S.P. units), 2 cc. Boxes of 6 ampuls.

VITAMIN E
Alpha-Tocopherol Acetate Tablets, 5 mg. (Synthetic Vitamin E). Bottles of 50 tablets.

VITAMIN K
Menadione (2-methyl-1, 4-naphthoquinone) Tablets (Synthetic Vitamin K).

Indications: Indicated for prophylaxis and therapy of hypoprothrombinaemia of obstructive jaundice, biliary fistula and other hepatic and intestinal derangements in which the blood has a subnormal prothrombin content because of vitamin K deficiency; also to prevent and treat hemorrhage in the newborn, and in primary dietary deficiency of vitamin K. Bottles of 100 and 500 tablets.

THERAPEUTIC POLYVITAMIN
'Thera-Vita' Capsules, Warner. Each gelatin-coated capsule contains: vitamin A—10,000 U.S.P. units, vitamin B₁—5 mg., vitamin B₂—6 mg., niacinamide—100 mg., vitamin B₆—5 mg., calcium pantothenate—20 mg., vitamin C—100 mg., vitamin D₁—1,000 U.S.P. units, mixed tocopherols—5 mg. Bottles of 50 capsules.

*Accepted by the Council on Pharmacy and Chemistry of the A.M.A.
Aminophylline* (Theophylline ethylenediamine, U.S.P.), 0.24 Gm. in 10 cc. Boxes of 6 ampuls.

Aminophylline* (Theophylline ethylenediamine, U.S.P.), 0.48 Gm. in 2 cc. Boxes of 6 ampuls.

Caffeine and Sodium Benzoate Injection, U.S.P., 0.5 Gm. in 2 cc. Boxes of 12 and 100 ampuls.

Calcium Gluconate Injection, U.S.P., 10% (specially stabilized). Boxes of 6 10 cc ampuls.

Camphor in Oil, N.F., 0.2 Gm. in 1 cc. Boxes of 12 and 100 ampuls.

Dextrose 50% W/V in Distilled Water, U.S.P., 25 Gm. in 50 cc. Boxes of 1 and 6 ampuls.

Diethylstilbestrol* (Stilbestrol), Warner, 1 mg. in 1 cc. Boxes of 6 and 12 ampuls. Individual 10 cc. multiple-dose vials.

Ephedrine* Sulfate, N.F., 0.05 Gm. in 1 cc. Boxes of 6 ampuls.

Nikethamide* Solution 25% W/V in Distilled Water, Boxes of 6 2 cc ampuls; boxes of 6 5 cc ampuls.

Posterior Pituitary* Injection, U.S.P., Obstetrical Strength, 10 U.S.P. units in 1 cc. Boxes of 6 and 100 ampuls.

Pituitary Extract, Surgical Strength, 20 U.S.P. units in 1 cc. Boxes of 6 and 100 ampuls.

Sterile Redistilled Water, N.F. (for preparing solutions for injection). Boxes 6 and 100 10 cc ampuls.

Sterile Anticoagulant Solution of Sodium Citrate 21/2% W/V, U.S.P., 1.25 Gm. in 50 cc. Boxes of 1 and 6 ampuls.

Sodium Thiosulfate 10%, N.F., 1 Gm. in 10 cc. Boxes of 6 ampuls.

Vitamin Solutions for Injection, in ampuls, are listed under “Warner Vitamin Preparations,” pages 440-441.

*Accepted by the Council on Pharmacy and Chemistry of the A.M.A.
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