



All true nitrates will dissolve
in water, Compounds of
Nitrogen & Hydrogen

Atoms of same substance
always have the same wt -
of different sub, dif wt,

Relation between wt of Atoms
of different ^{bodies} ~~comp~~, is same as
that of the Elements to the sum
of the compound.

Acids are compounds of H -
O, of which can be replaced
by a metal or group of bodies
and forms a salt,

H, always replaceable -
The last is the residue and gives
the name to the compound,

Any body which will replace the H
of an acid is a salt.

All acids are salts of Hydrogen
Nitrates only contain one atom of
Hydrogen. "Mono basic Acid" Normal
Sulphates contain two atoms

To test for true acid add Sulphate
of zinc and will develop brown
fumes. ^{on boiling} Test for Nitrates

Sulphate of Potassium Sulphuric Acid
and Sulphate of Ferrum

Nitrogen & Hydrogen N¹⁴O¹⁶ "Am"
is a gaseous metal "Sal Ammoniac"
Chloride of Ammonia, N¹⁴Cl^{35.5}
Soluble in water, lighter than
air, Great parts horn (Am) of
the ships, will not support
combustion, is an Alkali vol
atile, Will unite with acids form
ing salts, - Turn turmeric paper
brown.

Haloid Bodies -

4 Made from sea salt, Chlorine ^{35.5}
Bromine ⁸⁰ & Iodine ¹²⁷ Fluorine ¹⁹
is not free in nature.

Make salts by direct union
of Alkaloid bodies with other
bodies,

Base is a term applied to a
metal that will unite ^{with} water
and form a Hydroxide.

An Alkali is limited to these
Hydroxides that will dissolve
in water to form greasy substa

Chlorine is the unit

Compounds between metals are
called Alloys, except with Mercury,
which is called an Amalgam.

So in all the Animal Secretions
FeCl. + Black Oxide of Manganese,
heated, comes off as a gas,
Greenish yellow in colorable
irritable. Sol. in air, 2 1/2 times
as heavy as air, will bleach
any vegetable color and has the
strongest affinity for O. bleaches
by taking it away and releasing
the Oxygen, Great destroyer of
life, Alcohol or Ammonia Anti-
ton supporter of combustion,
Used in the Arts as a bleacher -
Sulphuric Acid will destroy its
color, Disinfectant, Parasiticide
All Chlorides will give white precip-
itate with Nitrate of Silver,
Chloride of Soda Labras. sol -
by passing Cl.

Bromine ^{wt} 50, ^{At. wt} 80

In combination in nature, and
made from salt water,

Impure salt, treated with Black
Oxide of Mn, & Sul. Acid)

Metals of the Alkalies

K, Na, Am

Metals of the Alkaline earths

Barium, Strontium, Calcium
& Magnesium

Metals of the Earths

Aluminium

Metals in presence of Am
with sulphuretted Hydrogen
will give character to Pre-
cipitates,

Bromine bleaches very slightly
is not sol in water, this with
Mercury are the only non metals
liquid. Add a little Iodide of Pot
to water to Dissolve Bromine

Is a disinfectant will destroy
all vegetable life, is dangerous
to health, is useful for all kinds
of ulcers, Bromine Dis, in
water, great new remedy for
Epilepsy, 1/2 to 8/4 water.

Teaspoonful a dose,

Inhale Am, for Antidote,

Taste, smell, color

Iodine, At wt 127.

In Com, in nature, made
from sea weed after burning.

Treat with Sul, Acid Bl Oxide

Mer, very insoluble in water

steel gray color, heat will

volatilize, not combustible

not sol in water, Iodinum

Officinal, heaviest vapor known

Give in pill form,

Belong to a class of alteratives
by dissolving certain kinds
of growth in a remarkable
degree. Counter Irritants apply
externally, does not desiccate.
Apply before stage of suppu-
ration; $\frac{1}{4}$ gr dose in Allox
capsule over dose irritants,

Give on empty stomach, to
allow starchy matter to be diges-
ted, Iodine had to give internally.

Good to Inject into cyst or joints.

Room Linc add Iodide of Potassium

~~Bodidene Linc~~

Lugalls Sol - watery Sol -
best for internal administration

Linc preferable to aintment
Tests for Iodine, Give a blue
color with starch, add dil Sol
(Starch Antidote) give Iodide,
Chlorine will displace either Bromine
from compounds,

Iodine with Nitrate of Sil
 will give A Brown color
 Bromine " A yellowish white
 Chlorine Perfectly white
 All three will unite with H₂
 hence called Hydrogen Acids
 All Acids compounds of Hydro
³⁰⁵³ H₂ diffused in combination
 made into gas by Sul Acid on H₂
 dissolves in water. sometimes
 called Marine Salt Dilute 4 to 12 ^{water}
 Good in gastric troubles Good
 in Acid Dyspepsia, same list
 as for Chlorine, Antidotes Chalk &c
 Nitro Nitric acid, (Aqua Regia)
 will not keep long, Good in
 Biliary troubles, Dil. may be used as
 a bath, H₂ Br₂ a sour
 Bromide of Potash precipitate
 by Sulphuric Acid, and you have
 H₂ Br₂, given as a substitute for
 Bromide of Potassium, will return
 the pair of Iodine, can give
 any dose, Good in cough mixtures

Floresic Acid Treated
with Sulphuric Acid

Sulphur S, like Oxygen
comes from Sicily & Italy
found united with metals
Sulphur with metals Sulphide

" " " Oxygen Sulphate

Heat Sul until goes off in gas
and is precipitated, Inflamable
gives a blue color, Insoluble
in water, Is an Alterative
and laxative, "Flowers" made
by redistilling from native,
Milk Sulphur, Boil Duck lime
and Flowers of Sulphur pour
off the liquid and add Nervative
Acid, May give with Cream
of Tartar, Makes a good oint-
ment, Sulphur & Phlogistic Arts
used in the Arts, Parasiticide,
Oxides of Sulphur 2nd, 3rd, 4th
bad when you burn Sulphur
SO₂

SO_2 Sulphur Dioxide 64
May make by heating Sulphur
and Sulphuric Acid -

Blanches by taking out the O
will destroy Vegetable colors and
some mineral colors, will
dissolve readily in water
and form an Acid H_2SO_3 Sul-
phurous Acid, May be solidified
and transported, Run this
gas through a tube surrounded
with water and it will freeze
it by abstracting the heat

Gives a black color with Acid pte
of Mercury, Largely used
in treating Pyramic Acid -
Sulphurous Acid as a spray for Diphtheria
Used externally

SO_3 - 80 $\frac{32}{16}$ Oxide of Sulphur
It unites with water readily
and forms, Sulphuric Acid
 H_2SO_4 "Oil of Vitrol"

Heavy, oily, colorless, Sour
Used in printing, Telegraphing

and is by far the most important
Chemical we have, will
blister by Abstracting the water,
never given internally,

Escharotic tendency to spread,
Dilute 1 part to 7 of water.

Is Lonic & Astringent.

in night Sweats Hemorrhage

from Kidneys, Will turn
anything black, Scorch it

Chloride of Barium white Precipitate
insoluble in everything.

Oct, 28th Sulphur compounds

Sometimes used for some criminal
purposes. stain at first will
disappear if treated with Ammonia

Oil of bitriol. turns a dark brown

Sulphuretted Hydrogen

occure free in nature sulphur
water, Sulphide of Iron and

water in tube and add a strong

Acid, will burn giving off
a blue flame, special use for

in skin diseases

The gas is poisonous & can
be condensed as a liquid
Sol in water, Tests smell
Blotting paper moistened
with sugar of lead will
turn it red, Boron B₁₁
In combination in nature
Boracic Acid & Borax,
Boran is its combination with
soda, Boracic Acid great used
in surgery as a disinfectant and
Antiseptic.

Tests for Boracic Acid, two
A green flame with Alcohol
with Luminous Paper turns red
Carbon & Silicon

Carbon C₁₂ Diamond, reflects light
Plumbago or Graphite see class.

Black grayish color, as in pencil
Stone polish, Will burn so

3rd Coal, so Lamp black, soot
smoky because it has too little

Oxygen, 4 Charcoal,
Wood & Animal,

Charcoal Bleaching agent, by furnishing a large amount of O_2 .
Animal charcoal more active
" will purify whiskey water
in cisterns, and in sugar

Coal - Compounds
Oxide of Carbon, Co Co_2
Colorless, Poisonous, Combustible
 CO_2 made in nature
by decomposition of woody
material. In Chemistry by treating
marble with a strong acid, it
is elastic sol. in water, will
not burn, sol. in water is called
Carbonic Acid, feeble Acid
unites with bodies and forms salts
Tests, gives white precipitate
with lime water, Bicarbonate
is sol. in water, Held sed-
atives for headaches from stomach
troubles & in fevers,
 Si Silicon not free in nature
This forms SiO_2 white sand
with Alkalies forms Glass,

There are 67 known Elements
39 of these are of Medical Interest
26 of these metals 13 non-metals.

Oxygen is a gas colorless tasteless
Supporter of combustion of Air.
Heat Chlorate of Potassium will
drive off the Oxygen Atomic wt.

Hydrogen is made by the action
of hot zinc or Iron on water
by the addition of Sulphuric Acid
Is invisible, odorless, tasteless,
Is combustible, combines with
the Oxygen and forms water, but may
be combined in right proportions
as gas and will explode on ignition
Atomic wt. H_2 is 1 - Is a prom-
-inent constituent of all the Arti-
-ficial lights, Is the lightest
substance known

Nitrogen, about $\frac{1}{4}$ of the Atmos-
-phere, Burn a small piece of
Phosphorus in confined air, it takes
the Oxygen leaving Nitrogen,

Its use is to dilute the O_2 of the atmosphere. It is incombustible a non supporter of combustion
Wt 14.44

Chlorine Cl 35.5

Is made from common salt. Place in test tube Cl_2 , Black Oxide of K_2O , and cover with water add a small quantity of Sulphuric Acid or Hydrochloric Acid an H_2 gas is evolved is of a Green color $2\frac{1}{2}$ times heavier than air is sol in water is a Deodorizer Disinfectant and Bleacher, has a great affinity for Hydrogen and abstracts from substances and Oxidizes the substance,

Carbon Dioxide (Carbonic Acid, CO_2 Carbonate of Calcium and Acid makes it - It poisons by preventing respiration
Nitrogen, P-31 Phosphorus
Made from bones, by heating with

Sulphuric Acid, Charcoal, very difficult to make, distils over in a tube through coater, Round white waxy sticks, Inflammable, has garlic smell, White or yellow, Amorphous or Red Phosphorus, and latter inflammable - unites with Oxygen and gives a bright light, Largely used in arts, for matches &c, makes a bad burn going deep, is a true Lonic -

Oil of Phosphorus (2 or 3 drops) very offensive, Phosphides from uniting with other bodies, Poison in large doses

Old ^{oil} Surpentine an Antidote) Sulcopher, Symptoms, vomiting pain, Blood Luminous ^{Bilious} sputa, Chronic form of poisoning, Attacks specially the liver, 3rd Party degeneration of internal organs, as shown in families

Compounds of Phosphorus -
Oxides of P, P_2O_3 - P_2O_5 made by burning in air, white body sol in water, P_2O_3 snow white looking body, Phosphates, Dilute Phosphoric

$8/10476 \div 97 = 108$
 $8/10476 \div 108 = 97$
 $1.09 \frac{1}{2} + .00 \frac{1}{2} = 1.08$
 $96 \frac{1}{2} \div .00 \frac{1}{2} = 97$
 Page 222
 $9700 \times 1.08 = 2781$
 $9700 - 2781 = 6919$
 Page 222
 $8600 \times .95 = 8170$
 $8600 - 8170 = 430$
 Page 19
 $8187.50 - 1251 = 6936.50$
 $8/100 \times .95 = 95$
 $85 \times .95 = 80.75$
 $85 \times .05 = 4.25$
 $85 \times .95 = 80.75$
 Page 18
 $8600 \times 1.08 = 9288$
 $8600 - 9288 = -688$

Acid a nervous tonic given in water before meals, as a good lemonade, Large loss of Phosphates in urine give the Phosphoric Acid,

Metaphosphoric Acid is an irritant Poison. Hypophosphites have had large use in consumption;

Arsenic. As₂O₃ free in nature and in combination, made by heating a compound with Sulphur. Roast an ore in an iron vessel will leave in vapor and condensed in another chamber, A Bluish Black body not soluble in water.

