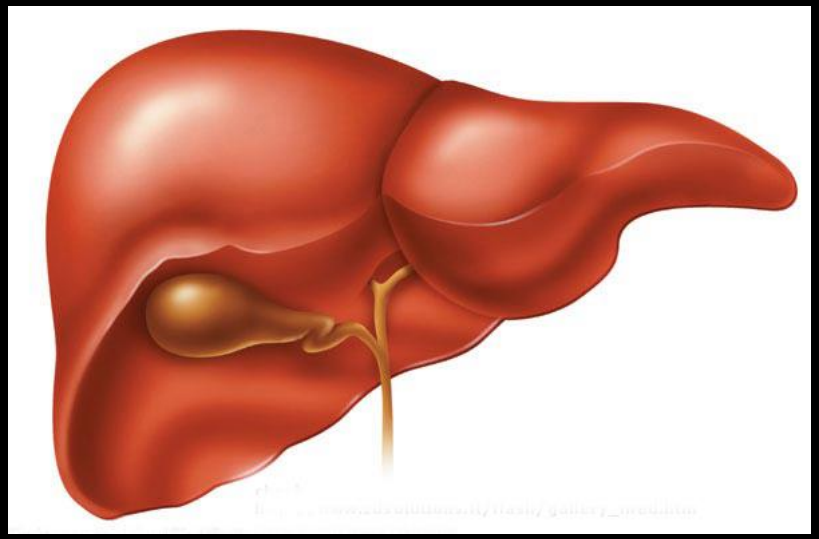
3.3.5
Blood Transport of nutrients



Need to know

Where and how digested nutrients are absorbed from the alimentary canal

Learn how digested nutrients are transported to the liver

Learn the main liver functions

Learn how nutrients are transported to cells and how urea is transported to the kidneys

Absorption of Nutrients

Fatty acids and Glycerol are absorbed from the small intestine into the Lymphatic system and then feed into the circulatory system (left and right sub-clavian vien) for transport to liver

Glucose, Amino acids , vitamins and minerals pass directly into the blood capillaries

