

On the effects of certain anatomical relations

Publication/Creation

1884

Persistent URL

<https://wellcomecollection.org/works/bvs36bsd>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

you may.
on the ^{relative} weight
of the Body.

It is believed &
right side of the
the left, & very
advanced acco
of the right h
is looked upon
weight is the l
hand have be
appellation

Now there is
left whatever the
which weighing as it does at 24,500
has only got the 24,500 weighing 24,500



ACCESSION NUMBER

89186

PRESS MARK

MS 1458

89186

St. Sider

that the
in them
we been
we

which
freedom of

to right.

the
the

in the

you may
 you may
 on the ^{relative} weight of the right & left side
 of the Body.

It is believed & largely taught that the
 right side of the body is heavier than
 the left, & very pretty theories have been
 advanced accordingly as to the use
 of the right hand. The organ which
 is looked upon as ^{giving} the predominant
 weight is the liver, & the liver & the right
 hand have been associated in the
 explanation of the use of the latter.
 Now there is no solid viscus in the
 left to balance the liver
 which weighing as it does at say 500g.
 has only for the spleen weighing say 80g.

to balance it. Further. Kidneys, all but³
weigh the same; the pancreas has a little
more on the right than the left; the ~~heart~~
~~lungs~~ right lung is 202 heavier than
the left, & the only other ^{organ} to fix on is the
heart, which, ~~lungs~~ presents a little
more on left than right side.

~~What~~ A table of proportion weights
yields this result.

	Right side	Left side
Liver	$44\frac{1}{2}$	$44\frac{1}{2}$
Pancreas	$1\frac{3}{4}$	$1\frac{1}{4}$
Spleen	0	7
Right Lungs	20	18
Heart	$2\frac{1}{2}$	$6\frac{1}{2}$
Kidneys	$4\frac{1}{2}$	$4\frac{1}{4}$
	73 $\frac{1}{4}$ oz	41 $\frac{1}{2}$

Hence the right side according (4)
to this table is heavier than the left,
by $31\frac{3}{4}$ oz.

Now what are the facts. On carefully
dividing the thoracic & abdominal
viscera by a central incision from
the top of the sternum to the symphysis
pubis it is found that the left, not
the right, but the ^{viscera of the} left side of the ~~body~~
body weigh $13\frac{1}{4}$ oz more than the
right i.e. not only is the deficiency
of $31\frac{3}{4}$ oz made up but there are
 $13\frac{1}{4}$ oz to the food. What is there then
to make up this $31\frac{3}{4}$ oz + $13\frac{1}{4}$ oz = 45 oz
upon the left side. Here is the intestine
& it is ⁱⁿ the intestine & chiefly the small intestine

which make up this lee way. The small
intestines lie ^{on} ~~toward~~ the left iliac
fossa & also within the pelvis between the
bladder & rectum. The effect of the
first position is to compensate for the
weight of the liver on the right & balance
the body; the effect of the latter position is
to carry the focal point of the body weight
below the centre of the axis of the weight
of the body.

Here then is ^{groundwork} ~~food~~ for theoretical work
in. They will find it much more
easy to explain how the light (right)
side rotates forwards whilst the
heavier (left) crags behind. They will
also find food for discussion, in the
fact that, the heavier side has its

over load low down, below the centre of
of balance of your bottle, whilst the
right has it over load above that
point, ^(acting without compensation, would) which ~~would be~~ unbalanced
^(the body) ~~the~~ ^{left} ~~body~~ ^{side} would be unstable
^{body}. Now that there is a slight
idea of having the weights at
different heights on opposite sides.
They may even indulge so far
as to account for the left foot
being the ~~one~~ one chosen to mark the
time on a march tomorrow. Whatever
explanations may come out of it,
these are the facts, that the left side
is heavier than right & that the intestines
are the cause of this surplus weight
on the left side.

