CONCEPT: INTRO TO LIPID DIGESTION

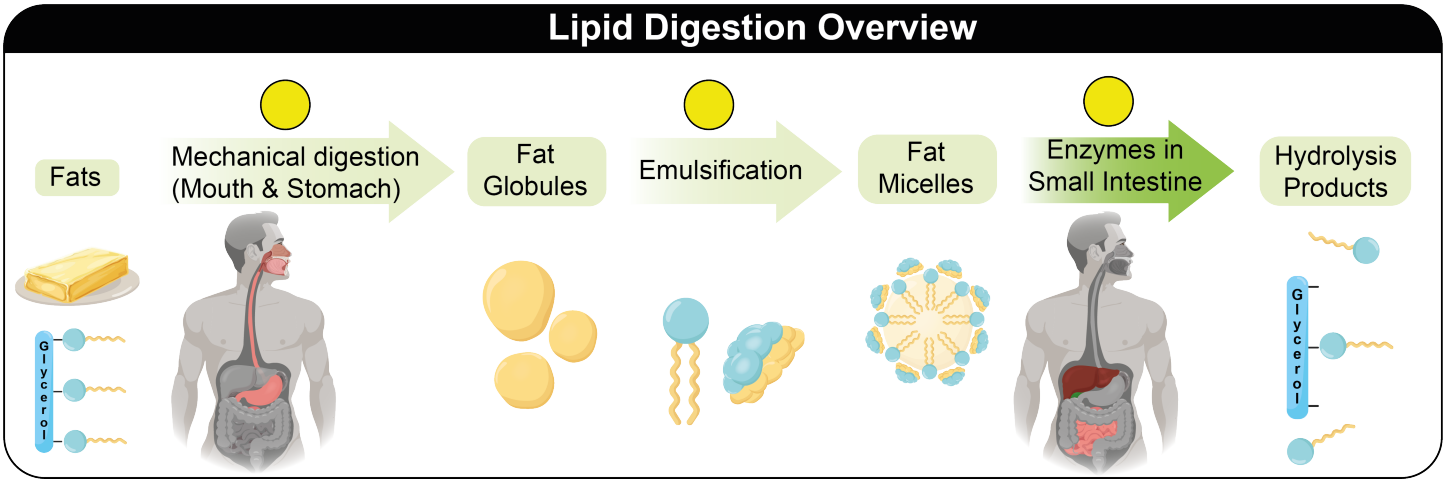
- Triacylglycerols (TAGs) are the most abundant dietary lipids and a _____ source of energy.

□ Mechanically digested in the mouth and stomach. □ Biochemically digested in the small intestine.

(A) Grinding in the mouth and churning in the stomach convert lipids into small droplets (_____).

(B) Emulsification by bile turns globules into _____ and increases their surface area and _____.

(C) Pancreatic Lipases *partially* hydrolyze fats (triacylglycerols) to monoacylglycerols and fatty acids.



EXAMPLE: Which of the following statements is correct about the role of bile in lipid digestion?

a) Bile contains bile acids that provide an acidic medium for lipid digestion.

b) Bile enzymes make lipids hydrophilic by oxidation.

c) Bile salts and lecithin in the bile emulsify lipids as a preparation for their subsequent hydrolysis.

d) Bile contains lipases that hydrolyze lipids to fatty acids and glycerol.

PRACTICE: Which of the following statements is incorrect about lipid digestion?

a) Emulsification of fat globules by bile increases their surface area.

b) Triacylglycerols are partially hydrolyzed in the stomach before they enter the small intestine.

c) Triacylglycerols in the small intestine are partially hydrolyzed by pancreatic lipases.

d) Mechanical digestion of lipids takes place inside the mouth and the stomach.