The Hepatic Portal vein then brings these nutrients directly to the liver

Villi

Infolding in the lining of the small intestine

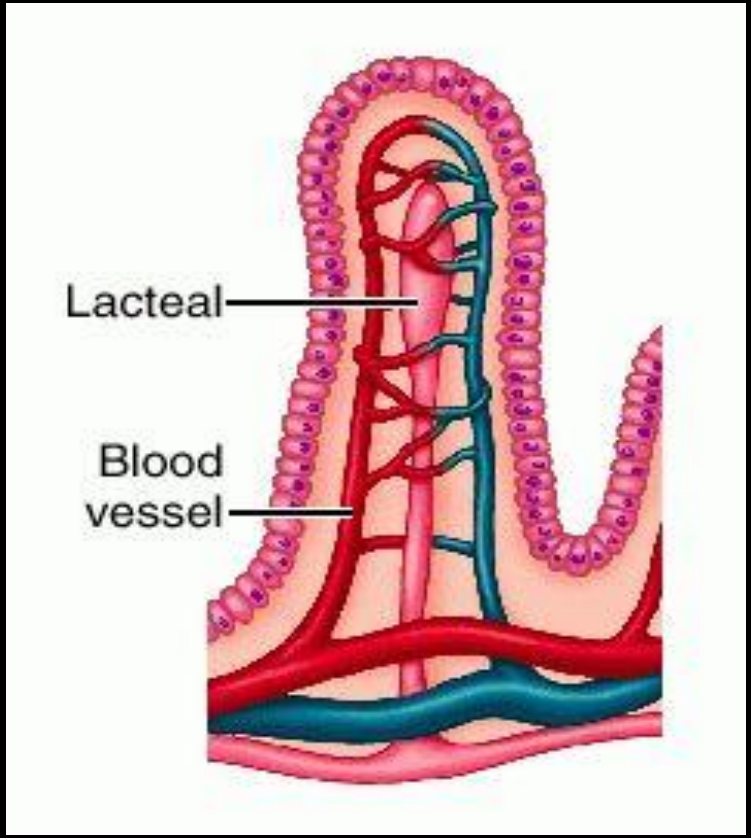
Function

Increase surface area for absorption of digested food

Absorption of Nutrients by Villi

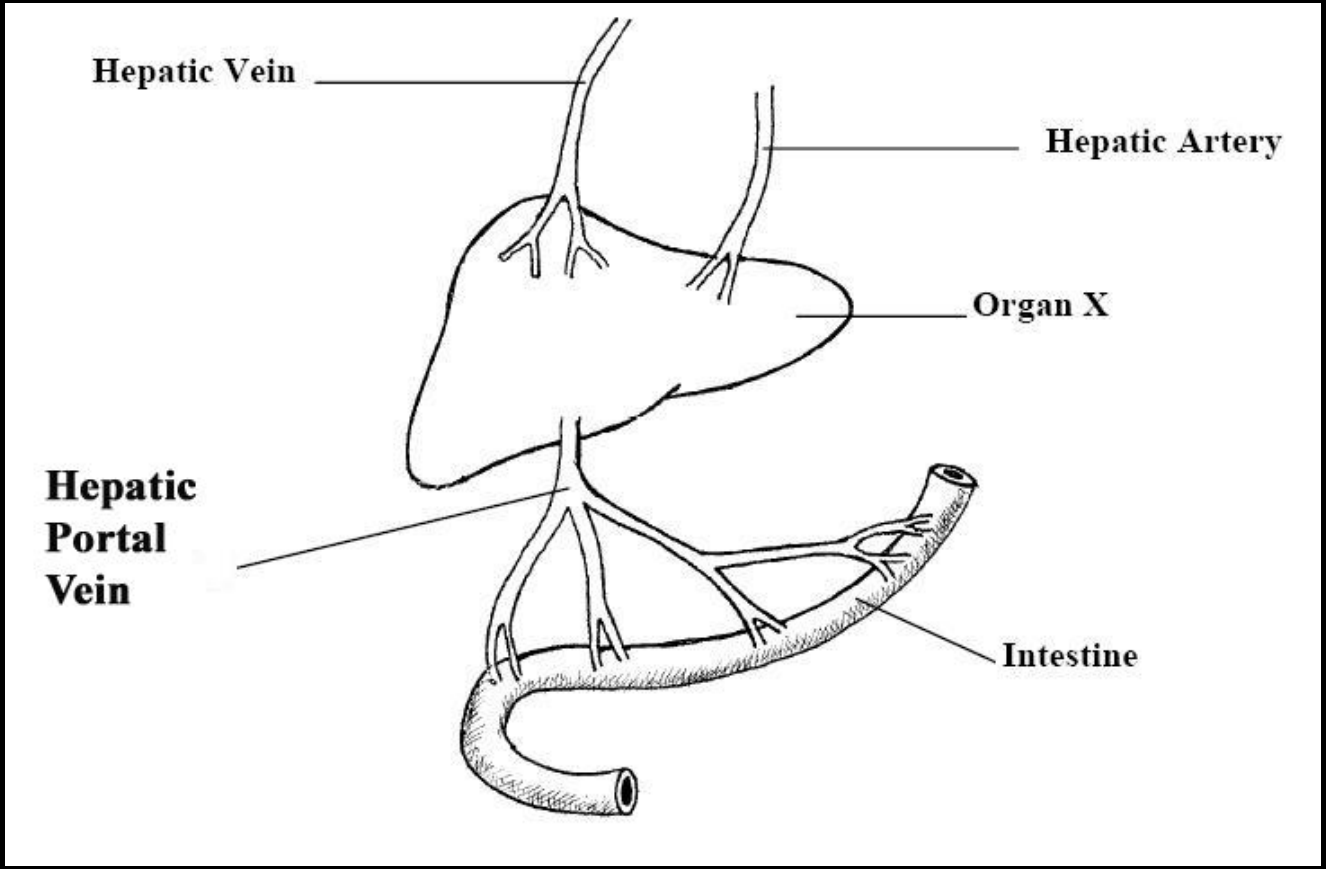
Fatty acids and Glycerol are absorbed into the Lacteal