The General position of the viscera & effect
~~the~~ A general survey of the body viscera
reveals the fact that the ~~the~~ viscera
containing air, ^(consequently the lightest) are seated the highest; the
+ above the diaphragm ~~that the food tract~~
commencing with ~~the~~ whereas the heavier
contents, feces & urine find their way from above
downwards until they are met with in quantity
at the lower ^{part} ~~end~~ of the abdomen. ~~But the~~ The
position of the stomach, liver & spleen so close
beneath the diaphragm ~~is also a matter for~~
~~the~~ and up under cover of the cartilages of
the ribs gives food also for much comment.
In the first place it is to be noted that the
stomach is but a weak walled organ considering
the amount of muscular work it has to do,
that the bile flows through the liver in channels
^{destitute of muscular fibres} for the most part; that the spleen an organ of
~~erectile vessels~~ vessels & fibrous network

Answer to Quⁿ 1. When an Artery is wounded the ~~flowing~~ blood is of a bright red colour ~~flows in~~ gushes out with great force and in ~~the~~ jerks. A vein is easily distinguished as the blood is of a dark purple colour and wells out with a steady flow. In Capillary bleeding the blood is of a bright red color but does not gush or jerk out like an artery nor flow steadily like a vein but oozes out from the surface of the ~~to~~ wound. In case of severe bleeding of an artery in the leg I should, ~~employ~~ with an extemporized tourniquet (made ~~up~~ of a handkerchief or bandage with a stone wrapped up) apply pressure immediately above the wound if this did not stop the bleeding sufficiently quick

has few muscular fibres in its tissue.
Animals having no diaphragm have
squirrels, & one cannot help associating ~~the~~ ^{relegating}
two backs & ~~relegating~~ to the diaphragm ~~some~~
the function of helping a weak walled stomach
in its action. ~~It comes about in this way~~
~~The diaphragm by its position slopes~~
~~downwards from the ensiform cartilage~~
~~to the fourth lumbar vertebra. We are apt~~
~~to consider the diaphragm~~ ^{consider the diaphragm} ~~to be a~~ transverse partition,
but ~~the~~ the accompanying diagram
shows how much more perpendicular it
is, show it slopes down behind the liver &
stomach. The spleen is also within its grasp
& it thus comes about that the diaphragm
not only descends, but also advances forward,
thus throwing the liver, stomach & spleen against

without injury. Then apply Caron oil (Lensed
oil + Lime water) + Cotton wool to exclude
the air - always keeping the wound moist.

H. H. Melchouse
Jan. 11th 1884

the anterior wall of the abdomen. The muscular
tension of this is overcome & the wall advances,
but ~~then~~ during the process the three
viscera ^{mentioned} ~~are~~ ^{are} pushed against
the wall & are ^{thus} compressed. The stomach is thus
aided in its action; the bile is helped along
the biliary capillaries the blood is aided
in its struggle through the open mesh
work of the spleen. Supposing the abdominal
wall is held rigid & the pyloric valve
closed, vomiting takes place, ~~the~~ soon
bile is ~~brought up~~ ^{from} the stomach,
showing that the ~~stomach~~ ^{stomach} is compressed
^{between the diaphragm} ~~by~~ the abdominal wall & that the bile is
squeezed out of the liver. These statements
are known to all & are found convincing ~~that~~
follow ~~the simple statement~~ ^{the fact} without further
argument. Besides, ^{much} ~~that~~ ~~the~~ the force generated
(is it consistent with the nature of things that)

form of rolled up coat, or other suitable article;
to turn the patient sharply from lying on his
back to a little further than his side at the
same time exerting slight pressure.

4. The first aid to be rendered in apoplexy
is to lay the patient upon his back in a
quiet room. Remove all tight fitting clothing
from the neck & chest. Apply ice or cold
water to the Head. Send for a doctor but
give no stimulants.

= In case of a bite from a dog. encourage bleeding
by washing to get rid of possible of the poison
apply a ligature on the Heart side above
the wound. Scrupify round the wound & cauterize
on opposite the wound. and remove if possible
all fear from the patient's mind.

= In case of fainting in a close room. Let the
patient lay on his back, open all the windows

by the contraction of the diaphragm ^{should} be lost: 10
If it can be made mechanically useful
is it not a conservation of force to employ
it. The ~~ent~~ descent of the diaphragm by
the aspiration fills the thorax with fresh
air & blood ^{are} ~~are~~ the organs below ^{to be denied}
any good ^{therefore} ~~from it~~. As it aids ~~in~~ respi-
ration & circulation so it aids digestion
the three all important ~~of~~ functions of our
vegetative life are made to harmonize
& depend on each other through this common
agent the diaphragm. I would go further
say that just as every cranny & work
of the ~~lungs~~ ^{lung} is affected by the ~~dis~~ action
of the diaphragm & is covered by pleura
balloon of that action, so is ~~the~~ ~~each~~ ~~the~~
every organ in the abdomen which is covered

or muscles or both.