As_2O_3 & As_2O_5 dissolve in water. Externally applied caustic As_2O_3 . Arsenic, Arsenious Acid, Ratsbane, White Arsenic, Arsenic Trioxide, Crystalline, bitreous forms. Slightly sol. in water, more so by boiling. Sol. in Acids, Hydrochloric Sol. in Alkalies, Dissolved in water forms the Arsenious Acid,

8750 x 0.525 = 4593.75
 8750 x 0.525 = 4593.75
 0.8 + 0.225 = 0.525 rate of gain
 Ex 10
 4200 x 2.66 = 11172
 14 + 126 = 140 rate of gain
 Ex 8
 25000 x 1.06 = 26500
 1.00 + 0.4 + 1/2 = 1.05
 Ex 7
 1.00 x 1200 = 1200
 150 x 48 = 7200
 1.00 + 0.5 + 0.25 = 1.75
 Ex 6
 9876.158 - 8922.40 = 953.758
 9876.168 ÷ 1.045 = 9445.85
 0.8 + 0.16 = 0.96
 Page 216 Ex 5
 Ex 11
 1/2 of 1/8 = 1/16 = 0.0625
 1/2 of 1/2 = 1/4 = 0.25
 1/2 of 1/4 = 1/8 = 0.125

Slightly Acid no odor Arsenious
 Acid 40 of a gr. Fowler's Sol, eggs
 of Arsenic Trisulphide and equal part
 of caustic Potash and water to make
 a pint, Tonic, Alterative, Antiperiodic.
 A good sedative, in very small doses
 and combine with Opium. In Intes-
 tinal Catarrh, In Cancerous Cachexy
 in nervous troubles, associated with
 muscular contractions, Ingest under
 skin for Paralysis Agitans or Tetanus
 begin with a drop diluted, The basis
 of the plaster for Cancer is, Arsenic
 Arsenic Sulphat of Zinc, & Sulphur
 with Rosin,

In Poisoning
 May be chronic or acute symptoms—
 Great irritability of intestinal tract
 sense of pain & heat vomiting &c
 Quick pulse cold skin, on the other
 hand may go right off in state of
 collapse, Chronic symptoms system
 run down, puffiness under the
 eye, hair falling out, symptoms
 appear within an hour or two
 as a rule, in criminal cases

$124 - 49 = 75 = 3 \frac{1}{2} \times 48 \text{ am}$
 (8)
 $2 \cdot 13 \cdot 24 \text{ PM}$
 $1 - 46 - 56$
 $25 - 27 - 1$
 $90 - 15 - 65 - 85$
 $96 - 89$
 Page 187 ex 1

$6 - 51 - 56 \text{ am}$
 $50 - 5 - 8 - 4$
 $12 \frac{1}{2}$
 Page 186 ex 5
 $166.75 \div 225 = 23 \text{ am}$
 $4.5 - 0 + 2.5 = 2.5$
 Page 188 ex 12

1022.60 am
 594.5
 4987.50
 $84.26 \times 10 = 2897.50$
 $82.50 \times 80 = 2600$
 Page 187 ex 8
 $480 + 80.50 = 560.50 - 200 = 360.50$
 Page 186 ex 11
 $56.826 \div 4.6 = 12.3516 = 12 \frac{3}{8}$
 Page 180 ex 14
 $118.255 \times 23 = 2719.25$
 (8)

Sublimations - In a dry tube
 heat the substance and will pass
 off in gas and will be deposited
 on tube as white, shining crystals.
 Add to sol of As Mercuric Acid, it will
 give a golden yellow precipitate.
 Silver nitrate + titrate of silver neutral
 give by adding As, add to
 the sol - gives lighter yellow arsenic
 sulfate of copper, neutralized by
 adding As, Add to the sol, and
 will give the green arsenic, copper
 (Rimick) Boil the prepared sol
 with Mercuric Acid and then
 immerse in it a strip of copper
 foil, the latter acquires a steel
 gray coating of metallic arsenic.
 Be very careful to dry and desiccate
 the As in a neutralized
 Acid had to As, dissolve, Lassar
 Emetic dissolved in As, and is
 always dissolved in the stomach.
 Boil the Dilute Acid, the clean cop
 page, and if copper stays bright, the
 chemicals as pure. Dist. Lect.

Lobroc Sol - Chlorinated Soda
Dissolves the metal ring, will
not the Antimony, Nitric Acid
will dissolve both leaving
Nov 11th Marwin

Metals first class, from Oxides
and will dissolve in water.

Potassium 39 K made from Compounds
by burning to ashes and lixiviation, the
water dissolves out the impure Carbonate
Potas & Soft bluish white metal,
turns on water,

K₂CO₃ is official Liquor Potas
Carbonate of Potas with Sol lime
Fused Potas dissolved in water
makes the Liquor Potas
Oxides end in as is a colorless
Liquid irritating Corrosive, Astringent
as Biogran, Antidote, Diluted is
official to render system Alkaline
Dyspepsia Greasy Obesity, Evaporates
makes Potassa Fusca, Excharotic
mixed with lime makes Bienna paste,

K₂CO₃ from which we can make
all other preparations, Salts Tartar
Dissolve in water and Add Acid
makes Bicarbonate is not deliquescent

Bromide Potassa KBr Great Liquor
Potassa with Bromide,

Sol in water, mild and agreeable
Bromine in water Sol, best -

Keep up treatment for Epilepsy for
years, Give in Alkaline solutions
on an empty stomach, R₂, Dissolve
Iodine in Hydrate of Potassa
Very Sol, in water, Give in small
doses, to prevent Injurious effects,
which sometimes occurs.

Acetate of Potassium, Good Diuretic
Good adjuncts to Iodide & Bromide

Sulphate of Potassium,
Bitartrate of Pot - Cream of tartar
Add to this Bicarbonate to make, Sulphate
Rochelle Salts, Cathartic,

Cyanides of Potassium
Cyanide Very dangerous & poisonous in few
seconds & like Succinic Acid, The Animal
dies with a scream

Chlorate of Potassium,
Make from it Neutral mixture,
20 to 30 grs. Two or three times a day.
Sulphate Potassium
Substitute Bromide Pot in Doves ^{instead} powder
Nitrate Pot,

Chlorate Potassium
Chloride of Pot with Chlorine water
will make it. Dangerous in large doses
cause Otitis, & Nephritis,
All Sol. in Water,
Gives a faint lilac color. burnt in
flame. heated on Platinum wire,
Sol. with Lactic acid gives
a white precipitate

Nov 15th

Sodium 20. made from
Ear Sodium, whiter than Pot
burns with a yellow light,
1st Oxide Liquid. Care of Soda with
liner sold as concentrated lye
makes a hard soap, will poison

by abrasion, Antidote vinegar
oil & fat milk,

Chloride Sodium made
from water by evaporation
purified by redistillation, enters
into all animal tissues, has
a tonic and slight periodia, Anthel-
-mintic,

Carbonate Sod

made from Chloride of Sod
Sul Acid makes Curative Acid
this with Charcoal, common
name is washing Soda - in
large white crystals, as an
irritant, is a detergent for
removing scales & crust,

Add Carbonic Acid gas, ^{and Bi-}
-carbonate of soda, ^{Sal Soda} coming from
is non crystallizable, is an anta-
-cid, and can be used too much
Give small dose before meal
assists or modifies use of Cal-
-omel, especially in children
prevents the burning feeling
of the discharge,

Phosphate of Sodium
made from Bar^L, by dis-
solving in it Phosphoric Acid
Sol in water pleasant taste
is a cathartic, and acts on the
Bowel, In catarrhal condition
of drinkers trouble in Duodenum
1/2 doses, in cases of Colic

Sul Sodium
made as a byproduct in man-
ufacture of Muriatic Acid
is a good cathartic, acts
on the liver, in certain skin
troubles &c. caused
by stomach troubles. Sexual
Give a mixture of Sulphate
Bicarbonate of Soda free in na-
-ture.

Large white crystal, Sol
in water, has soothing proper-
-ties, is Antiparasiticide.

for, Thrush, as wash or with
honey, for sore mouth, in es-
-titis, dissolved in Glycerin - with

water as injection

Enlarged prostate in old persons
Hot water Sol, best
Sulphites. Bi & Hg po
by dissolving Bar^L in water
and run Sul. phuric Acid
through it, is antiseptic &
good in infectious Diseases,
and externally for foul sores

Hypo Chlorite of Sodium or
Chloride of Sodium Sol
Lafac Solution contains
Chlorine and is good way
to administer Chlorine,
Equally administered
Valerianic Acid

Tests, burn with a yellow
flame, is very widely diffused
through nature, boil water down
Sodium Compounds Cathartic
Ammonium, a metal
Oxide, by heating Chloride
with sodium or lime, gaseous
body, fumes is irritating. Sol

in water, and forms Bartschan
in alcohol, Spirits of Am -
Aromatic Spirits of Am -
Are Alkalies, Volatile ss. Sod
& Potassium. Give diluted,
Stimulant, may be given in
forms of Dyspepsia ext Blisters
when covered up, Ar, Sp, Am
best for internal uses
has been used in poisoning
from bites.

Gas Am heat Sal Am like
with chalk, and the carbonic
acid unites with it, is only
one that smells like Bartschan
is good stimulant, and will
dissolve fibrinous exudation
is good in all suffocating dis-
Nov 16th Liniment sweet
oil & Liqueur equal parts
Chloride Am,

Made from burning animal
matter, Add to gas Cyano-Hydr-
atic Acid,

Large tough fibrous tissues
a cold solution. Alternative
used for any enlarged or
engorged conditions, Expecto-
rants very valuable for break-
ing down, and dissolve the
viscid substances. In hepatic
troubles in large doses two
or three times a day, in uterine
or ovarian troubles. Very
valuable, in biliousness or shown
in blotches on face &c, give a
mixture with Acetic Acid,
A great assistant to Saline
purgatives is Nitro-Hydr. Acid
Dilute in small wounds, In
enlarged prostate Nitro Am
in young ones

Sul Am,

Nitrate made from Carbon
Acetate Am, Spirits Mercur
Lique neutral mix Nitrate Pot.
Refrigerant & Diuretic -
is anodyne, in painful
menstruation ✓

Balerianate of Am.
Stinking body, used not in
sol condition, used in Elixir
or Juice, Antispasmodic,
In Historical cases, with
Aromatic Ex. Am. In Spasmodia great
relief from belching,
In flushes of heat acts well -
In Epilepsy or restless condition
leading to it. in these cases give
these preparations. In children
waking up with a cry at night
lets. Small in Juice. Gas
Compound mix with lime
or soda and we get the smell
will pass from solid to Gas.

