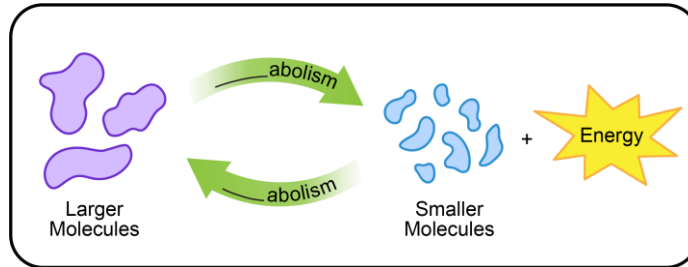


CONCEPT: INTRO TO METABOLISM

- Metabolism refers to ____ biochemical reactions that take place within an organism.
 - Catabolism:** Reactions that ____ energy by ____ down molecules into smaller ones.
 - Anabolism:** Reactions that ____ energy to ____ larger molecules from smaller ones.

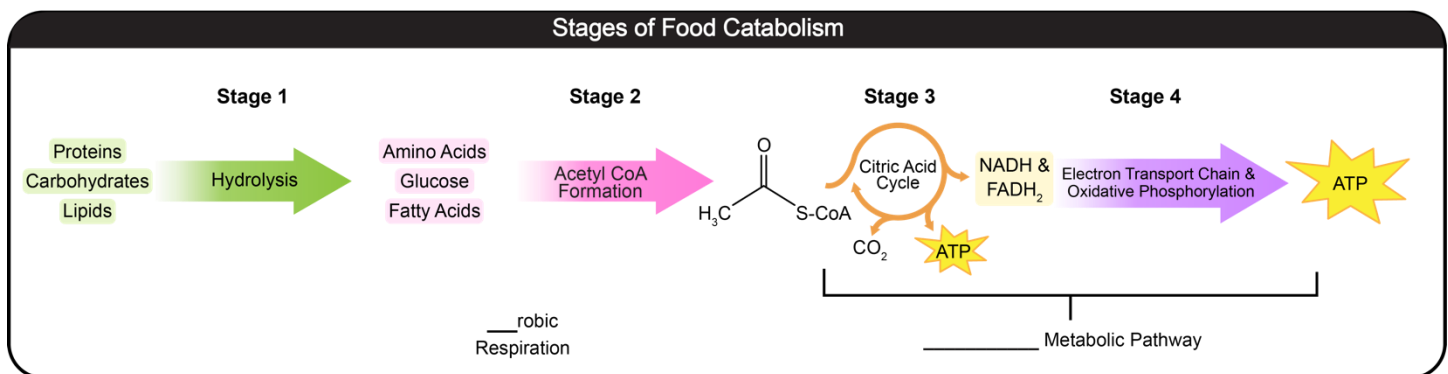


EXAMPLE: Identify each of the following processes as anabolism (A) or catabolism (C).

- ____ Trypsin in the small intestine converts proteins into smaller peptides.
- ____ Glucose is converted to glycogen for storage.
- ____ Lipase in the stomach hydrolyzes lipids to fatty acids and glycerol.
- ____ Amino acids in ribosomes are converted into proteins.

Stages of Catabolism

- Energy production through catabolism of food takes place in ____ stages.
- Aerobic Respiration:** The predominant energy production pathway in the body; takes place in the presence of ____ gas.



- Common Metabolic Pathway:** Stages 3 and 4 are ____ for the catabolism of all food types.

EXAMPLE: Which one of the following statements about the catabolism of food is incorrect?

- Carbohydrates are oxidized in stage 1 to produce CO₂ and energy.
- Acetyl CoA is the product of stage 2 catabolism.
- The electron transport chain & oxidative phosphorylation is the last stage of food catabolism.
- The citric acid cycle uses acetyl CoA to produce energy.