3. I would restore the apparently drowned as follows:
First remove all the wet clothes as quickly as possible & send some one for a medical man, dry clothes, blankets &c. Free the mouth from all obstacles likely to interfere with the respiration, pulling the tongue forward & securing it there by means of anything suitable such as a piece of string or ~~a~~ elastic string ~~then~~ ^{then} place the patient to the air (if not very cold) place him on his back in an inclined position ~~transverse~~ ^{transverse} the feet upwards and imitate the action of respiration by laying hold of the arms just above the elbows pulling them gradually upwards until they meet over the ^{head} then downwards again pressing them gently but firmly against the sides of the chest repeating this process from fifteen to eighteen times per minute.

by peritoneum ~~also~~ affected by the same muscle.

There are numerous other points to be considered: the relations of the abdominal viscera but space will not admit of interrupting them in detail. In short, notice how the main mass of the small intestines, ~~rests between the~~ ^{the} the heaviest piece of viscera in our bodies, rests between the bladder & rectum ~~below~~ below the level of ~~the~~ the central balance of our bodies. Notice again the position & structure of the colon. The ^{ascending} colon, wide & with walls incapable of perfect contraction must have difficulty in its effort to drive ~~the~~ its contents along. Its position would induce me to believe that it would be better filled during the horizontal position ^{lying down} ~~and~~ ^{well} after ~~catching~~ ^{catching} at the idea ~~and~~ ^{well} be ~~convinced~~ ^{convinced}.

from the wound caused by the Hemorrhage
& the elasticity of ^{the} arterial coats.

In bleeding from a vein it runs out more
steadily ^{the force of the heart palpation now lost not the pulse} in a continuous flow. And in the
case of capillaries there are almost always many
injured & the blood oozes out ^{all over the surface of the wound} as it were & can
as a rule be easily stopped by direct pressure.
The best plan to stop severe bleeding from an
artery in the leg is to apply pressure by means
of a tourniquet to the femoral artery against
^{or place a pad in the hollow of the thigh over the artery}
the bone of the thigh or femur, tie the limb and
after removing all extraneous matter from the
wound by washing with cold water bandage
it up. Further take the patient immediately
to the Hospital or call in a medical man.
In the case of severe bleeding from a vein in the
leg apply pressure to the vein both above and
below the wound & proceed as in the former case.

that it is during ^{sleep} ~~rest~~ that the ^{contents} ~~food~~ find
their way ~~into the~~ up the ascending colon
& for that matter ^{along} the transverse colon
during rest on the left side, ~~that after breakfast~~

out of
rest,
assuming
the erect
position ~~when the cavity of the abdomen is on getting~~
~~up the food drops~~ ^{force, ~~fully~~ by position, we helped} down the descending colon
~~that by the time breakfast is over, the~~
contents have arrived ~~in the~~ at the cecum
in the form of the 'morning stool'.

Again notice the position of the third part
of the duodenum & its relation to the left
renal vein. The vein is placed directly between
the aorta & the duodenum; when the
duodenum is full ^{blood with the} the vein must have
rather a struggle to get along; and not only in
the left but the right renal vein is touched by

~~the food immediately commencing~~

~~with further evening empty in position - supplying~~

If a person suffering from a broken leg is moved without the injured parts being replaced & secured by splints & bandages the great danger is that the broken ends may penetrate the surrounding flesh displacing bloodvessels & nerves & doing serious injury - from a simple fracture becoming a compound one - & the result may be that the patient will lose his leg & perhaps his life.

