



# OMENTUM

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# THE PERITONEUM

A thin serous membrane  
parietal peritoneum lining the wall of the abdominal and pelvic cavities.  
Visceral peritoneum covering the existing organs.  
The peritoneal cavity is the potential space between the two layers.

| peritoneal Cavity<br>(the largest cavity in the body) |  |
|---|--|
| <b>Greater sac</b>                                    | Extends from diaphragm down to the pelvis. |
| <b>Lesser sac (omental bursa)</b>                     | Lies behind the stomach.                   |

**Both** cavities are interconnected through the **epiploic foramen**.  
**In male** : the peritoneum is a **closed sac** .  
**In female** : the sac is **not completely closed** because it communicates with the exterior through the uterine tubes, uterus and vagina.

| Intraperitoneal   | retroperitoneal   |
|---|---|
| describe the relationship between various organs and their peritoneal covering  |   |
| nearly <b><u>totally covered</u></b> by visceral peritoneum.  | lies <u>behind the peritoneum</u> , and <b><u>partially covered</u></b> by visceral peritoneum.   |
| <b>Have a supporting mesentery</b>  | <b>Don't Have supporting mesentery.</b>   |
| stomach & 1 <sup>st</sup> part of duodenum<br>-Liver<br>-Gall Bladder<br>-Spleen<br>-Jejunum<br>-Ileum<br>-Transverse Colon<br>-Sigmoid Colon<br>-Uterus and Ovaries. | <b>Primary retroperitoneal organs:</b><br>Aorta, Inferior Vena Cava, Kidneys, Suprarenal Glands, Urinary Bladder, Vagina, and Rectum.<br><br><b>Secondary retroperitoneal organs:</b><br>(develop in mesenteries, but get pushed against the body wall (parietal peritoneum) during growth so that only half of their surface is covered by peritoneum<br><br>Pancreas, Duodenum, Ascending and Descending Colon. |

# FOLDS OF THE PERITONEUM

They are **ligaments, omenta, and mesenteries** .  
They permit blood, lymph vessels, and nerves to reach the viscera

## MESENTERY & LIGAMENTS

|                  |   |  |  |
|------------------|---|--|--|
| <b>Mesentery</b> | Two-layered fold of peritoneum <b>suspends</b> the small intestine from the posterior abdominal wall  | Broad and a fan-shaped Intestinal border—folded, 7 m long  | Root of mesentery : 15 cm long<br><br>Directed obliquely <b>from</b> duodenojejunal flexure at the level of left side of L2<br><br><b>To</b> the ileocecal junction in the right iliac fossa at the level of right sacroiliac joint. |
| <b>Ligaments</b> | Two-layered folds of peritoneum that <b>attach</b> solid viscera to the abdominal wall and diaphragm. | Ligaments of liver:<br><br>-Falciform ligament of liver.<br>-Coronary ligament.<br>-Left and right triangular ligaments.<br>-Ligamentum teres. |  |

# OMENTA

## Two layered fold of peritoneum connecting the stomach to another viscus.

|                               | Greater omentum   |   | Lesser omentum  |  |
|-------------------------------|---|---|---|--|
| connect                       | The greater curvature of the stomach to the transverse colon.   |   | The lesser curvature of the stomach to the liver.   |  |
| Description and course        | <p>The largest peritoneal fold contains some adipose tissue. A double sheet of peritoneum, <u>folded on itself</u> so that it is made up of <u>four layers</u> (anterior 2 layers + posterior 2 layers).</p> <p>1<sup>st</sup> Two layers descend from the greater curve of the stomach and commencement of duodenum.<br/>2<sup>nd</sup> pass downward in front of the small intestines. Then turn upon themselves, and ascend to the transverse colon, where they separate and enclose it.</p> |   | <p>It is continuous with the two layers of peritoneum which cover the anterior &amp; posterior surfaces of stomach and 1st part of the duodenum.</p> <p>Ascends as a double fold to the porta hepatis of liver, and fissure for ligamentum venosum.</p> |  |
| borders                       | left  | right   | To the left of porta hepatis  | right border   |
|                               | continuous with the gastrosplenic ligament.   | extends as far as the commencement of the duodenum. | It is carried to the diaphragm.   | Is a free margin; constitutes the anterior boundary of the epiploic foramen. |
| Contents between the 2 layers | the anastomosis between the right and left gastroepiploic vessels.  |   | Close to the right free margin  | At the attachment to the stomach   |
|                               |   |   | Hepatic artery, common bile duct, portal vein, lymphatics, and hepatic plexus of nerves.  | Run the right and left gastric vessels.                                      |

# OMENTAL BURSA (LESSER SAC)

It is a part of the peritoneal cavity behind the stomach

## Boundaries of the omental bursa

### Anterior wall

### Posterior wall

From above downward by

- Caudate lobe of the liver.
- The lesser omentum.
- Back of the stomach.
- Anterior two layers of the greater omentum.

From below upward, by

- Posterior two layers of the greater omentum.
- The transverse colon.
- Ascending layer of the transverse mesocolon.
- Upper surface of the pancreas.
- Left suprarenal gland.
- Upper end of the left kidney.