Magnesia Mg, occurs generally
in combination, with water
and lime. Take Chloride
Heat with metallic Sodium
does not catch fire on water
burns with very bright white
light in Photograph gives
beautiful light

Oxide made by heating
Bar Magna tasteless white
powder, Milk Mg, dissolves
in water give to children
as laxatives Bar free in nature
can make from Sul by adding
Co. of Soda,

Sul free in nature or
by dissolving any com. Mg
In Sul Acid Cathartic,
In Dysentery good by neutral
irritating secretions, with Sul
Acid may also add Opium
, Citrate a mild Laxative
Dissolve carbonate in Citric Acid
lets, Phosphate of Sodium
add to Sol, gives a granular
white precipitate,

Lithium Alkaline in
spring water or ashes of Sebasso
A white neutral lightest decom-
poses water Citrate & Carbonate
very Sol in water, hence best
in Rheumatism, Gravel

Barium from Chloride
of Ba. A white soft body
decomposes on water,
Chloride & Nitrate all used
Sul. Barium like white lead
Chloride white crystals
Alterative, in Scrophula &c
in small doses, Nitrate used
in same way, Tests, add to
it Sul Acid get a white Prec
Flamey Green color
Sr, Str. A yellowish metal
A crimson flame
Ca, Calcium
Combination in nature
A reddish looking metal
Oxide Ca, (Lime Quick) ^{Calx}
Calcium Hydroxide (Lime Distine)
Is an astringent Antacid
For 18th Sol in water Oxidate,
Used in Sol, Liqueur Calcis cold
water is astringent antacid,
Forms compounds with acids

Gene in milk for children and
a pinch of salt, Caution out Lime
water & Linseed Oil, Saccharated
Oxide - with sugar Takes more
Time, Evaporated Antidote for
Carbolic Acid poisoning
Bismuth paste, Chloride of Ca
Dis. Marble in Sour Acid
Prescribed in Sol, as Alterative
in Tuberculosis can give in cod
liver oil, 5 drop Sol, three times a day
Carb. Struc in nature as Marble
Limestone impure Precipitated, Prepared
-ed - good for Chafes, especially
when a little Pulvis. Camphor is added
Chalk texture, Precipitated, Finer
than prepared, & made from Oyster
shells, Chloride of Lime with Ca. Soda
Sulphate Coal Paster of Paris
Gypsum, Heat soil Pulverize
then mixed with water Setts.
Use fresh powder to increase its
setting power, Alum increases it
white of egg will take off the hard

Extensively in arts, Slightly
Sol in water

Chloride of lime, Hypochloride
of Ca, used for disinfecting - Bleaching
add a little vinegar and will
give off Chlorine gas

Phosphate of Ca, Large part
of bone, and free in nature
Used as fertilizer, Made
by distⁱⁿ HCl. Acid add Am
to precipitate, Givⁱⁿ Rickets
Rc, $\frac{1}{2}$ teaspoonful in milk to child -
No danger from overdose,

Hydrophosphate, Ca, made by
adding to lime water ^{the} Ca

Tests Dis, Oxalate of Am
White precipitate will dissolve
in acid, Give a brick red
flame,

Earthy Nectate, Aluminium
Clays are all compounds of this
A whitish tough metal light
takes a high polish

Forms alloys with other metals,
used for Table ware and
will not tarnish with sulphur
or oxide, Oxide called Geo-
glucoside Al_2O_3 make by decom-
posing any clay ^{with acid} gunny, used
in the arts for holding colors -

Sul Al, by dissolving in
Sul. Acid White crystals Sol
in water, can form double
salts. Alum, is astringent
Tonic, Emetic, use in croup
with molasses. Alum when do
not stir it, Dissolve Alum in
boiling milk,

Silicates used in arts, fine
China Ware, Ordinance Clay, Pottery

Glass, Silica or sand with 5 times
as much of Ca Sol and Ca Pat
with some of the Alkaline base
Sol Glass used as a dressing
and as a surgical dressing
will not stand urine, is light.
Tests Al, with Pat will give
white jelly, Rec

Manganese Mn , Occurs in Corn
Black Oxide by heat with Carbon
 MnO_2 , used in manufacture of
Chlorine, by Hydrochloric Acid
Belongs to Peroxydes, acts just as if
an acid forming salt,

Sul Mn , used as Iron
Ores, MnO , ^{lathy} pinkish color
Act as cathartics in large doses
Permanganate,

Black oxide, caustic Pot, Nitrate Pot
and bar ^{Pot} on platinum foil
heated gives a compound when boiled
with water gives it as green liquor
Is a great Oxidizer giving off its
Oxygen, is a great disinfectant
for foul ulcers & chancres &c, apply
with a glass rod, use locally
about the mouth or nose as
a spray or by Post. Spongy
Destroys the bad odors in
cancers, use externally, acts
Any of its Sol. Compounds

Add Am, Sulphide gives a flesh
color, or Heat on borax.

Sulphur give Amethyst color
Zinc a bluish white metal
malleable, burns ^{with a} bluish flame
and white fumes, does not tarnish
and is used for Galvanizing.

The preparations are keruac & zinc
Burn ^{Ca} zinc and make the Oxide
Zinc in doses of 10 or 20 grains in Pain-
ful troubles of the stomach after
eating, used for chafis, metal small
Ointment, 1 to 6 of Oint. Carbonate
used in same way,

Sul zinc, By dissolving in
Sulphuric ^{acid} acid, Specific Emetic,
In tartaric Poison best
Used externally as escharotic.

A local application in skin dis-
In Poison Oak, can about 1/2 a
strong sol. 1/2 to pint, in Exams
and in Ergasilas and astringent.
Chloride of zinc Deliquescent
Dis zinc in Acetic Acid
used exte Sul, burns deeper than

May remove a large cancer at
once, Acetate of Zinc
Used as injection All Prep $\frac{1}{2}$ gr
by enough, Valerianate of Zinc
Smells bad, Tonic, and Antispas-
modic Dose $\frac{1}{2}$ gr up, Phosphate
of Zinc White Powder, give away
in Pill, Best preparation.

Zinc $\frac{1}{2}$ gr with $\frac{1}{2}$ of Dry Vomica
in nerve troubles, Threatened Paralysis
Tests, Sol with sal. Am. Per
white Pre,

Iron occurs in iron, Oxides
and Sulphides
Haematites. Fool's Gold Sulphides
Make by fusing with limestone
to carry it off when flows off a flux.
Carbon gas unites with the Ox-
of iron and goes off,
Heat by iron stir and drive
off the Carbon (Puddling) makes
wrought Iron. Heat the wrought
iron with charcoal in layers makes
steel,

Low cast steel made by melting
cast & wrought iron together
Uses, more important than any
other, Are Tonics in medicine
necessary to life, Forms two
Classes of compounds Ferrous &
Ferrie, Lower Ferrous Heilder
and less astringent, acts by being
converted into Albuminate

Iron Pulvis, dissolves in Gastric
juices Reduced, Iron by Hydrogen
Heat the
Oxide in a tube and Pass over
it Hydrogen gas, keep in dark
place, Nov 23rd Steel gray powder
It causes belching, if any acid in
Stomach, $\frac{1}{2}$ of $\frac{1}{2}$ of $\frac{1}{2}$ of oxide of Iron
Add to a ferrie salt, Sol of an Al
A jelly like mass, is a Tonic
not used internally, used as Ant-
for Arsenic, Sulphide of Iron
not used in medicine
Heat it with Arsen Sulphur
retted off, Chloride Ferrous

Ferrous Chloride by adding O_2
makes Ferric Chloride, or by adding
nitric acid. Lime Fe, made by
dissolving Chlorine Alcohol,

Tonic in large degree, irritates
the stomach, good in Bright's Dis-
and Wainman, cystic, Dia-
-
Tongue best index not give
to any body, with a coated tongue
or in biliousness, use Salines.
First at any rate, can use Iron with
New Am, Splendid Tonic mixture
Give Iron in large doses for Neuralgia
Car Fe, the lower persons
make by taking a sol of iron
and add Car Soda, a greenish
compound, Ball's Mass, mixed
in Syrup. A greenish sticky sub-
-
its coloring in pill is a mild
preparation, good in Neuralgia, in
Malarial fevers with Quinine.
Only a certain amt, absorbed.

Enrich the blood with iron for
Neuralgia 30 grs three times a day
Griffith's mixture of subcarbon-
ate of iron, same use.

Sul Fe Green Nitral, Casper's
Dis Carbonate in Sul Acid
Ferrous, Tonic Astringent
Dry Sulphate, with lime is
a good disinfectant,
Ferric Sul, Iron Sul, and
add nitric acid, Liquor Sersul-
phate, should not be used.
With less acids makes the
subsul, ^{Meoniplo} not near so harsh
Good astringent for internal
use, not good for external
uses as it will cause supuration,
A weak spray for Hemorrhage
nose, Iodide of Iron, Iodate them
together with Syrup, Scrophula
Good for long continued use
When tonsils are enlarged and supu-
rate

continually suspicious of
Lieberck. Give these Iodine prepa-
rations of Iron,

Nitrate of Iron, *Liquor Ferric*
Dis Iron wire in Nitric Acid
is an Astringent for watery
stools of children, a drop or
two doses for child, give with Sine
of Columbus,

Scale preparations will not
crystals. Make ^{an} sol and pour
out on glass to dry,

Sulfate of Iron & Am,
These compounds mild
Citrate of Iron

Add $\frac{1}{2}$ Sol. Iron to sol of
Quinine & Citric Acid to make
Citrate of Iron & Quinine
Phosphate of Iron

Tests. Take a sol add Sul-
phide of Am, black precip
dissolve in Mur Acid,

Ferrous Ferri Cyanide deep
Blue, with Alkalies a Green
Gilly Precip

Ferric Ferro Cyanide deep Blue
Sulphob 1, blood red Prec
Add Lammic Acid Black -

Get a green color heated on
Borax bead

For 28th Plumbum
Sul Pb (Galena) Bluish metallic
Cooking, contains silver, malleable
but not ductile, best obtained
by roasting Com, Oxide yellow
called "Litharge" made by heating lead
used in making lead plaster best
with Oil, Is a very strong base
uniting with fatty acids, base of all
adhesive plasters, Goulard's extract

Iodide of Lead. Take sol of lead
and sol of Iodide of Potash and get
a yellow precipitate. The compound
are sedative and astringent effect,
Inversely enlarged glands

Car, Pb, White Lead,
Nitrate of Lead and Car of Soda
give a white precipitate,

Insoluble in water ground up
with oil makes paint and of all
colors by simply coloring it,
Used in medicine externally as
dusting powder but dangerous
is sedative, this produces Chronic
Lead poisoning. Used some
times for face powder by ladies
Used also in making hair dyes
1st Symptoms of Chronic Poison Run
down constitution, Pale symptoms
and colic, constipation around
the umbilicus, then muscles of
forearm Extensors, dropped hand,
Blue line around gums,

Carbonic Acid gas in water will
dissolve the lead. Bicarbonate
will dissolve, Electricity, Injection
of Strychnine is treatment,

Will not respond to Faradic electric
ity but slightly with Galvanism

Externally Iodide of Potash,
Antidotes Sulphates in acetate Pb
Opium in large doses for colic
Acetate Pb

Dissolve Lead in vinegar
Internally Poison, Anti Sulphates
Boil with Litharge gives Subacetate
of lead, Goulards, Ext clear liquid
to use, too strong, A dilute form
may be used ~~soft~~ make stronger
Use in skin diseases, or burns
may be used with Laudanum Inf
pctions. Acetate of lead in Lbem
in Typhoid fever, with Opium
May be used as Cerate or ointment

Nitrate Sol in water, good in
cracked nipple, or disinfectant
where there is smell

Tests Black Prec with
Sol Hydrogen, Yellow, with
Iodide Pot, white with Chloride
and Nitric Acid

Antimony Sb, Sulphide in
nature, brittle gray metal,
Oxide Official make for

Sulphide
Sulphide, Sol, Ant in Neur. Acid
boil 5bb liquid, add Water, gives
a white Precipitate, wash, add Carb
Sod, gives Oxide Ant remains.

