

What are Biological Value Proteins?

The concept of biological value (BV) refers to the proportion of absorbed protein from a food source that becomes incorporated into the proteins of the organism's body. Essentially, it measures how efficiently the protein can be utilized for growth, maintenance, and repair by the body.

Why Proteins are Categorized as Low or High Biological Value

Proteins come from both animal and plant sources, and they vary in their amino acid compositions. Some proteins contain all the essential amino acids that our bodies cannot produce on their own, which are termed high biological value proteins. Others may lack one or more essential amino acids, making them low biological value proteins.

High Biological Value Proteins

High biological value proteins (HBV) are those that provide all nine essential amino acids in sufficient amounts for bodily functions. These protein sources are typically animal-based, including:

- Meat
- Fish
- Dairy products
- Eggs

Because they contain all essential amino acids, HBV proteins are particularly important for growth and development, making them highly beneficial for children, athletes, and those recovering from illness.

Low Biological Value Proteins

Low biological value proteins (LBV) are often derived from plant sources and may not contain all essential amino acids in adequate proportions. Examples include:

- Beans
- Lentils
- Nuts
- Cereals

While LBV proteins are nutritious and can contribute to overall protein intake, they may need to be combined with other foods (such as rice with beans) to create a complete amino acid profile.

Importance of Understanding Biological Value

Understanding the biological value of proteins can help individuals make informed dietary choices, particularly in meal planning for specific groups such as children, athletes, and vegetarians. A balanced diet should ideally incorporate a variety of both high and low biological value proteins to ensure adequate intake of all essential amino acids.