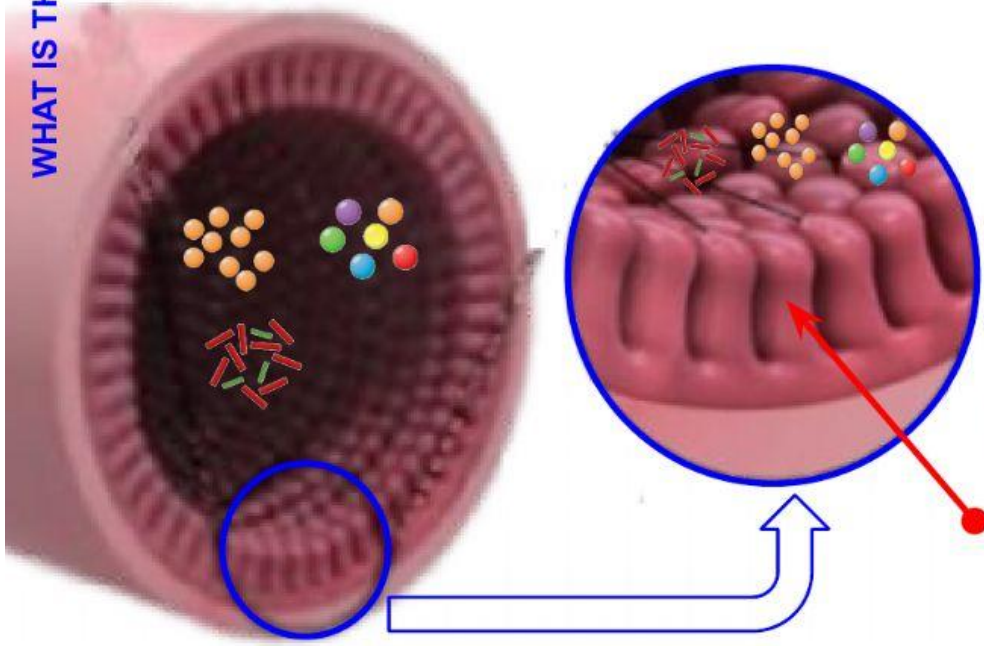
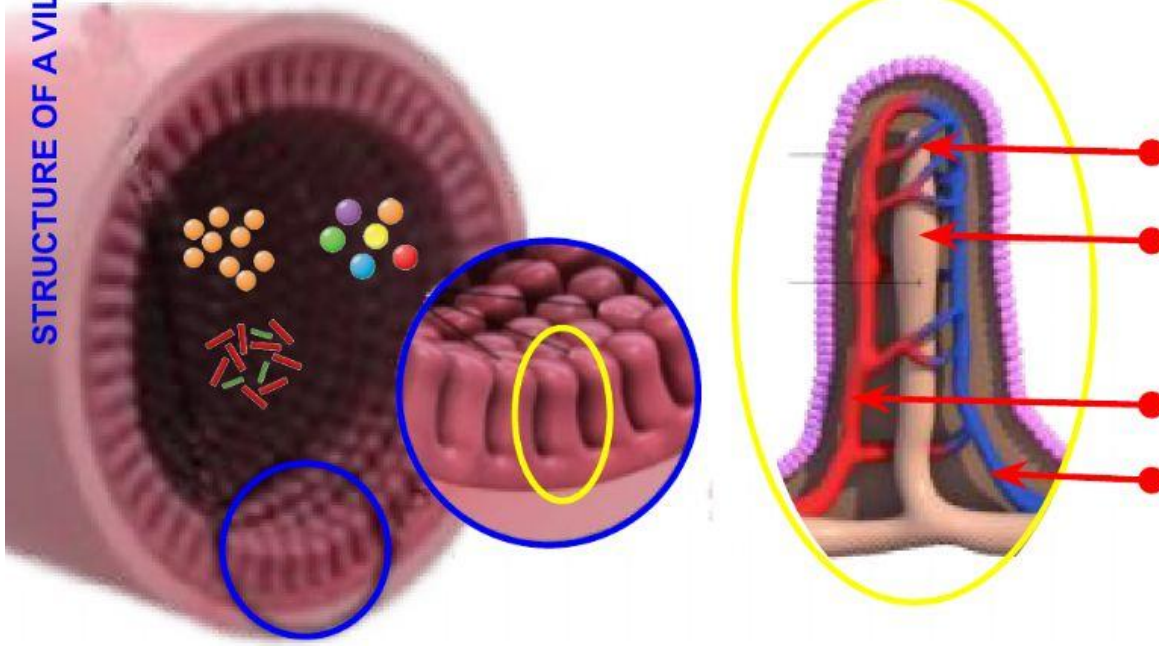


WHAT IS THIS ?



