

PROTEIN METABOLISM

PROTEIN CATABOLISM – hydrolysis breaks peptide bonds yielding amino acids

AMINO ACID CATABOLISM - (requires B6)

- A. **Transamination** – attaches an amino group of an amino acid to a keto acid converting a keto acid into an amino acid. The original amino acid becomes a keto acid.
 - 1. New amino acid can be used for synthesis
 - 2. Keto acid can be broken down in the TCA cycle
- B. **Deamination** – uses deaminase, water & NAD
 - 1. breaks down an amino acid into a keto acid and an ammonia.
 - 2. liver cells convert ammonia to urea via the UREA CYCLE

PROTEIN ANABOLISM – dehydration synthesis

- A. Amination – attaches amino group to a keto acid
- B. Ten essential amino acids
- C. Deficiency diseases
 - 1. marasmus
 - 2. kwashiorkor
- D. Genetic metabolic disorder - PKU