Tartar Emetic, $\frac{1}{2}$ to $\frac{1}{4}$ up
Dissolve Cream Tartar in water
and add Ant and Boil, to make
Burns leaving a black coal
with greater heat, turns white
Relaxes the System,
Mine of Ant 2grs Carb, to 1 pt
Sherry wine,

Ointment $\frac{1}{2}$ to 1 lb Pasture
Plaster of Ant, with pitch
Native Sulphide, Diaphoretic
Kermes Mineral another Sulphide
Oxysulphide, in Plummer's Kell
Lest's Orange red Bee, with,
Sulphuretted Hydrogen

Nov, 30th Mercur

Cerium - Ce - in combination
Oxalate of Cerium, A sedative
remedy, for nausea, or for cough
of all kinds 5grs three times a day

dry on the tongue, harmless
Hay fever, all nervous cough

Mercury 200

Com with Sulphur as sulphide
Cinnabar, Dissolves in certain
acids, and forms salts,

Forms compounds with other
metals called Amalgams, will
dissolve other metals, as gold
& volatile. Ground with silver
ores dissolves the silver and
sinks to bottom and the rocks scrape
off. Used in the arts in filling
teeth and coating copper -

Preparations Mercury itself,

Acts as poisons taken too largely
Are Alteratives, Purgatives.

acts especially on Glandular troubles
Is eliminated through all excretions

Treatment for Poison Emetics

Albumen, For the local effects
give Iodide of Pot to make a sol -

and then Purgative

Mercury as a Powder Blue Mass

Mercury. Canjee, Roses and
Powdered Liquorice root, Doebgr
For its action on the Liver -
Follow with Saline,

Metallc Mercury in presence of
Alkalies, makes a gray Powder
Oxide. Mercury is then dissolved in
greasy substances and is also con-
verted into Albuminates,

Mercuric Compounds act all
as Corrosive sublimate,

Mercury and Ointment a
make blue ointment Mercu-
rial ointment, is Parasiticide
for enlargement of Glands
is irritative to the skin.

Mercurial Plaster

And " " with Gum Ammoniac

Oleate of Mercury

Oleate of Mercury & Morphia
Yellowish in color, no bad smell -
and soothing, More eligible
Hydragrum Caum creta,

For children add a little more
chalk.

Oxides Red, Black, & Yellow
Is from the Mercurous

The other from Mercuric
Calomel acted upon by Alka-
lies, makes the Black Oxide
Red Oxide, by heating Metallc
Mercury in the air, Red, Precip-

As a wash in Granular Conjuncti-
vitis, Yellow Oxide, made
by dissolving Corrosive sub-
in water and precipitate by
an Alkali - More eligible than
the Red Oxide, Used same
as the Black wash -

Chlorides Mercurous & Mercu-
ric, Dec 27th

Mercurous Chloride, made from
Sulphate, by dissolving Mercury in Sul-
Acid, add more acid & Salt and
sublime, Dissolve out corrosive
sub, by warm water, Keep in
shade, Sol only by strong acids -
to slight degree.

Given only in small doses.
Is an Alterative, Solvent, and Diu
in congestive condition of Liver,
or Kidneys, Cal & Opium as Alter
ative, Biliousness, Catarrh of
intestines &c, Purgative. Summer
Diarrhoea of Children in first stage
given in soda or sugar, A little
before quinine, Sulf. Calarialis, $\frac{1}{2}$ gr
ever 20 min to one or two grs.
External use for healing ulcers
Venereal warts, Applications to
eye very small dust,
Bisulph. Yellow Chloride, Cor
Mercuric Sulph. mixed with Salt
and distilled, Sol. in water
and Alcohol, Corrosive to mucous
tract, Em Albumen Antidote
Acts by forming an Albuminate
Acts different from Mercurous
compounds, and Oxide ~~of~~
Good in ^{Chronic} Bright's Dis. two or three
times a day, give Elix 20 drops
and small doses of Cor Sub

Begin very carefully.
Iodide of Potash
Green Proto, Mercurous Iodide
Union of Iodine & Mercury
Evaporate to greenish yellow
Powder, Incom. with Iodide Pot
Alterative, Red Iodide.
Cor Sub dis in water. Iodate Pot
dis in water pour together get
Red Precipitate, given in Syphilis
as Ab and as ointments for
enlarged spleen, Give combina
tions water, Sol. a clear solution
By adding to Cor Sub & I. Pot. Cau
tic Potash a Chemical reagent
to test Am, (to make analysis
of water, by detecting Ammonia
in it. which is evidence of organic
matter, (A deep Brown color
Distil water first,
Cyanides, not much used
This is used to make Prussic Acid
used in making caps
Sulphates, Dis Mercurous in Sul
Acid, not given internally.

Mercuric ^{time} thrown into water gives
Yellow Sub Sulphate of Mercury
Red, Purple Mineral
Sulphides, Red & Black
Black version of Sulphur
and Mercury (Ethiops Mineral)
an unstable preparation
Red, is Native Sulphide of iron
bar, not much used,

Nitrate Acid Mercuric Nitrate
Use in liquid forms for
external use, Strong Caustic
In form of Ointment bitime
A Stimulating ^{yellowish color} Ointment
Strong Preparation Dilute
Lect, by Sol will throw
The Mercury down on Copper
A Chloride, added to Mercurous
corn, gives a white Precipitate
Mercuric, Black Prec with
Sulphurated Sol, Red with
Iodide of Pot. Yellow with H
Corrosive Sub. to it add Am
and gives a white Prec.

Used only externally
Silver Argentum
Occurs free & as Chloride
and Sulphide, made by roast
ing and reduction or Amalgamation
Burns black in presence of Sulphur
Best conductor of Electricity. Plated
with copper to prevent wearing
Turned black by sulphur forms
alloys with other metals
Oxide a grayish powder
A Tonic and Alterative to ^{grip}
Nitrate in large cubical plates
Tonic, Alterative or Astringent
Ext forms a compound with Si-
nes, acts only superficially, used
in nervous troubles, used for
a long time gives ^{line} the ^{more}
of Burns, do give to Tong, in
spinal trouble Locomotor ataxia
Zinc $\frac{1}{2}$ gr done in pill form 3 times
a day after meals, for three weeks
at a time, then rest a week,
Fused Silver,
Nitrated one half salt petre

Infernal Stone,
Run the risk of staining the
corner Cyanide of Silver,
Nitrate of Silver & Prussic Acid,
Black Pre, with Sul. H₂, —
and Chloride, gives a white
Pre, sol in Ammonia

Aurum, Free in nature
can be welded at ordinary temp
not oxidized, no single acid
will dissolve it, Dis slightly in
Nitro Muri Acid

Chloride of Gold, A reddish
Powder. Alteratives, in various
Chloride of Gold & Sodium
in Neurogia Hypertrophy, as
in brain, "called Sclerosis"
Tests its Color, Insolubility

Platinum Pt. Free in
nature in small grains —
very hard — hard to melt, does
not oxidize white color —
Used in the arts,

for tipping gold pens with some
other compounds —

Sn, Siu, Sae and as Oxide
Anthelmintic, Not used

Tin, used in arts for coating Iron.

Alkalies, Sol
Alkaline Earths Sol
Earths Aluminium,
Minerals

Those which give characteristic
Pre, with Sul. Hydrogen, ^{acid} in presence
Gold & Silver and ^{Mosses} Green Pre
with Chlorides,

Geo Fetter
Lushington

100	letter heads @	50
"	envelops	" 10
150	receipts	" 25
		<hr/>
		195
10 days		"

Dec, 6th 1881

Urine, Book Roberts ⁴⁰⁷⁰ best
Lyson best small book \$1.15
Kidney made up chiefly of tubes
and blood vessels, All shapes of tubes
always has a dilated extremity
composed of twisted capillaries
All of these parts tubes lined
with Epithelium, Only separate
the ingredients of the blood,
It consists of waste of the
tissues, and excess of liquids
Solid & Liquid Urines,
Diff. in liquid urine, some
Ac. Dogs, Acids Human
slightly Acid, Complex
Sub, has organic, but dis-
solved in it, Amber colored
Healthy, Paler the urine, greater
the quantity, if Pale urine is
not increased in quantity, some-
thing wrong, One quantity
of light color, symptoms of Bright's
disease, also Hysteria.

A large amount, at night a patholog-
ical symptom, A pale, very
light urine. Large quantity, diabe-
tes Insipid. Ferrile urine
dark colored, Bile may turn
it green or yellowish, Odor pe-
culiar. Light the fat of the
animal which secretes it,
A bitterish smell, may be
changed by the food,
Sweetish smell in diabetes -
Characteristic in Bladder trouble
Putrid smell, drawn off from
the bladder, full of Bacteria in
a case, Very Poisonous, Reaction
on Litmus Paper,
Light Col, with a white sedi-
ment contains either Phosphate
or. Phos. ^{amorphous} Mouldy looking
urine, from Hem, in Kidney
Red. Urine, with a deposit at bot-
tom. Large quantity of urates
and uric Acid, Black urine
from Carbolic Acid,

Green & Blue urine from
long standing. Odor -
State or fresh, & a sweetish
fermentative smell in
Diabetes Mellitus, has a bitter
salty taste tests by litmus
paper, normal slightly acid,
they have two acids in it at
same time. Very strongly
acid Lithaemia with oxalate
of lime, (Citrate of Lithae)
for a few days will cure it -
Alkalies, Soda, Potash, and
if ^{color} remains blue is a fixed one
and comes from Kidney -
if ^{color} not fixed is a sign of
decomposition of Am -
and will form largest stone
and treatment must be
addressed to the bladder
Take a bottle full of clear
distilled water, empty it
and fill the bottle with urine

and weigh it. multiply this
weight by 1000 and divide
by weight of water,
Weigh by Ubrinometer
Sink a graduated tube in
a cylinder full of urine
Whenever take Sp. Gravity
of urine always take amt,
Chronic Brights Dis. Pale increas
ed Amt, and low specific grav
ity, Amt, 3 to 5 pts per day
Quantity depends on many
things. What tends to increase
elimination from other sources
lessens it. Persistence in small
liquors increased for awhile
but lessened in the end.
Mental states influence it,
Holding it lessens it, bad
policy. There may be increase
of either, liquid or solid,
To weigh it, boil down any
ounce and weigh the solid
multiply by no of pyriday

2nd Take the average sp. Gr. —
as 1020 Take last two figures
and multiply by 27 will give
the no. of ^{parts} solids matter in
every 1000 ^{= 2 pts} cubic centimeters
Heat the solids turns black
and is a sign of organic
matter. The black represents
the mineral matters;

Dec 9th Two specimens.
Light col. & Dark. A high col
urine with low specific gr. a
liver trouble. The Other a very
heavy deposit that when heated
disappears, shows urates, and
Oxalate of lime, first symptoms
of Bright's - Bright's disease. Pain
in back. Necessary to know Amt,
58 grams in 1000 Cub centimeters
There may be no urine passed
scarcely. From either want of
secretion or retention in bladder
secretion in kidney and may be

Obstructed suppression
caused by obstruction to Ureter
as from a stone. Mechanical
may be from morbid growth —
most frequent cause Uric Acid
Stone in Gouty patients,
Symptoms. Light. Low. Pain, sup-
-pression low sp. Gr. Different amt.
at different times. does not con-
tain Albumen as a rule, May
go eight or ten days without
Symptoms of Poison, First Twitch-
-ing, Diarrhoea, vomiting come
Death Treatment dislodge
the stone, Early diuretics stim-
as Digitalis, Give Citrate of Lithia
well diluted. Try to dislodge by
mechanical pressure, Last resort
perform Lithotomy or nephro-lithotomy
In suppression from other than
mechanical causes, as in Fevers —
small amt. is very dark and
contains large blood and Lute
casts, An injury in urethra —
may cause these same symptoms
Keep away from bladder;

Give Skin

Symptoms Comatose retching
vomiting, Pupils contracted; comes
on in 2 or three days. Nervous
Symptoms prominent, Treatment -
Must be rapid. Croton oil or Pilo-
-carpine Hypodermically, A splat-
-tice over the Kidneys hot or cold
or dry cups,

Retention Obstruction between
Bladder and Urethra. Stricture
and enlarged Prostate from
pressure, Treatment, Local
Relieve the inflammation, and then
use the catheter, Symptoms. A drib-
-bling of Urine, caused from a
loss of tone, Introduce catheter
to prove, Catheter soft and sealed
eyes, Level of Urine apparently high
but not higher than level of blood
This is a sign of Irritation.
Healthy Urine has no deposit
within twelve hours, unless
a little cloudy mucus

