

The Liver and Hepatobiliary system

Lies in the **right hypochondrium** under the diaphragm. It is an accessory gland of the **foregut**.

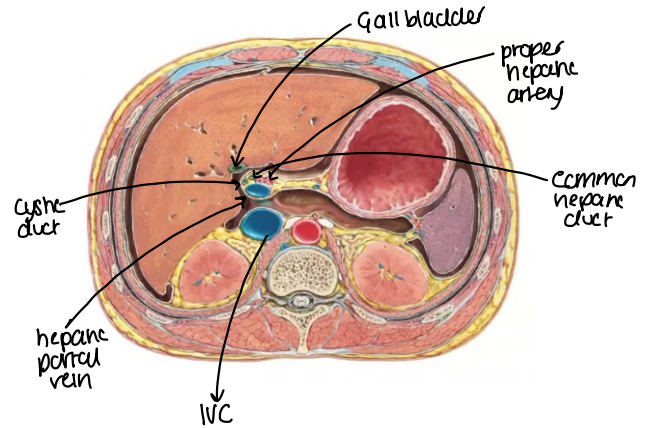
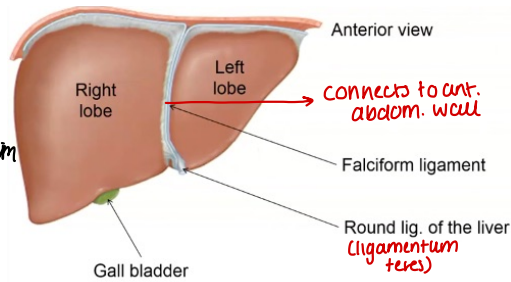
- Roles:**
- **Bile production** - breaks down fat in small bowel
 - **Glucose** → **Glycogen**
 - **Produces cholesterol** to carry fats throughout body.
 - **Fat + amino acid regulation**
 - **Iron storage** - stored as ferritin
 - **Detoxification of circulation**
 - **Manufacture of blood proteins in circulation**
 - **Immunity** - immune factors (important as receiving drainage from the intestines)

The liver is **intra-peritoneal**.

Diaphragmatic surface = Anterosuperior + sits below diaphragm

Posterior surface = bare area of liver

Visceral surface - posterior inferior surface → covered in peritoneum

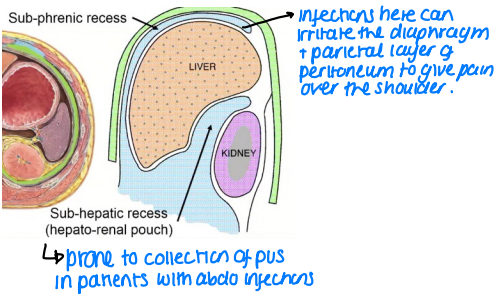


The liver is covered by a fibrous layer = **Glisson's capsule**.

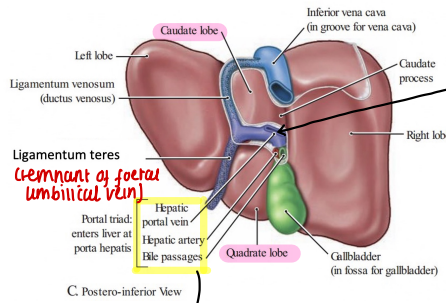
HPV = splenic + SMV

Caudate lobe - lies between the IVC + a fossa produced by the **ligamentum venosum**

Quadrante lobe - lies between the gall bladder and a fossa produced by the **ligamentum teres**. Both supplied by **left hepatic artery**



Liver Lobes



Transmits all vessels, nerves + ducts

entering/leaving liver except **hepatic veins**

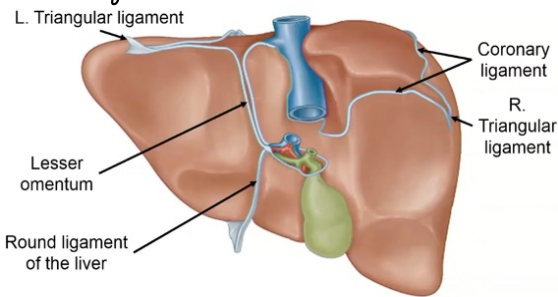
Falciform ligament - anterior surface of liver. Attaches to ant. abd. wall

Coronary ligament - attaches superior liver to inferior diaphragm + demarcates the bare area of the liver. Unites to form the triangular ligaments.

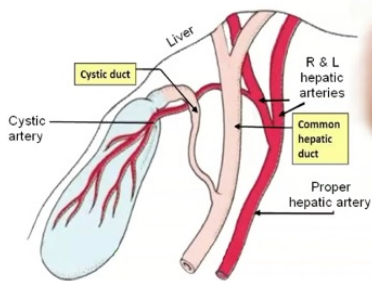
Triangular ligaments - Left T.L. attaches the left lobe of the liver to diaphragm. RTL attaches right lobe of the liver to the diaphragm.

Lesser omentum - attaches liver to the lesser curvature of the stomach + proximal duodenum.

Liver Ligaments



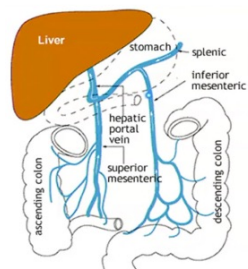
Calot's Triangle + Porta Hepatis



• The **proper hepatic artery** (25%) supplies the non-parenchymal structures + is derived from the **coeliac trunk**.

• The **hepatic portal system** (75%) carries nutrients from the small intestine to the liver. Blockages result in varicosities + tissue oedema = **portal hypertension**. venous blood tries to bypass via:

- > Lower oesophagus (blood in stomach → vomiting)
- > Recanalized ductus venosus to IVC
- > Anal canal (haemorrhoids)
- > Anastomoses on the posterior abd. wall
- > Recanalised umbilical vein (caput medusae)

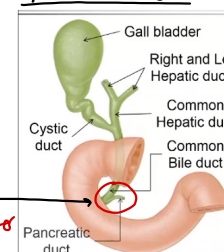


Foregut - drained by splenic vein

Midgut - drained by SMV which joins the splenic

hindgut - drained by inferior mesenteric which joins splenic vein

Gall bladder



- supplied by **cystic artery** from the @ branch **hepatic artery**

hepatopancreatic ampulla of Vater surrounded by sphincter of oddi