STRUCTURE OF A VILLUS



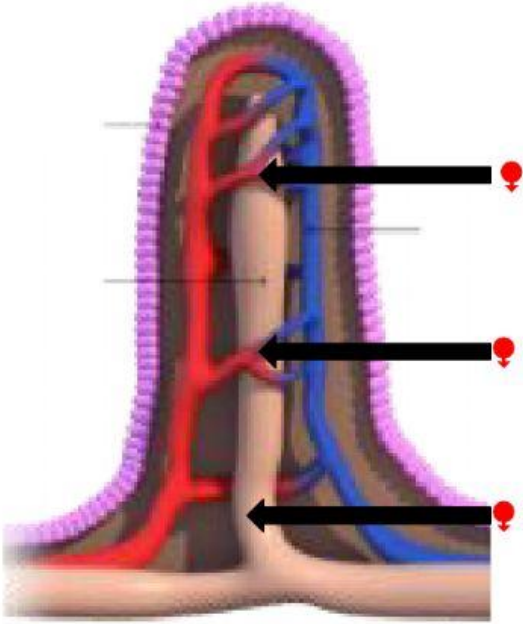
 villous vein


 villous capillaries


 villous artery

 lacteal

WAYS OF ABSORPTION
OF SMALL NUTRIENT MOLECULES



 **glucose**



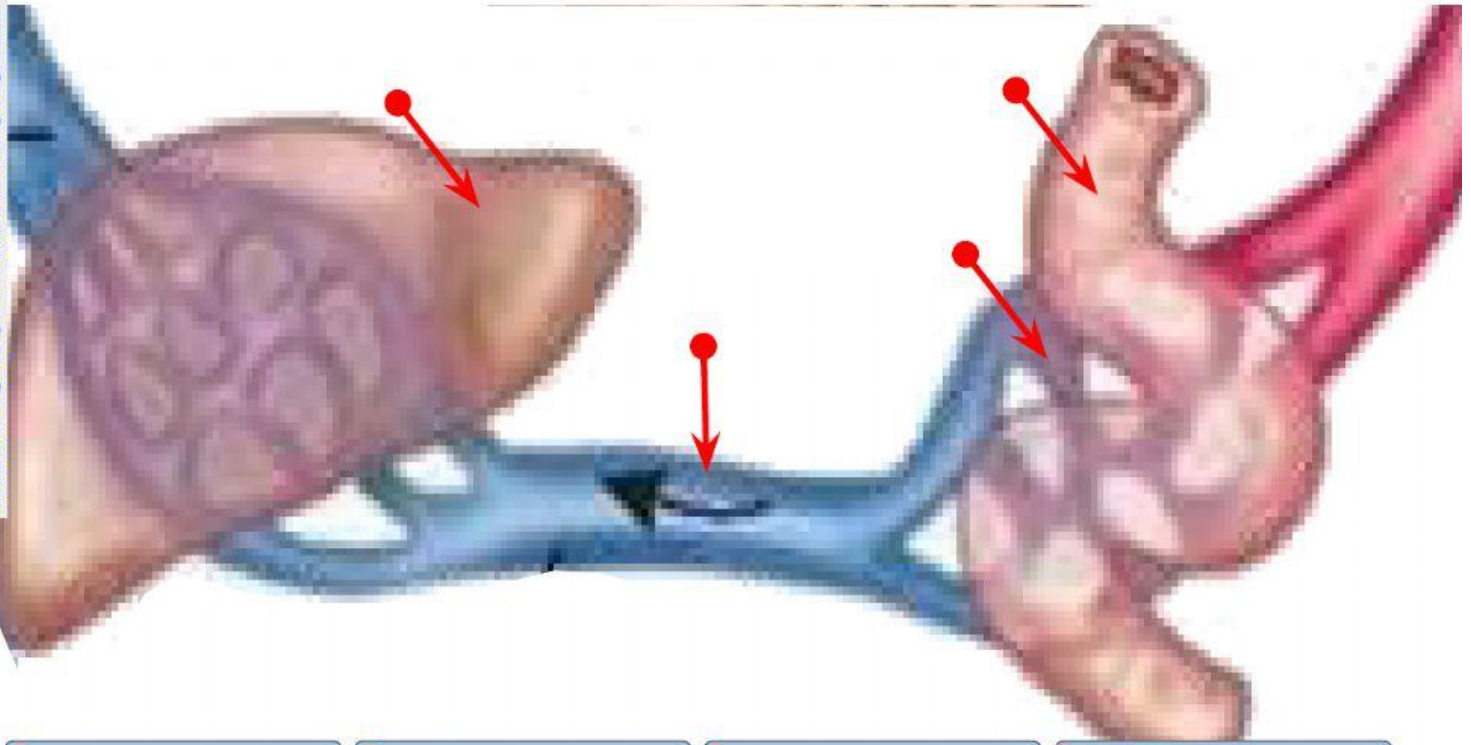
 **glycerol & FFAs**



 **amino acids**



HEPATIC PORTAL VEIN SYSTEM