1st first part of Deposit -
Color, & Character. On keeping
healthy urine, undergoes an acid
fermentation in time. Longer
keeping it gets Alkaline. a Sec
fermentation, a white deposit
Ammonia smell, Sometimes
this Al. fermentation comes on
suddenly from Micrococci. Urea
and decomposes the Carb. Urea
and forms Carb. Am,

Dec, 13th Organic & Inorganic
Solids in the urine

Organic largest & most impor-
-tant. Urea. a white substance sol-
-uble in every thing but Ether, never found
as solid in urine, Make artificial
from Inorganic Comp. Splits up
easily into Carb. Am, & water,
Lasts, (first acts like a base with
acids to form salts) Nitric & Oxalic
Acids form the compound,
Boil down Urine to 1/2, pour
it off and mix with equal bulk

of nitric acid and forms
 crystals on cooling, they are
 flat or six sided, that lap over
 each other like shingles, or shod
 of wheat, Oxalce same but used
 as only confirmatory, Quantity
 in healthy 2 to 3 per cent, or 500
 grains in 24 hrs, To find out the
 amt, (Liebig's, depends upon
 a sol of mercury with urea
 forms a white Prec) $2\frac{1}{11}$ ^{grains} Urea
 mixed up with Labae sol
 will decompose the urea and
 forms carbonic acid Gas -
 Take a graduated tube, Directly
 attach by a rubber tube to a jar
 Depends upon Urea being de-
 composed by Hydrobromite of Soda,
 Dr. Powell's Labae Sp. Cr, and
 mix with the Hydrobromite Soda
 and by decomposing Sp. Cr, is learned
 Pure Urea gives for every 1000
 gives 10027 gram, of Urea

Labae Urine, Sp. Cr. 10:1
 11 1 part of urine and 1 of
 Labae solution, and mix (get
 the Sp. Cr. of Keist.) Set aside
 for 24 hrs, shaking often, then
 Test Sp. Cr. again, and note
 the loss, and for every degree lost
 gives $3\frac{1}{2}$ grs, ^{to the volume of unshaken} of Urea, as
 multiply by 77 give the per cent,
 Keep the same all the time at
 about the same temp.
 2 1/2 per cent, about the average
 amt, of urea, It is found in all
 tissues, it is the metamorphosis
 of the nitrogenous substances,
 waste or ashes of all the tissues
 as influenced by the ^{temp} food, and
 represents the last step in the stage
 of death of tissues. It is increased
 or dim - by the character of diet
 Muscular exertion, does not increase
 it in health Dec 14th Pathology
 Those troubles which increase
 oxidation & disintegration increase
 of urea except, Yellow Fever

In Cholera & largely diminished
In troubles of ^{increased} nervous system
"Aemia", when accumulated in
the system, 2^{ndly} when this urea
converted into Carb. Am. Ammoniaemia
The poisons due in the system
not the Urea nor organic matters
but the "Inorganic" (Alkalies)
Sym. Nervous twitching of
muscles, first face intermittent
Vomiting & Purging, Sets cold
and clammy and goes off in
convulsions, Sequella to Se-
fever, Measles, &c, In Pregnancy
In retention, when retained
in bladder, changed to Carb
Am, and poisoning, have
red tongue & glazed appear-
ance; no vomiting & constipation
In Pregnancy Pilocarpus,
Ammoniaemia
When retained in bladder
Generally in old persons then

from enlarged Prostate Gland,
Keep the bladder empty, & clear
Uric Acid generally found in
combination with Alkalies -
forming urates, Crystals of uric
acid, is generally color-
ed with other coloring matter,
A great variety of Rhombic Prisms
Tests, naked eye, only Brown or
red crystalline deposit.
Nurexide tests, Nurexide Take
the crystals out of urine, place on
Saucer, dissolve with Nitric Acid, evap-
orate gives a yellow stain, add Am, a
crimson stain, add to this caustic
Potash, which gives a blue,
Determine a part of the quantity
of urine ^{and} deposit early -
It is closely allied to urea, and
forms it by oxidation, and anything
that increases one tends to lessen
the other, Eliminated in small
^{a few grains} quantity by Kidneys, Nitrogenous
food increases it, and Malt liquor
Febrile diseases increase it.

Clinic Significance,
Ought to always make more than
one analysis as it changes
greatly in amt, It stains the
vessels, anything that will
tend to increase the concen-
tration of urine increases it,
If deposit is persistent,
Shows that proper oxidation
is not going on from defect
in some of the functions, as
liver disease especially, Dyspepsia
Examine Patient, give less lig-
nerous high food, more
exercise, and act on them
It is largely increased in gout
nearly always from Lithaemia
Lithic Acid same as Uric Acid
most frequent of all forms
of stone, Uric Acid crystals,
any little impediment may cause
the stones to form.

Dec 16th, Uric Acid is
always more or less colored

Occurs in urine in small
quantities, but is increased
by anything that diminishes
the oxidation Pathology, One
in Lung and Liver troubles
also, Digestion troubles occurs
after the paroxysm of pain -
in Rheumatism & Gout,
A narrow train of symptoms
Lithiasis or Lithaemia Virgines
&c without vomiting, trouble gene-
rally with the kidney, sometimes
liver Cases of numbness and
tingling in muscles, and no
organic derangement, folled by
increase of Uric Acid & Urea
and Insomnia also this trouble
may be Intermittent, Hypochon-
driac This aborted form of Gout,
Treatment Eliminated the pro-
ducts, In Liver troubles, from
drinking, more to be eliminated
than can be, must stop the drink-
ing before can cure, give more
vegetable diet exercise and

to stone formed without
some local cause or obstruction

Dec, 20th

Urate appears in two forms -
Amorphous, and crystalline in two
forms. Uric Acid stone treat-
-ment, What kind of stone, Reced-
-ing symptoms always, if strongly
Acid, Uric Acid stones if not
acid is Oxalate generally, Medi-
cinal Treatment for stone in Kid-
ney, based on the principle that
uric Acid will unite with alkali-
es and ^{become} more sol and pass
out, Citrate of Lithine 10 or 15 -
grs, three times a day. Buffalo
Lithiac waters good, is pleas-
-ant to take, get better effect from
natural water than artificial.
~~Hydrangea~~ ~~Fluid Ext~~

Will bring on Brights due by its
irritation, probably. Treatment
of Uremia, Pilocarpia together
be careful not to give to patient

thoroughly unconscious as it in-
-creases saliva and may choke

Increased production of Urea
without fever - - - - - may
mean nothing but should watch
for sugars.

Phosphates, some Phosphoric Acid
necessary to life. Always in urine
in ^{comb} Phosphates, Phosphates Lime, by
Earthy, Soda & Pot, Alkaline
Alkalies sol. in water, but of
the Lime Insoluble and forms
the deposit, a ^{first} white amorphous
Powder, Bone earth, 2nd, Rare the
Crystallized Phos. of Lime, 3rd
The ^{same} ~~Lime~~, Magnesia, called
Triple Phos, largest class -

Phos lime from an Alkaline
urine, white granular Powder
under Microscope dots, does not
disappear by heat, as ^{Amo} urates,
Alkalies will throw down, ^{etc}
Acids Acetic, will dissolve
urates will form crystals
Phosphates in blood,

~~As the phosphate~~ milky before get
cold ~~Phos~~

Any roasting of bones
will increase Phos. of lime
(In some brain & spinal troubles
not increased but sometimes,
In some Dyspeptic troubles
and vegetable food will increase
it, It will not form a stone
in Amorphous condition
Crystalline very seldom seen
and is thought to be indie of serious

Am Magnesia only found
in decomposed urine, always
find out whether it is stale,
if it take place before passed
indicates trouble in bladder

A white crystalline substance
beautiful Prisms, under microscope,
oblong generally,
with end bevelled off, white acid
colored and never bevelled
Phos of Soda & Pot. largest but
is never in form of deposit
To make examination, Amt of urine

Sp, Gr, and Alkalinity or Acidity
Magnesium mixture will
precipitate as milky and shows
too much,

~~Regenerium~~ But Milky looking
urine, may come from Indigestion
Change his diet give diuretic
~~Phosphoric~~ Acids to improve his digestion
and diminish his Phosphates.

Roseford's Acid Phosphates -
In rickety child gives Phosphate
of lime. Bone Powder, in Bread & Butter
Treat mother for rickety talent
while Pregnant, prevents it in child,
Triple Phosphates trouble in blad-
der from retention, treat that
keep empty and washed out, local
treatment, give it rest, a drop or
two of nitric may be used in wash -

Stagnable stone of triple, Bone earth
^{combined} will ~~R.~~ melt heated on wire
Break easily, largest grow rapidly
in few weeks - have them in blad-
der, crush and wash out,
Borax and Glycerine wash -

Dec 21st Oxalate of Lime

Oxalic Acid & lime, does not exist in healthy urine but on standing it may be deposited and is nothing abnormal. In the eye in, a conical glass, the lowest deposit a white, and above a grayish colored deposit, and deposit of crystals along the side of glass. Under Microscope - beautiful Octohedral Crystals Folded Envelope appearance - rather small not so large as triple phosphate, Insoluble by heat. Alkalies & vinegar - but Sol in Acetic Acid, & Nitric W. P. O. Res.

Whitener tends to prevent complete change to urea Due - Oxalic Acid poison -

Oxalate of lime from very slight causes, indiscretion in food if not persistent & indicates nothing, after eating Apples, Lemons,

Rhubarb & sorrel, & certain Diets - Peptic troubles, & Lung troubles and in all Chronic skin troubles Oxaluria or Oxalic Diathesis - Result of Diseases. When it persists for some time Pathological and if not removed will in turn produce its effects, Any organized material will cause the aggregation of these crystals causing stone, happens in men who lead sedentary lives. Treatment improve activity of the system, take a bath of Epsom ^{salt} water and rub well the skin, correct the indigestion, give more meat diet - Stop his drinks, containing Carbonic Acid gas, Give something that tends to dissolve the deposit. Nitro-Hur, Acid will improve digestion, Acid Phosphate three or four times a day, & take exercise, may occur in the eye itself, & Pelitis in Catarrhal and Pile. Pain in the back

Floyd & Wain N. C.

over the region of the kidney
a symptom of Pelitis.

In people of sedentary habits
if find crystals of Oxalic Acid
then con, stringy mucus
and then, oval Epithelial cells
Inflammation of Pelvis of Kidney
Treat as above, A little mucus
may cause large rough stones (Kend
berry) hard to crush,

Chlorides Principally Sodium
and Pot 40 grs in 24 hrs, never
forms deposits, Test Nitrate of
Silver Sol in Am,

Dec 23rd

Next in amt to Urea
Detect by Nitrate of Silver -
In Dim amt in wasting dis-
eases, Typhoid, Pneumonia in state
of resolution, with Silver a small
deposit and separates in little
flakes and clots, Chloride of Pot-
Sul, Pot & Sodium, Chloride

of Barium a white Prec, ^{insol on Nitra} Urea -
in liver troubles often, No importance
Carbonates, Bar of lime not often
found forms a white deposit dis-
solved in vinegar gives of Bar, Acid
Small Spherical masses, radiating
from centre, "Organized deposit"
made by an organ, ^{at Pus} - may
be in large or small quantity, urine
^{granular deposit} when it passes, settles
down as a bulky deposit, if urine
is alkaline, it has a greenish jelly
like mass, Microscope, circular
globules granular appearance
add vinegar, outer rim becomes
clear and shows ^{one or more} nuclei, and
resembles white corpuscles,
This nucleus shows ^{it is} Pus,
Donné's Test, add an Alkali con-
verts it into a jelly like mass,
Origin may be from urethra, prostate
Kidney, Prostate, Bladder & and Clap
& from Clap, the first urine
contains most, or may be squeezed
out, withritis

