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PHARMACOLOGY

1. Firstly Biological value (BV) is a measure of the proportion of absorbed protein from a food which becomes incorporated into the proteins of the organism's body. It captures how readily the digested protein can be used in protein synthesis in the cells of the organism. The biological value of a protein extends beyond its amino-acid composition and digestibility, and can be influenced by additional factors in a tissue-specific manner. In healthy individuals, the slow appearance of dietary amino acids in the portal vein and subsequently in the systemic circulation in response to bolus protein ingestion improves nitrogen retention and decreases urea production. This is promoted by slow absorption when only protein is ingested (e.g. casein). When a full meal is ingested, whey achieves slightly better nitrogen retention than soy or casein, which is very likely achieved by its high content of essential amino acids (especially leucine). Elderly people exhibit ‘anabolic resistance' implying that more protein is required to reach maximal rates of muscle protein synthesis compared to young individuals.
2. I. BIOLOGICAL VALUE: Biological value (BV) is a measure of the proportion of absorbed protein from a food which becomes incorporated into the proteins of the organism's body. It captures how readily the digested protein can be used in protein synthesis in the cells of the organism.

II. NET PROTEIN UTILIZATION (NPU): The net protein utilization, or NPU, is the ratio of amino acid mass converted to proteins to the mass of amino acids supplied.

III. AMINO ACID SCORE: Amino acid score, in combination with protein digestibility, is the method used to determine if a protein is complete. PDCAAS and DIAAS are the two major protein standards which determine the completeness of proteins by their unique composition of essential amino acids.