

Questions to Ponder

Exam 2, Fall 2022

"Bioavailability = ingested nutrient is digested & absorbed which becomes available to the body"

Proteins

1. What are the structures of proteins and amino acids?
 - **Amino acids**
 - o Building blocks for proteins
 - o Formed mostly of carbon, hydrogen, oxygen & nitrogen
 - Branching carbon backbone, acid (carboxyl) group & amino group
 - o 3 branched-chain amino acids- leucine, isoleucine & valine each with a branching carbon backbone
 - **Protein**
 - o 20 different amino acids make up all proteins via peptide bonds (4 kcal per gram)
 - o Amino acids are linked together by chemical bonds (peptide bonds) to form proteins
 - Bonds are difficult to break, but heat, acids, & enzymes can do so during cooking & chemical digestion
 - o Bonds form between amino group of 1 amino acid with the acid (carboxyl) group of another
 - o Most proteins are polypeptides
2. What is an essential amino acid? What are the nine essential amino acids?
 - **Essential amino acid:** cannot be synthesized by humans, must be consumed from diet
 - o Histidine
 - o Isoleucine
 - o Leucine
 - o Lysine
 - o Methionine
 - o Phenylalanine
 - o Threonine
 - o Tryptophan
 - o Valine
3. What are the functions of proteins in the body? How much protein does an average person need?
 - Building blocks of body components
 - Fluid balance maintenance
 - Acid-base balance
 - Building blocks of hormones & enzymes
 - Immune function

Ponder Tales Study Guide Answers

Albert A Gayle



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