In female most frequent cause
is from Clap. or inflammation in
the urinary organs, Specular exam-
ination, Strains, In old men
Enlarged Prostate, ~~or~~ but not
so much or in Old cases of Clap
little specs or flocculi floating
around in the urine, These come
from ducts of Prostate glands,
or stricture low down some times.
There is a little Spermatozoa some
times in it, has wonderful effects
on the mind, In Cystitis, a large
amt, ~~is~~ and converted into
a jelly like mass, and symptoms
referred to bladder, In mild cases
small amt, It may come from
Kidney and generally comes from
~~the~~ Pelvis, Pelitis Pain in back
urine not in jelly like mass
but as globules and ~~have~~ epithelial
~~cells~~ with them, from inflammation
of these Papillae and Plugs round

ed and Pear shaped, Pathognomonic
May be from irritating substances
Acute form from inflammation
of ureter and causes suppression
From introduction of instruments
may be chronic from pressure
or morbid growths, Generally ^{partly} in other
Continuation of inflammation down-
wards, in urinary organs travel
backwards, Certain Constitutional
troubles, Brights Dis, Subacute
Ris in Kidney different amt, at
different times, one affected,
May be from Perinephritic Abscess
Local sometimes, Treatment de-
pends on Diagnosis, Local or Gen-
eral, May give inflammation by over-
stimulating medicines, Lina
Cron in Chronic form, Sonics
Ris coagulates by heat
Pot converts in jelly like mass
kinogen Brings out nuclei

Dec 27th

Epithelial cells form deposit sometimes. Always a little in urine. Anything that irritates will cause this. From the urethra in male flat oval containing nucleus - in vagina very large frequent epithelial cells. From bladder irregular of various shapes frequently with tail, and oval - Kidney Pelvis like water, oval and tail ⁱⁿ plugs of mucus, in Kidney round with distinct nucleus faintly granular matter around, easily destroyed leaving nucleus looking like a blood corpuscle not biconcave looks like Pus. Large white deposit from desquamation distinguish by acetic acid which only shows one nucleus Pus two or more. Associated with it, have mucus, which shows when treated with vinegar, white Pus corpuscles in larger quantity

than the [mucous, casts] which are long, stringy and are called cylindrical come from Prostate, when branched comes from the tubercles of Kidneys always sign of irritation. Always color ^{with} a little sol of Iodine,

Semen Spermatazoa always a little after coition. If in large quantity, looks stringy & the eggs under glass, like tadpoles only very small head, with no marks about it. Very characteristic always in large numbers. Always find more than one. May lose in evacuation of hard feces, no trouble. In old people after passing sound with enlarged prostate, no trouble.

Q One of impotence due to man, - may be large amount of it, but not healthy, and Spermatazoa live 24 hours, may be found broken.

Treatment. Atropia *Hydroquinone* all for nocturnally. ^{at 8 1/2} *Borax, Pot. Chloride* - ¹⁰⁰ *and* Tube casts, are only molds from

exudation into the interior of the
tubes of Albuminoid substance (Blood
se, and also the Epithelium ^{lining} shed
from degeneration and running to-
gether. Let the urine set in a conical
glass for twelve hours, when they
will form a white flocculent deposit.
Cast 1 is a Hyaline when transparent,
are always smooth and regular at end,
one end nearly always round. Next
is Epithelial ^{most frequent} cast from tubes of kidney
is mold of Albumen substance and
has epithelial scales scattered on it,
3 Granular casts simply mold
with dots ^{or grains} all about over it, dark
or pale 4th Fatty casts,
5th Bloody casts, 6 Pus casts.
What is significance? always some
trouble from the kidney. Prepon-
ance of one kind of casts, aid in diag-
nosis. Epithelial early in disease
Hyaline later, and Granular in-
dicates chronic trouble. Bright's disease
Hyaline indicates least trouble,
Pus Pus only in late stages of disease
where there is abscess.

Tube casts are nearly always
found with Albumen,
Blood in small or large quantities
Haematuria, from any cause of in-
jury to urethra first urine passed,
Blood from bladder, Stone, cystitis
or Billi. (little projections containing
capillaries) which bleed very easily -
frequent cause, Urine is of such
color and on standing coagulates
at the bottom. B. from kidney
from uriniferous tubules and
capillaries as a rule is mixed
with urine as emulsion, dark
smoky urine with no coagulum
anything that irritates these organs
causes blood to flow ~~there~~ into them
may be there from Purpura -
also by vicarious menstruation
If due to stone remove, If from
Liver treat dis. Lett Chem
Tine Siccum and Oil Turpenti-
na make emulsion, drop a bell
urine in this, when it will soon

larger amt of blood diverted into it.
Dangerous from tendency to hemorrhage, and from involvement of other parts. Will remain just the same size sometimes, and others grow with the growth of the body. A slight dilatation of the vessels and is continuous, and sometimes by attrition of surfaces coalesce and form large vessels, or sinusses, the walls become strengthened by borrowing from tissues around and in this way sometimes become encapsulated.

Smallest may be cured by persistent application of Collobion, 2 or three ~~times~~ times a day, Blistering often cures it. Blistering also, if they are however growing rapidly, they have the same effect as aneurism.

and same painful effects even over the bone, sometimes ^{Arterial} pulsating and must be dealt with summarily. Best in such cases is the ligature, and must be done with the least injury to the skin possible, as it will

tend to slough, May be treated by Galvano Puncture, and by introducing a needle and heating the end sticking out.

Complete excision when encapsulated cut wide of the tumor and will be but little hemorrhage, children and ^{old people} lose blood with great injury.

Lancing best for only stains ^{prompts with spirit of mett} Bone to encrustment, armed with very dilute croton oil.

Dec 27th Fractures

Very difficult, and important subject. Sol of Continuity of Bone. Round Sol of some of Soft parts does not necessitate a complete separation. A fissured Fracture, May be broken without symptoms (Green stick) in children, In others where the ~~sol~~ solution is complete yet no separation, (Impacted) deformity is present. Fractures take different directions, "Linear," Oblique in contradistinction to the "Transverse" which is not directly across, sometimes a combi

Sometimes the collateral circulation is not established and gangrene occurs. If it occurs notice its amt and wait for line of demarcation.

Cirsoid Aneurism, an ^{toruous} elongated, enlarged Artery may be one or many, Rarely do any serious harm, except from pressure. If troublesome it must be treated by ligature.

Varicose Aneurism, Both vein and Artery enlarged Arteriovenous Aneurism - Artery sends a part of its blood into the vein and enlarges the vein, ~~It is~~ A tumor connected with a vein and artery by necks. Sometimes there is a direct communication between the vessels, Occurs from gunshot, is called Arterio-venous Varix, Gives a loud purring noise, the Varicose cured by stopping the circulation through the Artery.

In the first the sound is not so loud & diffused. Usually no treatment required.

Causes that interfere with successful treatment of Aneurism First Constitutional ^{defective} Defective power of ^{fibrillation} of fibrine ^{of blood} & ^{of blood} slough will follow from defective nutritive powers. ^{Local causes} Disease of the artery you are ligating.

Lie too near the next branch above, Dec 18th 23rd ^{Varix} Special dis of vascular system, more properly come under head of tumours - but are distinguished by being separated from surrounding parts by vessels, and are full of capillaries are situated in or under skin and sometimes involve the blood vessels. The superficial have to deal with, and is congenital and color depends upon the kind of blood circulating in them. Sometimes occupy almost $\frac{1}{2}$ of the body.

First is Direct Pressure,
Digital or Instrumental
Direct or Indirect
Above, Continuous or intermit-
tent, Digital and Indirect

Compression on distal side
Hardrop, Plan, Lournikit, Air
bag connected with it, Sometimes
pressure by a bandage Elastic,
Esmeruchs or Kaoutchou put on
bandage from below over the
Tumor and Lourniquet above
Flexure of the limb,
Galvano Caustery, by coagulum
of Albumenoid substances.
Dangerous from partial coagu-
lum and Embolus,

Injection of coagulating
medicines. If these fail
Ligature above, or on
the distal side,

Dec. 16th Where Aneurism
begins to form it is sufficient
to ligate after compression fails
It is not necessary to tie both

ends after Aneurism formed
unless the vessel is injured.

When an open wound and
great hemorrhage enlarge that
wound rather than to make
another, and tie both ends.

If an aneurism in Scarpa's triangle
with no external wound, better
to ligate the ~~wound~~ ^{vessel} from above,
Result Tumor still remains -
after arrest of flow of blood, it some-
times then shrinks and hardens
by absorption, sometimes the tumor
is so large as to slough from
want of blood, Great slough
by incisions and elimination
Sometimes the Aneurism returns
again on acct of Collateral circu-
lation and regurgitation, Tied
by compression. Sometimes
the coagulum is ~~removed~~ ^{washed out} and
circulation is reestablished,
Test, whether you are ligaturing
the vessel that feeds the tumor?
may be an abnormal distribution

or may have it associated ^{with}
caused by fracture, either pen-
etrating or wounding coats and
causes softening, - have modi-
fication of pulse on distal side
from loss of blood, also palor in
the limb, do not die often from
external bleeding, or within cellu-
lar planes, as there is syncope
Then there is a consecutive Trau-
-matic Aneurism, is wounded
artery at first, may be mistaken
for a wounded vein, Danger
from Gangrene on acct. of collat-
-eral circulation in Traumatic An-
Listen for a slight tracing (when
cant discover nature of wound)
which is pathognomonic, Secondary
hem. due to ulceration at site
of wound, Treatment when hem.
or driving occurs at time of wound
by compression, at the sight or
above with use of a bandage, If
this fails ligate the vessel high
up, so as to cut off the most

of the blood, Danger is immi-
-nent at first from Gangrene
of the limb from failure of blood
supply, Object in Treatment is
to fill up the sack, by a coagu-
-lum. In Aneurism of the
upper part of the Aorta, Consti-
-tutional Treatment, ^{and rest,} such as
slows the blood, Iodide of Pot.,
Arterial Sedatives, Scurvite, Berberine,
Niride, Ergot, combine with Local
Treatment when you can,
Cavity of Lumen shrinks, when blood
does not flow so fast, The latest
coagulum is the softest, and
sometimes by manipulation the
coagulum is thrown into the
opening and stop the circulation
The ingress or egress is sometimes
stopped by the Inflammation and
swelling, sometimes, from
the Plastic deposits, These
Spontaneous cures Local
Treatment to plug the part,

Nature protects by furnishing the tissues outside for the wall of Artery
Inside the Artery, the blood clots and there is a tendency to coagulate, which being squeezed loses its liquid and becomes fibrillated fibrin and forms a layer to the inside of Artery, This deposit continued and forms a white coat, these layers are very friable. Syncope or slowing the current aids this deposit. In same way we may make pressure as there may be pressure of blood from without affecting the same. There may be an aneurism from strain as also from weakness by degenerative changes.
Symptoms, (May be mistaken for other tumors) or Abscesses. Sometimes Artery connect with Abscesses.) A Pulsating Aneurism. It pulsates. It has a freeing noise a harsh whirring noise, ^{function} _{excitric from center to periphery} An Expansion. ^{generally appears}

Dec 10th

May be detected by grasping the sides of the tumor, ^{and} by cutting off supply of blood by pressure there is a marked change in the size of the tumor. A vascular tumor can not be distinguished from where it is in neighborhood of large arteries, symptoms from pressure, Pain at distribution of nerves that are pressed upon. Vascular spasm & then pressure from same cause at the sight of pressure taken frequently for Rheumatism numbness at extremities.

Congestion and Oedema, as shown by collateral enlargement of the veins on that side, The pressure and appropriation of surrounding parts causes great pain.

Dec 13th This is true of both Traumatic & Idiopathic forms.

Traumatic caused from wound from without that may cause softening or may rupture the coats.

a tendency to dissect up between
the coats. There is also calcifica-
tion of the Arteries and Ossifi-
cation giving the hard pipe
stem feel. There is a resiliency
of the coats naturally, by which
they avoid being torn, but are in-
jured. Aneurism & pulsating
sterile tumor, may be result
of ^{traumatic} Injury, (Idiopathic the
of disease) may be result of
Strain or disease.

