

**THE IMPORTANCE OF THE LIVER IN THE BODY, BILE FLUID, GALLSTONE
DISEASES**

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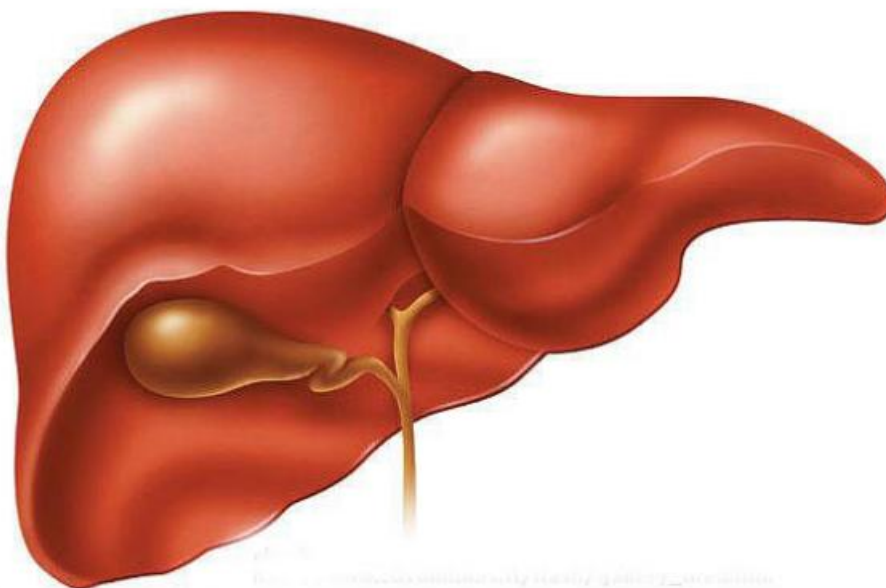
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Abstract: The liver is the largest parenchymatous organ in the body. The liver performs a number of functions related to digestion and not related to digestion. The main functions of the liver are homeostatic, metabolic, digestive, excretory, barrier and reserve. The digestive activity of the liver is related to the production of bile and its excretion into the intestine. Grass is both juice and excretory liquid at the same time. Bile participates in the emulsification of fats, and also increases the hydrolysis and absorption of proteins and carbohydrates. Gallstone disease occurs as a result of the accumulation of stones in the gallbladder and bile ducts.

Key words: Parenchymatous organ, hemostatic, excretory, fat emulsification, cholic and deoxycholic acids, gallstone disease.

Enter. The liver performs its homeostatic function by collecting some substances from the blood, changing them, excreting them, and creating various substances. Blood passing through the liver is cleaned of harmful substances from the stomach and intestines, and glucose is converted into glycogen in the liver. Glycogen accumulates in the liver cells and is broken down into glucose and released into the blood when the need for carbohydrates in the body increases. The liver participates in the assimilation and exchange of substances, has its own enzymatic and excretory activity, it also affects blood circulation. Most of the substances that participate in blood clotting and prevent clotting are synthesized in the liver. The liver performs its functions by neutralizing toxic substances and toxins from microbes. In addition to storing carbohydrates, the liver also stores fat-soluble vitamins. Fat-soluble vitamins (A, D, K, E) accumulate in perisinusoids. During the embryonic period, the liver takes part in the formation of blood. The liver is actively involved in protein and amino acid metabolism. Most of the proteins in the blood are synthesized in the liver. It ensures the deamination of amino acids and transfer of the amine group, participates in the formation of glutamine and creatine. Urine, the main waste product of protein

metabolism, is almost entirely produced in the



liver.

Figure 1. External structure of the liver

The participation of the liver in fat metabolism is expressed in the synthesis of triglycerides, cholesterol, phospholipids, lipoproteins and fatty acids. The assimilation of fats depends on the activity of the liver. In the liver, the processes of oxidation, formation, decomposition of glucose, synthesis of glucuronic acid proceed at a high speed. The participation of the liver in the exchange of internal and external biologically active substances and drugs is extremely important for the body. It suppresses the enzymatic activity of steroid hormones, insulin, glucagon, antidiuretic hormone, thyroid hormones, catecholamines, histamine, serotonin and others.

Formation of grass. As a result of the digestive activity of the liver, bile is formed and excreted in the intestine. Grass is both sap and excretory liquid at the same time. The composition of the herb contains various endogenous and exogenous substances, it also has some enzymatic activity. 1000-1800 ml of grass is produced in one night. The formation of bile (choleresis) continues continuously, the secretion of bile (cholikinesis) is periodic and begins only when food is consumed. While not eating, the bile fluid does not enter the intestines, but collects in the gall bladder, where it is stored as a reserve, thickens, that is why the bile in the gall bladder differs from the bile in the liver in that it is darker in color. Bile fluid is synthesized as a result of the synthesis of substances that make up its component in hepatocytes, as well as the active or slow transport of some substances and water through the wall of bile ducts, as well as reabsorption processes. When there is no food in the stomach and small intestine, the duodenum stops and it accumulates in the gallbladder. The smooth membrane of the gallbladder has the ability to absorb various substances and water contained in the grass, and to separate some substances into the grass. Therefore, the composition of liver bile that enters the gallbladder changes significantly. Gallbladder (vesica fellea) is a reservoir of bile formed in the liver. It is 8-14 cm long, 3-5 cm wide, and has a capacity of 40-70 cm³. The bottom (fundus vesicae felleae), body (corpus vesicae felleae) and neck (collum vesicae felleae) of the bladder are separated. The duct of the gallbladder (ductus cysticus) connecting the gallbladder with the common bile duct (ductus choledochus) emerges from its neck. The gallbladder is located mesoperitoneally in the pit of the gallbladder (fossa vesicae fellae) on the visceral level of the liver. Its side facing the abdominal cavity is covered with a serous layer. The wall of the gall bladder consists of serous

(serosa vesicae felleae), muscular (tunica muscularis vesicae felleae) and mucous (tunica mucosa vesicae felleae) layers.

Gallstone disease is a disease characterized by a violation of the synthesis and circulation of bile in the hepatobiliary system, which leads to the formation of stones in the gallbladder and bile ducts as a result of a violation of cholesterol or bilirubin metabolism. Gallstone disease is considered dangerous due to the fact that it causes serious complications with a high probability of death. Obesity and consumption of products containing a large amount of cholesterol, reduction of bile acids in the bile,

A decrease in the amount of phospholipids that do not allow cholesterol and bilirubin to harden and sink, such as bile acids,

Stagnation in the biliary system (concentration of bile due to the absorption of water and bile acids in the gallbladder) can cause gallstone diseases

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