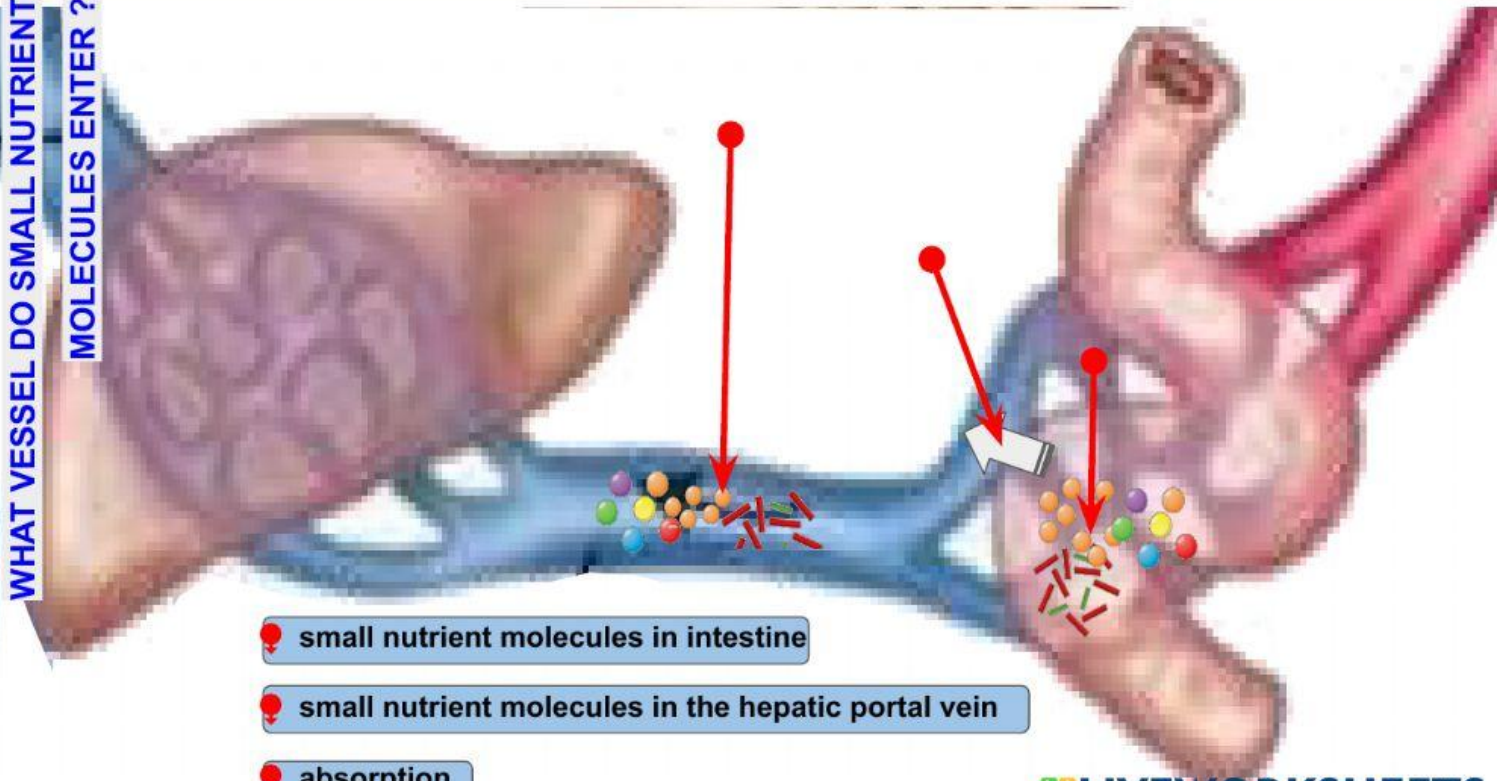
small intestine

intestinal capillaries

liver

hepatic portal vein

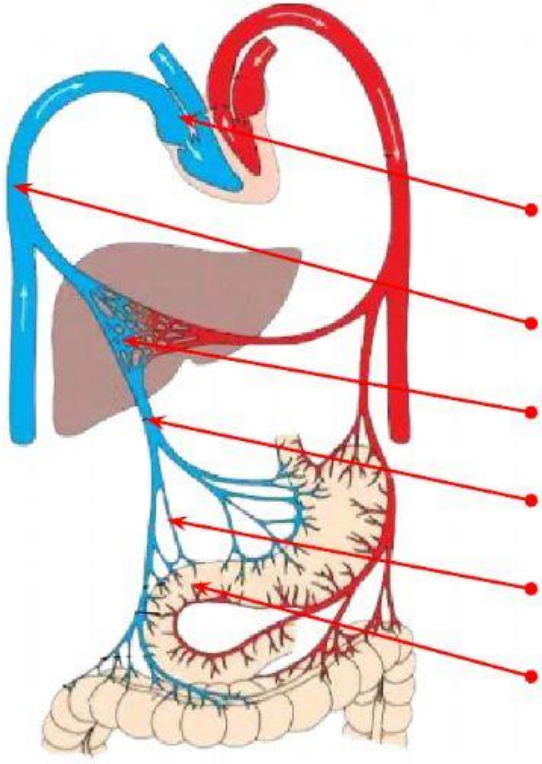
WHAT VESSEL DO SMALL NUTRIENT MOLECULES ENTER ?



- small nutrient molecules in intestine
- small nutrient molecules in the hepatic portal vein
