

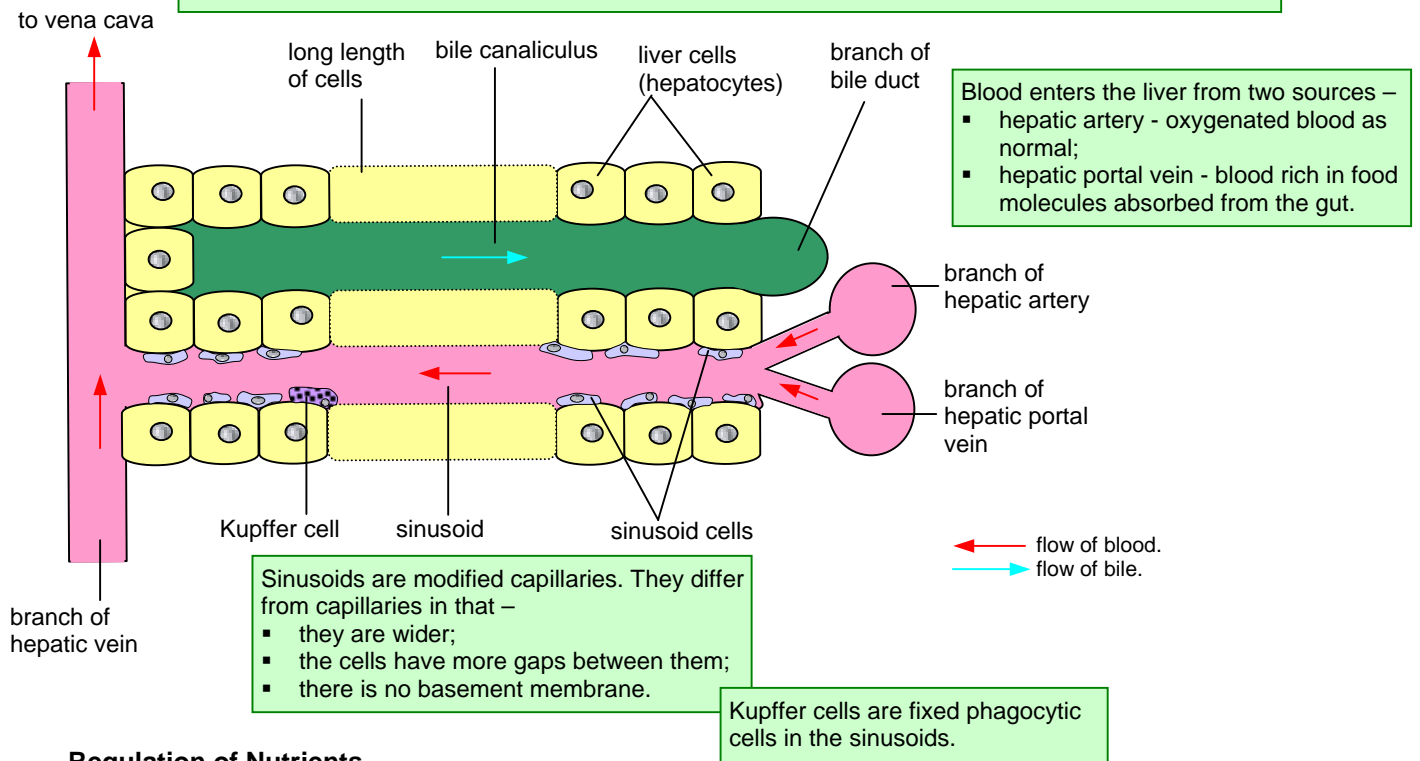
## ❖ Functions of the Liver

### Circulation within the Liver Tissue

#### Bile secretion

##### Key points

- Bile is synthesised by the hepatocytes and secreted into the bile canaliculi.
- These drain into small ducts which join together to form the bile duct.
- This carries the bile to be stored temporarily in the gall bladder.
- Water is absorbed by the wall of the gall bladder to concentrate the bile.
- Bile enters the small intestine through the bile duct.
- Bile contains -
  - hydrogen carbonate ions ( $\text{HCO}_3^-$ ) to neutralise the acidic chyme from the stomach;
  - bile salts made from cholesterol and which emulsify lipids;
  - bile pigments which are formed from the haem of haemoglobin and are excreted.



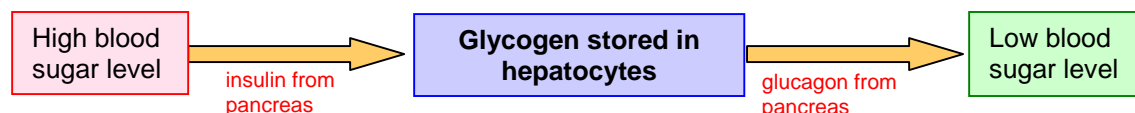
### Regulation of Nutrients

#### Key points

- Nutrient levels in the blood rise sharply as they are absorbed after eating;
- Nutrient levels in the blood fall as they are assimilated by body cells;
- The liver maintains a balance in the blood by storing nutrients when they are in excess and releasing them when they are needed elsewhere.

### Storage in the Liver

**Carbohydrate** – (see also page 87 in the Core Guide).



#### Iron

- Stored in specific protein called ferritin.

#### Vitamins

- Retinol;
- Calciferol.
- These are both fat soluble vitamins and are stored in large quantities.