Send for medical assistance, dry & warm clothing &c. -
Answer 3. ^{by medicine} Extend the body - placing a cushion made up of your coat under patient's shoulders so as to support chest - cleanse mouth & nostrils open mouth & draw out tongue & keep it out. Remove clothing from neck & chest - Excite ~~proper~~ respiration by tickling nose

second portion of the duodenum. Can it
be that these laws to do with the renal
congestion which ensues after each meal
do the full duodenum cause an increase
pressure ^{on the renal vein & thence} on the sympathetic trunk ^{thus} providing
for elimination of fluids & thereby organic
~~material~~. Laugh at this first & think
of it afterwards & make a better explanation
than my own attempt. If I have
stimulated you to think about such matters
although I have not convinced you &
~~I have obtained all I want.~~

~~the effect of operation was a relief
immediately the patient made a recovery
may try these operations as before
during these operations some other persons
will be interested.~~

with feather, blowing snuff in nostrils, applying
smelling salts or

If this fails immediately proceed to bring
about inspiration.

place yourself in kneeling position above patient's
head. Grasp his arms a little above elbow
& draw them steadily upwards above his head
keep them there for two seconds - this fills
the lungs with air. Then ~~press~~ ~~press~~ ~~press~~ them
~~steadily downwards~~ bend the arms & ~~press~~ them
downwards & against the sides of the chest & keep
there for two seconds (This draws air out of
chest) Repeat these motions 15 times a
minute & they must be continued till the
pulse has ceased to beat & there have been no
signs of respiration for at least an hour or

How the Gall bladder is emptied. 44
At examinations it is a common question DO you see the first portion of the duodenum when you open the cavity of the abdomen. The candidate taught by his teacher to say "yes" may be shown by the examiner that it is not so, ^{but also} ^{may take place} vice versa, ~~the case~~ so that it is not a settled question. ~~That~~ Now the real fact is, that when the stomach is empty the duodenum with its first portion ~~may~~ be seen but when the stomach is distended it disappears under the liver. Not only so but look ^{exactly} where the duodenum does disappear ^{to} you will be led along the gall bladder from fundus to neck. The direction of the first portion of the duodenum is parallel

be given small quantities of stimulants
as tea, coffee, brandy &c.

- Ans. 4. (a) In apoplexy the first aid to be given is
to send ~~immediately~~ ~~medical~~ ~~as~~ for medical
assistance - then free the neck from any
tight clothing - raise head & apply
ice or cold water to head. (b) In the
case of a bite from a dog encourage the
bleeding by bathing with warm water,
also scarify around wound to about a
 $\frac{1}{4}$ of inch in depth & afterwards use caustics
but as in previous case - medical assistance
must be obtained as early as possible.
- (c) In case of fainting in close room
open windows wide & place patient where
fresh air will play round his head -

to the long axis of the gall bladder. Does
this suggest any thing? would ~~there~~
~~be a difference in the pressure~~ exercised by
these two on each other be greater when
they are full than when empty? When are
they full? the duodenum is full during
digestion & the passage of food from the
stomach; the gall bladder is being
constantly filled between meals but
is emptied of its contents during digestion
or poured in quantity in the intestinal
canal. Hence ~~the~~ during digestion
they are both full & the first portion
of the duodenum tucked under the
liver ~~lower~~ by the ~~the~~ forward moving of the
greater curvature of the stomach
when full presses against the gall bladder

until Medical assistance arrives.

During these operations some other person may try to excite respiration as before mentioned.

Immediately the patient makes a voluntary effort of respiration cease operation remove wet clothing, cover in blankets & commence to restore circulation by friction under the blankets. The patient should be conveyed where he can have a hot bath - in which he should be immersed in a short time - failing this - hot bricks & warm flannels should be applied to pit of stomach - inside of thigh &c - Circulation having been restored & power of swallowing returned patient may

from fundus to neck. Muscular fibres
in the gall bladder are scarce & it
has always been a perplexing question
how the gall bladder empties itself,
~~without discussing the galvanic stimuli~~
exciting but slow & meagre contraction therein.
Here is an ~~explanation~~ a meaning
which a full stomach & duodenum
provides for the flow of their own bile
the fuller ~~the~~ there are the more will the
gall bladder be pressed upon & consequently
the more completely emptied. Why fly off to central
nervous ~~is~~ & reflex nervous influence when a
mechanical ~~means~~ ^{explanation} is at hand; is the mechanical
less wonderful than any other explanation,
be it ascribed to vital nervous reflex or any
of the other ~~reflex~~ ^{indefinite cloak of ignorant} ~~refuge~~ ^{unlike} that men take to
when every other ~~explanation~~ ^{every other} ~~tail~~ ^{tail} escape fails.

(1) How do you know when an Artery, Vein or a Capillary is wounded & how do you stop severe bleeding first from an artery & second from a vein in the leg.