All other digested food are absorbed into the blood vessels



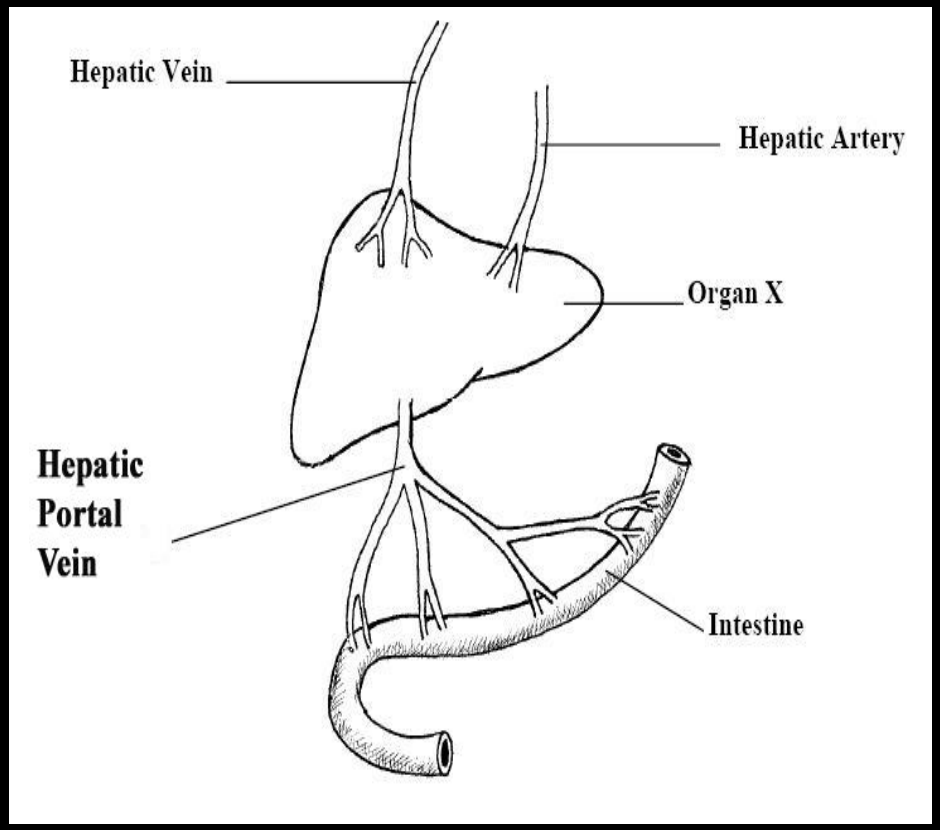
A single Villus

Blood Transport from Intestine to Liver



The Hepatic portal vein connects the small intestine to the liver transporting glucose, amino acids, minerals and vitamins

Blood Transport of nutrients to Cells



The Hepatic Vein transports nutrients and waste urea from Liver to heart

From the heart nutrients are transported away from the heart through the Aorta to the body cells dissolved in the plasma

From the heart waste urea is transported away from the heart to the kidney through the aorta dissolved in the plasma

Liver Functions

1. Make Bile
2. Store Glycogen
3. Breakdown toxins
4. Store Vitamins A, D , K
5. Make Plasma Proteins
6. Make Urea from excess protein
7. Produce Heat
8. Store Iron

Learning Check

List six functions of the liver

Name the blood vessel that connects the small intestine to the liver

Explain how glucose, amino acids, vitamins and minerals are transported to cells

Distinguish between the hepatic vein and the hepatic artery

End