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The liver is the largest organ in the body. Its domed upper surface relates entirely to the diaphragm while its postero-inferior, or visceral, surface rests against the abdominal oesophagus, stomach, upper duodenum, hepatic flexure of the colon, right kidney and suprarenal gland, as well as carrying the gall bladder

Its surface relations can be marked out by joining points on:

- the right costal margin in the mid-axillary line, (the 10th rib)
- the right 5th intercostal space ditto
- the left 5th intercostal space in the mid-clavicular line.

The liver can readily be marked out on the subject by its dullness to percussion. Note that the liver in the normal subject is not palpable on clinical examination; especially in a well- developed male, the contracted anterior abdominal muscles mimic the liver edge, but careful percussion reveals that the so- called liver edge is resonant!

Peritoneal attachments

Apart from a small posterior *bare area*, demarcated as the peritoneum from the diaphragm reflects onto it as the upper and lower layers of the *coronary ligament*, the liver is otherwise enclosed in peritoneum. To the right, these layers fuse to form the short *right triangular ligament*. The *falciform ligament* runs to the liver from the umbilicus carrying the *ligamentum teres* (the obliterated fetal umbilical vein), in its free border. The ligamentum teres passes into its fissure on the inferior surface of the liver, while the falciform ligament passes over the dome of the liver and then divides; its right limb joins the upper layer of the coronary ligament, while its left limb stretches out as the long narrow *left triangular ligament*, which joins the lesser omentum as this arises from the fissure for the ligamentum venosum. The *lesser omentum* arises from the fissures of the porta hepatis and the ligamentum venosum to attach along the lesser curvature of the stomach.

Anatomical subdivisions

The superior aspect of the liver is divided by the falciform ligament into an anatomical right and smaller left lobe. Postero-inferiorly it bears an H-shaped arrangement of fossae:

Anteriorly and to the right is the fossa for the gall bladder. Posteriorly and to the right is the groove for the inferior vena cava.

Anteriorly and to the left is the groove for the ligamentum teres (often partially bridged by liver tissue).

Posteriorly and to the left is the fissure for the ligamentum venosum. This represents the obliterated fetal ductus venosus, which shunts oxygenated blood from the umbilical vein to the inferior vena cava, short-circuiting the liver.

The cross-bar of the H is the *porta hepatis*.

Two additional lobes are marked out on the visceral aspect of the liver between the limbs of the H e the *quadrate lobe* anteriorly and the *caudate lobe* behind.

Lying in the porta hepatis, which measures about 5 cm in length, are a triad of important structure. These are:

- The right and left hepatic ducts, fusing into the common hepatic duct e anteriorly and to the right.
- The hepatic artery dividing into its left and right branches erather more posteriorly and to the left.
- The portal vein, dividing into its left and right branches e posteriorly.

In addition to this portal triad, there are autonomic nerves (parasympathetic from the hepatic branch of the anterior vagus nerve, and sympathetic from the coeliac axis) and the portal lymph nodes.