(2) How do you know when a bone is broken and what accidents might arise from moving a broken leg bone carelessly.

(3) How do you restore the apparently drowned.

(4) What is the first aid to be rendered in a case of (a) apoplexy (b) bite from a dog (c) fainting in a close room (d) poisoning by opium (e) severe burn or scald.

~~The relations of veins to arteries, & the other~~
~~in these the~~

Has it ever struck you ~~too~~ as anything
peculiar that veins & arteries should
run so persistently so closely together. Has
it ever occurred to you that one might
derive help from the other? ^{if so} It must be the
strong which ^{gives} help to the weak, namely the
artery to the vein. The veins & arteries in the
limbs ^{are especially} are enclosed in a common sheath, now
the blood, rushing along an artery would tend
to fill the sheath & drive all the blood ~~back~~
in the veins back the way ~~the~~ it came;
to prevent this valves are inserted in the
walls ^{these} supporting the blood until such time

18

as the arterial wave has gone on keeps the blood ready to occupy the spot immediately behind the ~~the~~ ^{spot of increasing tension} ~~pressure wave~~ where the pressure is negative. Thus the ~~blood~~ ^{current} venous blood is ^{kept ready until} picked up as it were by the ~~blood~~ in the artery, the removal of the pressure allows its onward course. ~~Meaning~~
As an example of the effect of the relation of arteries to veins take the common iliac arteries and veins. The vein & arteries on the front of the fifth lumbar vertebra are so placed that the vein is on a plain posterior to the artery, & placed against the wall they both. Now when the artery contracts there is more room

under head & incline head to side

3. To promote circulation by rubbing energetically from feet upwards.

4. In Apoplexy, lay patient on his back with neck & chest raised, apply cold water to head but not to give any stimulants, by mouth. See bite from dog. Suck the wound, pressure over wound, have it cauterized by Doctor.

Fainting in close room. Open windows & give patient as much air as possible. Apply cold water to face but not too much, if handy apply Smelling salts to nose for a second or two, but no longer & a glass of water when ^{recovery} able to swallow. If the symptoms are so prolonged as to cause alarm. Send for a doctor, in the mean time you can administer a tea Spoonful

2 In the passage of venous blood, but when the artery is distended, the blood which is there must be stemmed or an accumulation will occur in the iliac veins of the left side, which accumulation, the moment the artery contracts, will allow for the filling of the common a large rush of blood than would otherwise happen.

Is it not possible also that the ~~distension~~ sudden ^{expansion} of the artery upon the full vein may ~~not~~ give the blood, ^{in the vein} a help or a flip by which it will pass up the long & alveolar Cava. That there is difficulty for the venous blood to pass there is like made out by trying to pass ~~any~~ a ~~dissecting~~ ^{room} blow pipe ~~behind~~ along it when the arteries are distended with Lant. 2. During dissection when ~~phlegm~~ phlegmasia

Refrain from as an additional safeguard, apply pressure
Venous exposure & examine wound wash in cold water.

~~to main leg~~
Elevate limb, & place patient in lying down position,
~~for wound in leg. compress femoral artery & demand patients leg up~~
~~again back of hand middle of fold of groin bandage~~

You know when a bone is broken, by

1st Crepitus when placing hand to wounded part & creating
motion with the other. 2nd Heat of injury at a shaft or
body of bone (generally) 3rd easily replaced. 4th

Unusual mobility at seat of fracture, ^{unusually moveable}
4. limb often shortened, ~~limb~~ is helpless.

By treating a broken leg carelessly you are liable
to make a simple fracture into a compound
one, the dangers are of pressing the broken bone
into the flesh.

3rd To restore the apparently drowned, send immediate
for medical assistance. get & remove clothing

does exist. & many museum specimens
show that the thrombus extends all the
way up to the crossing of the left common
iliac vein behind the ~~artery~~ right common
iliac artery. This ~~is~~ helping the notion
that ~~even~~ fluid blood found difficult
to pass. Clotted blood found it impossible.

3. The ~~fact~~ ^{consideration} that phlegmasia
dolens of the right ^{lower extremity} ~~leg~~ is more often fatal
than upon the left ~~may~~ ^{again} ~~associate~~
~~also~~ ^{as} ~~find~~ ^{region} and that the blood in the right
iliac ^{vein} ~~can~~ ^{can} pass more easily than in the left
so also may a clot more easily pass & thus
account for the phenomenon.