True & False. True in
which there is a distinct
tumor, Diffuse Aneurism
where there is extravasation
into surrounding tissue.
If escapes externally, is Ruptur-
ed, 3 classes of True, Fusiform
Equally enlarged on all sides
2 Sacculated where ~~the~~ it is on
one side, Dissecting Aneur
where the blood dissects up
^{between} middle and Int. coat,
Very hard to diagnose.

How Formed, Reason is because
the wall has lost its power
of uniform and continuous
pressure, of Electricity & con-
tractility. There is inflammatory
condition of Middle and Int.
coat first, then weakened
condition, and it loses its
contractile power and gradual-
ly ^{yield} for the softening condition.
Dec, 9th Loboid resembles the
fusiform True Aneurism in which
the enlargement is of the three
coats. Practically it is a true An-
of the destruction of one or more coats.
These may become so attenuated by
pressure & attrition and burst.

Sacculated ² The outside of the Aneur-
presses on the surround parts and
and attaches itself to them appropriating
them, and may destroy the bone by first
destroying its Periosteum. The ext. coat
of the Artery may be destroyed,
when the Aneur. is called Consecutive.
All these forms True Aneur.

Dec 3rd Treatment,
 Prevent the accidents or complica-
 tions, of dislocation reduce
 it. Protect from bed sores.
 Water bed. Air bed recoils on pres-
 sure, not good, Water bed equal pres-
 sure, tepid water, Put in sand
 or bran bags, where there is inju-
 ry to the spinal column requiring
 stillness, or in plaster dressings.
 Make horizontal suspension by
 cloth and apply plaster around
 sand bags in twilled cloth, Best
 can keep any part at rest by means
 of these, Attempt reduction in
 dislocation in Lumbar spine
 by extension and counter extension.
 In shock with injury to brain
 in railroad accidents, with quick
 reaction, use preventive, treatments.
 In any case when the symptoms
 are permanent or progressive
 or growing stiffness, or coming
 and going, or pain in nerve trunks

Muscular spasm twitchings or
 Paralysis, they indicate that
 congestion and inflammation have
 already occurred, All these sym-
 ptoms may be mistaken for
 Rheumatism pleurisy, Hip Dis.

Dec, 6th Dis. of Vascular
 System, What Embrace?

Arteries except Arterioles contain
 three coats, Ext, ^{with some elastic} middle
 Elastic tissue, or unstriped muscu-
 lar fibres, Int. coat, and Ama-
 orphous coat, ^{Serous} Basement membrane
 and epithelial layer, Artery in
 constant state of contraction
 and expansion, Remittent flow
 not intermittent, empty them-
 selves at death, tendency
 to degenerate and grow hard
 and inelastic in old age,
^{atheromatous} Degenerative, the internal coat will
 leave a chasm of any shape &
 belong to old people chiefly, there
 is loss of structure which leaves
 with a weakened state and

In brain loss of consciousness
also, In slight sprain of back
we may have loss of motion
whether they affect the cord or not
and should be treated with rest
Liniments &c, May have from this
change in cord and Paralysis.

Fractures & Dislocations of spine
important from the Injury to them-
selves as well as the cord,

Dislocations occur only in Cervical
region, not possible in Dorsal
without fracture, Fall fractures
from direct & continued force
from leverage, May be direct from
blows, May have paralysis from
blow to the spine without either
fracture or dislocation, The spinal
cord with its sheath, hang loose in
Spinal canal, hence, not so quickly
or easily effected as in brain,

Patient may recover from any
injury of cord below the 3rd Cer-
vical vertebra, that is respiratory
Centres,

Sec 24th Fractures and dislocations
of spinal column important from
pressure upon the cord,

Concussion & Pressure of cord imme-
diate Paralysis, Hemorrhage gives
Paralysis later.

Spinal nerves come out of the
vertebral foramina a little below
their origin, Spinal cord terminates
at 2nd Lumbar vertebra, Locate the
injury by the Paralysis,

A Patient Paralyzed this way, he lies per-
fectly unconscious of the pressure,
and is thus liable to bed sores,

There comes up a troublesome cough
from accumulation of mucus when
Injury is high up, and may thus set up
irritation in the lung, The cough is
of reflex excitation, Three dangers
1st Bed sores, 2nd Derangement of Bladder
3rd Accumulation of mucus in air pas-
sages, causing suffocation,

Must not give Anodyne as Opium

Treatment depends on the cause
If a foreign body within reach
remove it or elat. s. be careful
not to remove Dura Mater,
If effusion of blood, treat to prevent
the inflammation, and may be treat-
sored. Give for this effect Altera-
tives, Cal. in broken doses, Doonide
Iodide of Pot, and Opium, with
great care
modifies inflammatory action.

Is this condition necessarily
fatal, No, They recover generally
with partial Paralysis, mental
or Physical.

May have Fractures when these
symptoms are not present,
Fractures in the Base of cranium
different symptoms according
as Ant or Posterior, more danger-
ous in the Posterior part, May
recover

Nov 26th Wash to cleanse the
gland & Repair in an infiltrated
condition. Lime water with
Laudanum $\frac{ij}{\text{ss}}$

Injuries of the spine
Constituting concussion
Compression of spinal cord
and fracture of the walls sur-
rounding it, Affecting the
spinal column, & in which
the spinal cord is involved.

Injuries of the spine localized
involving one or many vertebrae
In children the local disease causes
deformity, called spinal disease &c
May be very slight injury

Nov 28th Sprains of the spine
May interfere seriously with the
movements of spinal column
without fracture or injury to
spinal cord, Paraplegia. The
rule for injuries of the cord.

Concussion gives rise to Paralysis
of lower extremities, of spinatus &c.
Inflammation may follow these
causing change in the cord, and
Deferred Paralysis, Inflammation
modification of sensations, motion,

1st Cause foreign Bodies or
depressed
pieces of bone, 2nd by Extrava-
sation of blood sufficient to give
rise to the symptoms, 3rd Effusion
the result of inflammations follow-
ing injuries, disturbing the relation
of nerves, 4th Supuration usually
between Dura Mater and skull,

Nov 22nd Holloway

3rd Inflammation comes on slowly or ^{in 5 to 6 days} receipt
of injury to the brain, and hence gives
an opportunity to counteract the
Inflammation, and length of time shows
rise of temperature is not from Hæmor-
rhage, but from effusion, and such
cases are favorable to reabsorption

4th Cause Supuration, coming on, some-
times on opposite side of Injury

Just when effusions stop, and sens.,
falls. Symptoms of compression
may arise suddenly from pus
accumulation, between the Dura mater
and skull and requires Trephining
Can only distinguish the site of
compression from the Paralysis

which is always on the opposite
side from the injury, can only
trephine above the curved lines
on occipital bone

Symptoms of Compression
Are Absolutely unconsciousness
will turn from side to back
and limbs stretched out, and will
lie heavily that way, and breathing
slower than normal, Stertorous, also
the puffing of cheeks, a slow, full
incompressible pulse, can be seen.
Skin cooler than normal usually
Palid cheeks, Eyes lids are open
partly and will remain open, Pupil
fails to respond to light, may be
either dilated or contracted,
more or less Paralysis of the mus-
cles, Vol, or Involuntary, more or
less complete, Paralysis may be
partly on each side, but more
completely on one side, Symptoms
of both Concuss. & Compress. may
both be present,

This may last for an indef-
-inite time and may die in
this condition, but if does
is generally due to complication
if emerges from this stage. he
turns on one side and vomits
or retches, and is partially re-
stored to consciousness, and
is listless, and has reflex exci-
tation, and draws up his limbs,
and will answer when question-
-ed loudly. His respiration
becomes deeper, his pulse
better, his pupils respond to
light but lids are firmly closed
and is delirious. this is evidence of
shock, and is common to both
Third stage may show the symp-
-toms of compression, & may
not manifest any symptoms
of third stage. Only manifest
symptoms of shock, unless
there is injury to brain, and
then will have symptoms of concussion.

At that ^{1st} stage the patient should not
be disturbed by moving. ^{2nd} In stage of semi-
-unconsciousness examine his eyes
and make application of cold to head
not important to bring on evacua-
-tions at once, if there is after con-
-stipation Croton oil with other oil
-oil, if restless use medicine Bromides
best not to give Opium at this stage
unless as extreme measure to keep quiet,
There is danger in two or three days
of Brain fever, and should watch the
Tem. which will not be elevated unless from
constipation. May emerge from this
^{2nd} stage in a few hrs, or days, and make
inquiries as to his condition, and should
be answered promptly and kept quiet,
may recover entirely, or if does not get
the rest, may gradually lapse into in-
-sanity, must have rest for weeks.
Don't allow to do any brain work or read
If here compression supervenes
in first stage, causes of compression
compression when the brain is oppressed upon
as to manifest a train of symptoms

Causing Ecchymosis Localized.
This by direct blow or through the
spinal column, may be single or
double, and be followed by same
symptoms as fracture of skull.
Train of symptoms from ^{epitaxis} exudation by
concussion, Fractures may be direct
or indirect, on Vertex or Base, of
Vertex generally deformity or displacement
may be fissured or Impacted or loose.
Fracture, with Concussion and Com-
pression of Brain for most hour
Nov 16th Holloway Injuries
to the cerebral mass, and patient
manifests this by more or less un-
consciousness, dependent upon
the extent of the injury to the
cerebral mass, Sometimes there
is sudden death, but this may
be occasioned by dislocation of
the neck. Death is hardly as quick
from injury of cerebral mass.
These slight concussions that
may or may not be followed
by direct

symptoms of injury, may after
by reason of ^{this} Concussion be follow-
ed by serious disturbances, when
there was really injury to brain mass.
It is impossible to Diagnose the
extent of the injury. Dividing line
between Concussion & Compression
is shown by the persistence of the
symptoms. Both may be present
and then the symptoms of Compression
will over shadow the other.
Symptoms of compression are acci-
dents and may be present without
injury. Be careful in examination.
In cases of concussion ordinary
Symptoms three stages. First symptoms
come on immediately (in compression
not immediately) the patient falls and
lies in that condition exactly,
or pale and cold
and is totally unconscious, and his
pulse is feeble, and respiration
feeble but more or less natural
eyelids closed, pupils any way dilated
or contracted, but to a great or
less extent responds to light.

If it causes active inflammation and Suppuration, lay open freely and prevent Dolorizing. Wounds of Scalp heal quickly under favorable circumstances, Sew flap back carefully, to prevent the edges from turning in, Sutures do no harm in the scalp, if removed in time.

Nov 26th Scalloway.

With the lifting of the Scalp you have also raising of the Pericranium which will interfere with the blood supply. also may be a fissured fracture of the external table, or ^{2ndly} contusion of the bone which we may not know unless, from inquiry of internal parts. He may have also Hypertrophy, which in Syphilis is shown as Gummatas on the external table Pooey like, will have also, caries & necrosis. Not to be too quick to pronounce a cure after healing of soft parts, treat the soft parts

and wait for symptoms of Bone disease. We may have such an injury as to rupture or injure the vessels of the Diploe, which may give pain general without meningeal trouble, and patient dies with all the symptoms of Septicemia poisoning. Night Sweats etc and give vent to pus and prevent the Septicemia. Next, may have a contusion of internal table without external signs, and cause separation of the internal lining and caries & necrosis of the Inner table and also Hypertrophy with Aphasia or Paralysis or Epilepsy. The latter caused by pressure on the brain, and may be overcome by trephining and by bone pliers removing the bony tumor. Not necessary to be a depression of external part. May have most serious lesions of Cranial contents with only a contusion of external parts, this by extravasation of blood on the part causing compressions or may be disturbance of brain matter itself.

This may dissolve and ^{there} may be a recurrence of Hemorrhage.

Penetrating punctured wounds, ^{as Stiletts} may penetrate the joint and destroy without showing any outward signs as needles and are retained, travel a long distance along the cellular planes by reason of the contraction of the muscles, may penetrate a dense part and give pain by transfixing the part, not justifiable in cutting unless feel carefully under the skin, Fish bones often swallowed in same way. Ordinary punctured wound from nail, find out whether anything has been retained, whether discharge or not, Probe, if no discharge and products retained, lay open, if nothing retained, a piece of fat meat to keep moist.