# EPIPLOIC FORAMEN

It is the communication between the greater and lesser sacs

## Boundaries

|               |  |
|---------------|--|
| In front      | Free border of the lesser omentum, <u>with its contents</u> (hepatic artery, common bile duct, and portal vein)                            |
| Behind        | Peritoneum covering the inferior vena cava.  |
| Above (roof)  | Peritoneum on the caudate process of the liver.  |
| Below (floor) | Peritoneum covering the commencement of the duodenum and the hepatic artery, before ascending between the two layers of the lesser omentum |

# NERVE SUPPLY OF THE PERITONEUM

|              | parietal peritoneum                         |  | visceral peritoneum   |
|--------------|---|--|---|
| Sensitive to | pain, temperature, touch, and pressure.     |  | stretch and tearing   |
| Nerve supply | Lining in the Anterior Abdominal Wall       | central part of the diaphragmatic peritoneum | autonomic nerves that supply the viscera or traveling in the mesenteries. |
|              | lower six thoracic and first lumbar nerves. | phrenic nerves.                              |   |

## CLINICAL POINTS

### Peritoneal Pain

|              | Parietal Peritoneum          | Visceral Peritoneum  |
|--------------|------------------------------|--|
| Pain is      | somatic                      | visceral   |
| from         | parietal peritoneum          | visceral peritoneum, including the mesenteries<br>By Stretch |
| Type of pain | usually severe and localized | poorly localized, poorly characterized                       |

### Peritoneal Dialysis:

the peritoneum is a semi permeable membrane :  
 It allows transfer of substances (glucose solution) across itself to remove the waste products.  
 It has been used of in patients with acute renal insufficiency.

1-which one of the following organs totally covered with peritoneum ?

- A.1st part of duodenum
- B.kidney
- C.ascending colon

2-which one of the following organs is a primarily retroperitoneal organ ?

- A.Pancreas
- B.aorta
- C.Duodenum

3-which one of the followings is the right border of the lesser omentum ?

- A. The gastric arteries
- B.the epiploic foramen
- C.gastrosplenic ligament

4-the left border of the greater omentum is continuous with :

- A. epiploic foramen
- B. bile duct
- C. Gasrtosplenic ligament

5-anterior to epiploic foramen will be :

- A.free border of the lesser omentum
- B.inferior vena cava
- C.both a and b

6-the mesentry start at what level ?

- A. T3
- B.L1
- C.L2

7-nerve supply to the parietal peritoneum is :

- A.Autonomic nerve supply.
- B.lower 6 thoracic and first lumbar nerves
- C. botha&b

8-the greater and lesser sacs are interconnected through :

- A.epiploic foramen
- B.gastrosplenic ligament
- C.falciform ligament

9-anterior to the omental bursa will be :

- A.posterior layers of greater omentum
- B.lessor omentum
- C.Transverse colon

10-which one of the followings is half covered by peritoneum :

- A.Duodenum
- B.prostate
- C.Rectum

11-the central part of the diaphragmatic peritoneum is supplied by :

- A. Phrenic nerves
- B. autonomic nerves
- C. lumbar nerves

12-the visceral peritoneum is sensitive to :

- A.pain
- B. stretch
- C.Temperature.

13-the parietal peritoneum pain is usually :

- A.Dull
- B.localized
- C.botha&b

14-the largest peritoneum folds is :

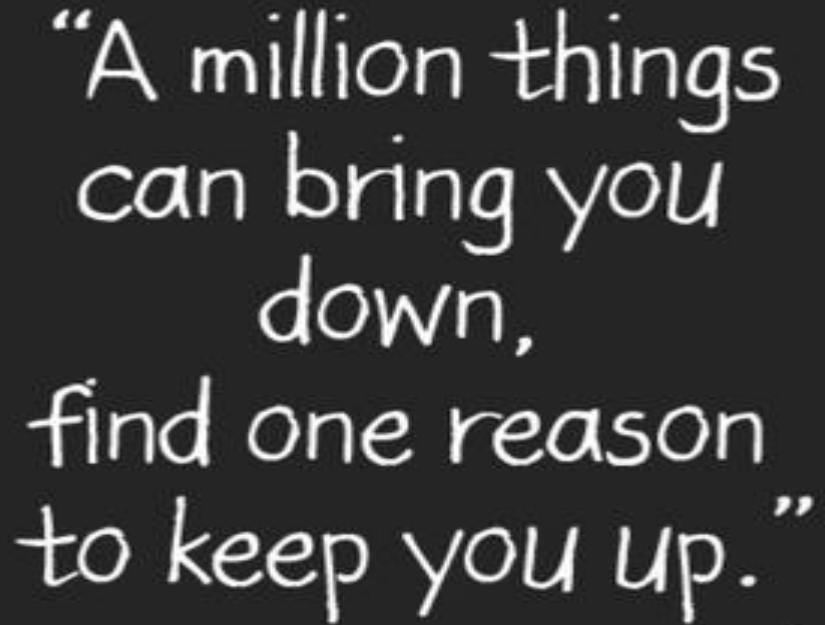
- A. greatae sac
- B. greater omentum
- C. Mesentery



# GOOD LUCK DOCTORS

Answers:

- 1.A
- 2.B
- 3.B
- 4.C
- 5.A
- 6.C
- 7.B
- 8.A
- 9.B
- 10.A
- 11.A
- 12.B
- 13.B
- 14.B



“A million things  
can bring you  
down,  
find one reason  
to keep you up.”

Done By:

غيداء المسعد