~~There will not allow of this a further~~
~~prosecution of the~~ ^{consideration of the} ~~relation~~ borne by
arteries to veins ~~by which I have set you~~
~~going thinking it is something.~~

Arteries

You know when an artery is wounded the blood flowing out in jets in great force owing to its being propelled from the heart & is of a bright red colour. In bleed from a vein the blood flows slowly with out it is of a dark purple hue or nearly black.

3. Capillary when there is an oozing of red blood from the surface.

Arterial is the most important & dangerous form of bleed and must be moment sought to be lost in giving help.

Ligature Send immediately for medical assistance & place patient in lying down position. apply pressure with the fingers in the bleeding part. ~~Examine wound~~ Examine wound wash in cold water elevate bleeding part but place patient in lying down position, ~~elevate limb~~ apply pressure with fingers directly into the mouth of bleeding part ^{or to the nearest artery on the head side} apply a band over

Sluerial arrangement of nerve axons

I hope with to draw your attention to
a subject ~~which I discussed~~
before you some ~~six~~ year ago. Whilst
~~preparing~~ preparing a frogs sciatic nerve
for a ~~physiological~~ physiological demonstration
I noticed a peculiar but very decided
spiral or coiled appearance of the
contents of the nerve. On stretching
the nerve the coiling disappeared, but
on relaxing it ~~it~~ it came back again.
At that time said I believed it had
something to do with allowing the
nerve ~~to~~ accommodate itself to the
~~flexion~~ flexion, & extension of the limb. &
Since then I have inspected most of the
nerves in the human body for a like
purpose. I find now that all nerves
which are ^{capable of} ~~capable of~~ being in a position

of Sal volatile mixed with twice the
quantity of water, or a little weak brandy or
water.

Opium poisoning, cold douche to head,
strong coffee, shock from galvanic battery,
walking exercise, pricking with needle
& do the most effectual thing to keep him
awake, for should he once go off to sleep
he might never wake again.
In severe burn or scald, apply solution of lime
water, castor oil, ^{olive oil} & wrap part in cotton wool
wool or flannel & keep person in thorough state
of rest.

He stretched ~~the~~ present this same
^{naked eye} spiral a coiled appearance, as I met with
~~in the~~ first in the frog sciatic.
~~Beautiful~~ Beautifully marked is it in the
tongue ~~I never~~ never of the tongue then
where one would expect to see it & which
were the first regions I looked for it
owing to the ^{frequent} variations in length of these
two organs. In the never of the bull penis
I found it beautifully marked how
some four years ago. Never ~~to~~ running
through bony canals, such as the superior
maxillary nerve in its course through
the infra-orbital ^{canal} ~~foramen~~, do not show
it. So ^{the} nerves of the hand & foot as they
approach the end of their course
lose the appearance; the median ulnar
about the half way down the fore-arm

A. Brown

Gr. off blankets. Lay patient on his back with head inclined on one side. (The 1st thing is to restore respiration & breathing, then after breathing has been restored, Circulation, & warmth.)

To excite breathing, Cleanse the nostrils, open mouth & draw forward tongue, & keep it forward by an elastic band placed above the tongue & below the chin.

To promote breathing place patient on his back on a flat surface inclined from feet upwards. Grasp the arms above elbow & draw them backwards above the head & keep them there for 2 seconds & press air into the lungs, then downward & press them firmly & gently against side, press air out of the lungs, repeat this steadily & energetically for 2 hours. (15 times a minute)

Another method is to turn patient on to his side from back to his back at the same rate as above.

cease to show it, the nerves of the ^{leg} ~~lower~~
~~extremity~~ markedly the antenitilial
are well with constitute of any such
condition. ~~Now we see~~ the nerves mentioned
are obviously ^{so likely to be} ~~much~~ affected by ~~joint~~
~~motion as the~~ ~~the motion~~ the limited
motion of the wrist or ankle as are those crossing
the knee or elbow. Hence, ^{almost} all the ^{trunks of the} nerves in
the extremities ~~at~~ as low as the knee
& ankle show it well. To begin with
let me advise you to look for the condition
mentioned in the sciatic nerve & the
cords of the brachial plexus & you will
at once see what I mean.
~~Please finishing let me draw your~~
~~attention to another fact that may~~
~~after attract your attention.~~

