Gross anatomy

1 why do we have the portal vein or the liver receiving more blood from the vein than it recives from the artery

In the hepatic portal system, the liver receives a dual blood supply from the hepatic portal vein and hepatic arteries. The hepatic portal vein carries venous blood drained from the spleen, gastrointestinal tract and its associated organs; it supplies approximately 75% of the liver’s blood. The hepatic arteries supply arterial blood to the liver and account for the remainder of its blood flow.

Oxygen is provided from both sources; approximately half of the liver’s oxygen demand is met by the hepatic portal vein, and half is met by the hepatic arteries. Blood flows through the liver tissue and empties into the central vein of each lobule. The central veins coalesce into hepatic veins that collect the blood leaving the liver and bring it to the heart. A portal system is a venous structure that enables blood from one set of capillary beds to drain into another set of capillary beds, without first returning this blood to the heart. The majority of capillaries in the body drain directly into the heart, so portal systems are unusual.

The hepatic portal system connects the capillaries of the gastrointestinal tract with the capillaries in the liver. Nutrient-rich blood leaves the gastrointestinal tract and is first brought to the liver for processing before being sent to the heart. Here, carbohydrates and amino acids can be stored or used to make new proteins and carbohydrates.

The liver also removes vitamins and cofactors from the blood for storage, as well as filters any toxins that may have been absorbed along with the food. When any of these stored substances are needed, the liver releases them back into circulation through the hepatic veins.

2 discuss five disease condition of the liver

* [**Hepatitis A**](https://www.webmd.com/hepatitis/digestive-diseases-hepatitis-a)**.** Most people get it by eating or drinking something that’s tainted by fecal matter. You might not have any symptoms. It usually goes away by itself within 6 months without any long-term harm.
* [**Hepatitis B**](https://www.webmd.com/hepatitis/digestive-diseases-hepatitis-b). You get it from somebody else, such as through unprotected sex or taking drugs with shared needles. If it lasts longer than 6 months, it makes you more likely to get liver cancer or other diseases.
* [**Hepatitis C**](https://www.webmd.com/hepatitis/digestive-diseases-hepatitis-c)comes from infected blood that gets into your blood. You might get it if you take drugs with shared needles or in connection with HIV. If you’re a health-care worker, you might get it from an infected needle that accidentally sticks you. Symptoms may not show up for many years. For reasons that aren’t quite clear, baby boomers are at risk for hepatitis C and should be tested for it.
* [**Autoimmune hepatitis**](https://www.webmd.com/hepatitis/autoimmune-hepatitis)inflames your liver. It can lead to other disorders and even liver failure. It strikes girls and women more often than boys or men.
* [**Liver cancer**](https://www.webmd.com/cancer/understanding-liver-cancer-basic-information)affects women more often than men, and African-Americans more often than whites. Your doctor might call it [hepatocellular carcinoma](https://www.webmd.com/cancer/hepatocellular-carcinoma). It’s more likely if you have [hepatitis](https://www.webmd.com/hepatitis/default.htm) or drink too much.