- absorption

HOW DO SMALL NUTRIENT MOLECULES

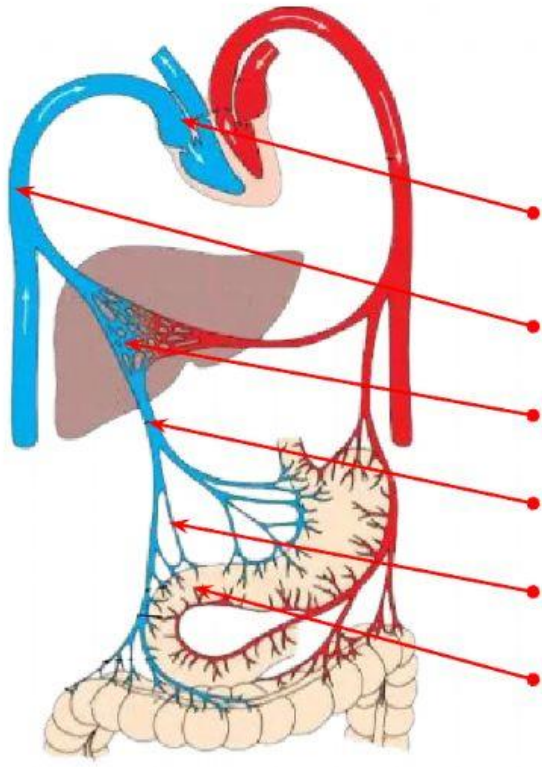
TRAVEL ?



- 1
- 2
- 3
- 4
- 5
- 6

HOW DO SMALL NUTRIENT MOLECULES

TRAVEL ?



intestinal capillaries

vena cava

hepatic vein

hepatic portal vein

intestinal vein.

right atrium