If needle lodged near a joint and can find one end. Cut for it. Needle becomes fixed very tight sometimes in the cellular tissue, needles force

If a punctured weapon penetrates a joint. Treat actively to prevent inflammation, and if it suppurates, lay open the joint freely do not wait for the pus to burrow, Less danger to the joint in fresh lacerated wounds.

Regional Surgery.

Injuries of the Head,

Contusions and Scalp wounds -
Contusions of brain substance
Contusions of the scalp only, these may be very simple; is highly vascular and moves freely. Have Echinosis & Extravasation, have ruptured vessels beneath. Hematoma and has the appearance often of escape of brain ^{substance} into the wound, no danger unless the skull is injured and is cured by absorption. May burrow down to base of skull from continual bleeding, should be obliterated by Ligation. If Hematoma is not absorbed draw off carefully with the Aspirator.

Nov. 8th Holloway.

Where besides injuries to soft parts
we have fracture of bone, if seen
comminution, question of Amputa-
tion immediately. Examine with
the finger. Comminuted fractures
of thigh should be Am, ^{Especially} as first,
Should not be moved to any distance
Smith's Anterior Splint, for suspen-
sion, Should take out fragments
that are entirely detached from
Periosteum, Establish free drainage
Enlarge the opening, make com-
pressions dress by sealing from
air best good can, and disinfect,
If blood vessel wounded, Am right
away, near the joints. Excision,
At the hip joint is the only hope.
With these injuries is the shock -
upon the nervous system, Syncope
which depends on the extent of injury
and location of injury, especial
of Abdomen. There is modification
of all the functions, -- lessened sensi-

bility, Symptoms of recovery from
profound shock, complaint of pain
Sympathetic seems to be first impres-
sion, but under excitement may
go on for a time, Leave patient as
quietly in recumbent position as
possible, but give nourishment
by injection, and Opium by Hypo-
dermic method also Whisky & Wine
of Digitalis. Recovery from
shock is frequently followed
by Hemorrhage, and again shock
may recur, Give no Chloro-
form or Ether when Amputating
during shock, Postponed shock -
After 60 hours. Probably, Septicemia,

Nov 11th Punctured wounds

A characteristic, the entrance the small-
est part. Hence Hemorrhage would
not escape so completely as in incised
wounds, and retention of morbid pro-
ducts greater, Hence dangerous -
More difficult to find and extract
foreign bodies on account of small
size, and coagulation of blood

Nov. 5th Contused & Lacerated Wounds
continued. Includes Gunshot
wounds, Inversion of tissues at the
entrances and everted at exit
and larger, and decided swelling
follows speedily, hemorrhage slight
if no artery cut, and good part of
hemorrhage is retained and forms
a clot. If ball is smooth, is now
irritative and becomes organized, and
give no trouble except by gravitation,
Extravasated blood in large wound
acts as a foreign body, when it decom-
poses which is only prevented by banks
of conservative tissue thrown out.
When there is suppuration it burrows
in oblique direction and not the
track of wound, We must then
enlarge the wound of exit or en-
trance and disinfect the track.
In Septicemic poison there is
a nidus for the generation of the
poison, and the cause may be
arrested by disinfectants, and then over-
come, by elimination.

Traumatic Gangrene, likely
to occur in contused & lacerated
wound, Three kinds, one Growing
immediatly of the wound, 2nd a
result of an injury to a main
vessel supplying the part, 3rd
The Spreading Trau - Gangrene
or Hospital Gangrene, From both
a local & a constitutional cause,
from outside influences,
Nov. 4th. Process of separation between
dead & living tissues, Natures method
of preventing Septisemia, Constitu-
tional condition & surroundings
have great influence and often
determines the Spreading Gangrene
notwithstanding good appearance
Hospital, Spreading Gangrene
Septic Poison runs with it, because
condition is favorable, want of In-
flammation, never say to determine
whether best to amputate at first, a not
best consider this question,
have consultation. White times
bound down by inflammation, die sooner

Nov 1st Patient Henry Koch -
Enlarged cervical gland, of several
months duration, has been discharg-
-ing at times, has ^{strange growth} ~~found~~ flesh at the
orifice swelling leads up to the mastoid
bone,

Treatment of Wounds to prevent
decomposition. First get rid of discharg-
-es in the wound that will cause decom-
-position. The main point is to ex-
-clude the air, on account of substan-
-ces in the air. Air is perfectly pure.
Lister Abandoned Carbolic Acid Treatment.
McDowell The Father of Ovariotomy (Fly)
Prevent the air from reaching the wound
and put in proper position for
drainage, use disinfectants in dress-
-ing wounds, and cleanliness.
Carbolic Acid is a stimulant to wounds.

After 36 or 48 hours, constitutional disturbances around the wound
Conservative Inflammation. A slight inflammation that results in resolution
Union by the first intention, when it does not go onto supuration. The constitutional condition must be attend-
ed to. Lacerated or Contused, Lacerated
Lacerated where a part is suddenly torn off. Convert the lacerated into an incised wound by trimming the wound fragments. Contused & Lacerated wound, in the contused part vitality is so lowered that a part will die, there is less hemorrhage than in the incised, and there will be but little hemorrhage until after reaction or sloughing.

Treatment, Every piece of tissue that has any vitality or connection should be preserved, dried & fibrous tissue should be cut off. 2nd Intention. "Granulation" is always attended by supuration, {contraction, cicatrization}

Incised
Contused
Lacerated
Punctured
Poisoned

Incised, First Symptom
is pain, 2nd Hemorrhage
3rd Gaping.

Treatment, First Stop
the Hemorrhage 2nd Remove
foreign matters; Coaptate
and keep in that condition
Sutures only should be used when
absolutely necessary and as few
of them as possible, by adhesive
straps first. Oct 29th 1881

Adhesive straps far better for incised
wound, French leave the wound open
Rubber plaster is irritating. Official
Adhesive plaster. Apply a bandage
after the plaster or suture, as a support
This will also keep the antiseptic dressing
in place

This is a form of tumor,
Enlargement by a coalition of a host of
veins accounts for the immense
sack. There is an ^{very} enlarged lym-
phatic gland in the groin.
Poultice the Gland, & bandage the
vascular tumor.

Contusions Continued.

Reparative process by absorption,
aid by a slightly stimulating lotion.
Bruise at first, cuticle may be
raised in a bleb, $\frac{1}{2}$ color a dark
dingy red, skin unbruised a bluish
color, fade off to a yellowish
tinge ^{and} a liver color,
Generally ten days to disappear—
shown by the ^{color of the} edges of the bruise.
Bruise must be distinguished from
beginning Gangrene, in beginning
Gangrene the temperature is lower
than the surrounding tissues,

Bandage for ulcer of Leg -
for compression, to drive out
the extraneous circulation, as
in milk leg.

The case of Obstruction in
the throat, been on 10 drop doses
of Iodine, Opium the base of all
cough bases, 5 to 6 of Kosphia
in sugar, ^{Dry Gallonage} cough medicine
in this case has been Hydrobromic
Acid & Wild Cherry.

Oct 20th Gilbert Blumenberg
A hard swelling tumor in Saphi-
nous opening very painful
Has a scaly eruption on the
leg above the ankle, an en-
larged and inflamed gland,
A hollow pouch under the skin
just below the knee, filled with
blood fluid as shown by the Hypo-
dermic syringe, A vascular
tumor connected with vein
Varicose condition of the vein,

Oct. 24th Case 17 3/4 of age
Congenital Syphilis
Has had chills, Herpetical eruption
of the face, Subject of congenital
Syphilis, has had Syphilitic
Oreans, Some of those bones gone
Horrible fetor, Cleft Palate
No constitutional treatment,
The voice is modified in cleft
palate, Keuffed, Children often
starve for nourishment in cleft
palate. A plate will restore the
voice in acquired cleft Palate.
Inyes of Hydrate of Chloral,
or — Hydrate of Potash Per-
manganate,

In congenital Syph. teeth are
notched, not so in acquired

Allow no grease to come in contact
with rubber bandage, will destroy it
The bandage should be next limb when
used as support

and is reabsorbed from its liquid state, and is not always, all removed, rendering the part afterwards more liable to injury,

Extravasation is fluid poured out between or within the tissues. Degrees

1st Only skin contused. 2nd Skin and subcutaneous cellular tissue. 3rd where the subcutaneous cell tissue and muscles or parts beneath,

4th where the whole substance down to the bone, and bony structures are injured

The wound may be insignificant and the contusion very great, in a "contused wound". The effects of the pressure on the skin may be such as to cause gangrene,

Local Syphilis	Constitutional
Multiple sores as a rule,	Single (as a rule)
or several little Pimples	or simultaneous sores.
making one ^{or more} sore.	and ^{rare} will appear again
Follow the Original case,	when cured
Auto. Inoculable,	not Auto. Inoculable.
to definite Period of incubation	of Def. Period.
12 hrs to 5 th or 6 th day	

Oct 22nd Injuries.

Direct & Indirect, Anything that does violence to the body. Contusions & Wounds. are the two grand classes. Contusion is an injury to the skin without solution of continuity.

A wound is a solution of continuity. Contusions may be of all gradations. Contusion is caused by a blunt instrument.

In a contused wound the first symptom is a swelling, ^{hemorrhage from} from broken vessel under the surface, and this is usually the capillaries, and the amount of swelling shows the amt of hemorrhage. This hemorrhage pressing upon the parts causes the inflammation, by changing the nutrition of the parts.

Where blood is extravasated the injury continues as long as the blood remains, and depends for its removal, upon the sound vessels.

Results effects,
Terminations of Inflammation
Resolution
Ulceration
Sloughing
Absorption "Interstitial"
Fatty Degeneration
Caseous Necrosis

Effects Immediate
Exudation, causing change of form
Hypertrophy & Indurated
followed by Atrophy

Predisposing & Exciting
Predisposing causes of Inflammation
1st Previous Inflammation
2nd Over Use of Part,

Any Injury (Exciting Cause)
Extrinsical & Intrinsical
Blood Poisoning causing (Blood
Clot), Embolus,
Wounds, Bites, Chemicals
Blood Poisoning
Abscesses of the Bone
caused by exposure
to cold & wetness

Oxys Dry heat as of sand bag
hot bottles for subduing local
inflammation, Chronic Inflammation.
Sometimes no pain except when
used, hence rest, position and
application of soothing remedies,
Constitutional Remedies, or Anodynes
Specific Remedies, are Alteratives
which are necessary in local injuries
at times, and may be combined with
a nodynes, Stimulants sometimes in
chronic inflammation in adjacent
part as counter irritant,

In deep seated inflammations
Counter irritation, by the Deton

Applications of cold & heat
alternating not continued too
long. Frictions, where parts
are at a stand, still by stimulating
parts. Compression,
properly applied so as not to
interfere with circulation, set
as a splint.

Oct 18th 1851.

Case, of Coitre Enlargement of
Thyroid Gland. Tincture of Iodine in
starch or water.

Treatment of Inflammation, Acute
Local Depletion, By venesection
or Leeches important to cut it short
Application of cold steady with no
alternations of temperature. Discontinue
the cold when unpleasant to patient.
Dry heat an agent in allaying pain
a powerful agent instead of Opium
Moist heat, as the poultice in some
cases.

Oct 20th Contraction of Palmar fascia
called Cooper's disease. The fascia
only affected, and divided early will
recover. For cicatrix of burn may
be dissected out and parts put on a
stretch. Scars are of low vitality.

151
152
153

2.79	-----	227
45	-----	189
40	-----	169
40	-----	200
80	-----	200
12	-----	117

985

- to [unclear] [unclear]
- 1 shirt
 - 1 under shirt
 - 1 Collar
 - 1 pr. socks
 - 2 hand
 - 1 pr drawers
 - 1 " Cuffs

James
 Hunt
 Grant
 Hunt
 Grant