The Position of the Sympathetic ganglia²²

It is thus. on fixing your attention to ~~moving~~ an ~~external~~ one of the dorsal ~~symp~~ ganglia of the sympathetic nerve & moving the head of the rib it will be seen that the ganglion is affected by the motion of the rib. The ganglion is pressed upon alternately at its upper & lower part as the rib rises & falls. Also observe that two nerves leave a ganglion to join the intercostal nerves one goes ~~to~~ from the upper part of the ganglion to the nerve above the ~~two~~ other from the lower part of the ganglion to join the intercostal nerve below. Hence the upper & lower part ^{of the ganglion} are affected alternately by the upward & downward movement of the ribs & each nerve

should be meanwhile removed and the attempts
to restore breathing at once commenced -
The object is to imitate the natural action
by elevating and depressing the ribs -
There are two methods of doing this - One by
kneeling behind the patient and grasping the
doubled arms just above the elbows and
drawing them back till they are extended
almost parallel above the head and
continuing this motion at about the rate of
18 times to the minute, and gently at each
return gently but firmly pressing the chest
for about 2 seconds - The other is to turn the
patient from his back to his side and pressing
on the ribs of the upper side at each movement
circulation is induced by surface friction in the direction
of the heart. Motion clothing &c.

receive a filament during both actions
~~also~~. Observes also that only it is in the
 thorax where the ganglia lie so far
 back, in the abdominal region especially
~~the~~ they come forward to the near the
 middle line. Why do these ganglia lie
 so far back in the dorsal region, is
 it because ^{of giving} the filament to the ^{intercostal} nerves
~~that is to the nerves~~ no! the lumbar
 ganglia give similar branches if they
 are connected by nerves then a four
 inches long. Beside then ^{branches} ~~nerve~~ of the
^{intercostal nerves} ~~ganglia~~, & plantar nerve supply
 the liver ~~for~~ all the upper abdominal
 viscera arise. ~~may it~~ Is there not some
 physiological & Clinical Evidence
 about the glycogenic function of the liver
 being interfered with when ~~these~~

other, to tear veins arteries or ~~veins~~ nerves
or other important organs. or to allow the
broken ends of the bone to come through the
skin, to the danger of gangrene or erysipelas.

Question 3 How do you restore the apparently drowned =

Answer 3rd The objects to be aimed at in attempting to
restore the apparently drowned one to induce
first respiration + 2nd circulation =
The Patient should be placed on his back
with the shoulders slightly raised and the
head on one side so as to allow the
mouth and air passages to get rid of water
or other exhalaneous matter. The tongue
should be extended and if convenient
or necessary tied back which is easily
done with an elastic band. Wet clothing

with with
of the ribs which ~~are not~~ ~~are~~ ~~are~~
^{these ganglia & nerves} are associated with the
~~ganglia~~ are broken. In other
words is this purposeless, is this taking
of the ganglia useless, is the course of
the dorsal ganglia over the head, of the
the ribs accidental. ^{That dare not be said} ~~Is one dare to say~~
none is drawn to the conclusion that
some purpose is served by it, but that
the "mechanical stimulus" to prompt
by which inhalation prompts exhalation
or vice versa, through ~~an interposition~~ to the
~~intercostal muscles~~ conveyed by the
~~stomach~~ ~~nerves~~ ~~that~~ ~~put~~ ~~in~~ ~~the~~ ~~sympathetic~~
branches as the upper & lower part of the ganglia
are alternately excited; or is it that some useful
effect & purpose is fulfilled in regard to the ~~thoracic~~
nerves as they proceed to the abdominal viscera.

Question 2nd How do you know when a bone is broken
and what accident might arise from
moving a broken leg carelessly.

Answer 2nd Indications of a broken bone are
Generally either shortening or lengthening
of limb = Crepitus. or sound of one of the
ends or edges of the broken bone scraping
against the other, unusual mobility of
limb. Unnatural appearance of limb =
And inability to use it = And uneven
surface =

The evil of moving a broken leg carelessly
would be the probability of turning the fracture
into a compound, complicated or comminuted
fracture, by forcing, or rather allowing the
broken ends of the bone, to rub against each