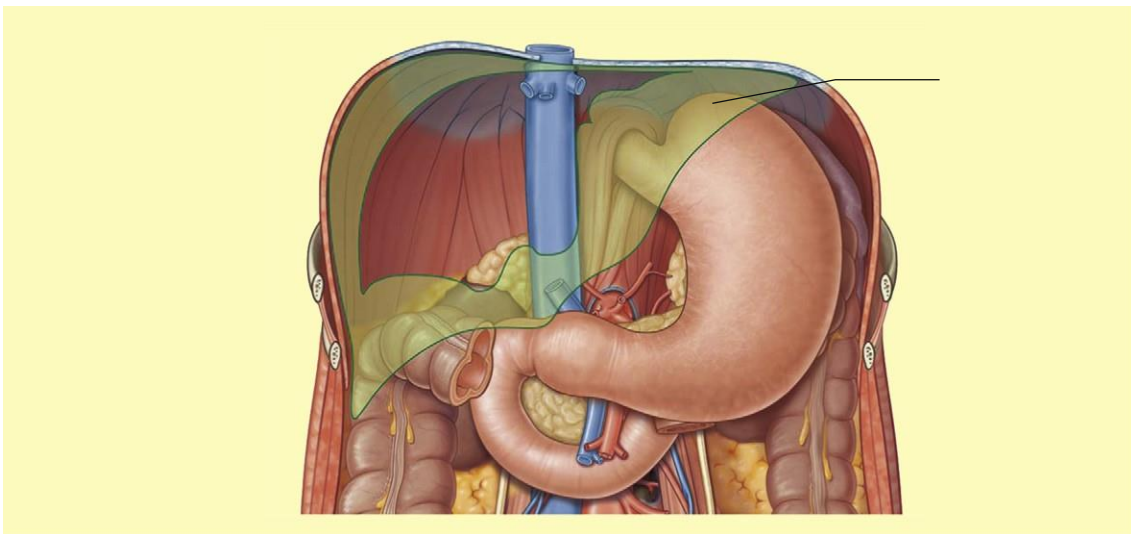


Fig No.1: Outline of liver

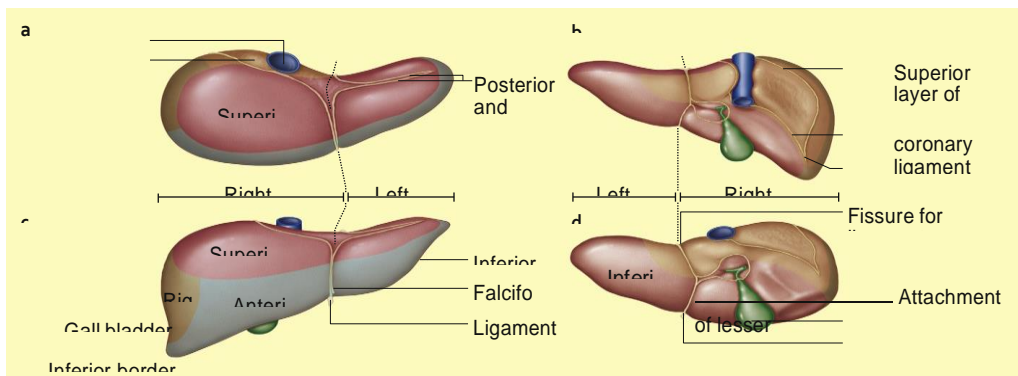
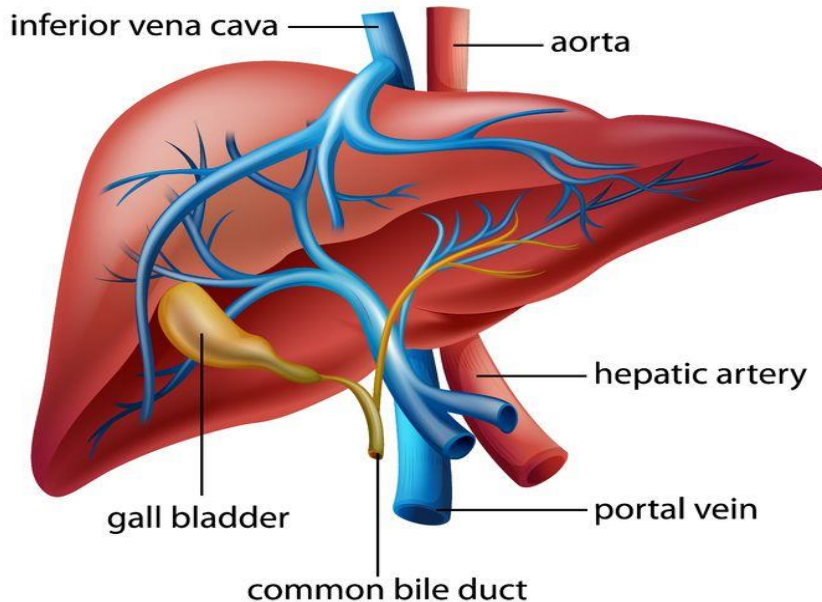


Fig No.2: Attachments of the liver

Human Liver Anatomy



Functions of liver

- It has a wide range of functions
- [Detoxification](#)
- [protein synthesis](#)
- production of biochemicals necessary for [digestion](#).
- [glycogen](#) storage.
- [decomposition](#) of red blood cells.
- [plasma protein](#) synthesis
- [hormone](#) production
- major role in [metabolism](#)
- The liver is necessary for survival; there is currently no way to compensate for the absence of liver function in the long term.