

Milk Proteins, Biopeptids and their effects on health

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Abstract

Today, proteins are known as active physiological active ingredients in the diet. Proteins are rich source of biological and bioactive peptides. These peptides were inactive in the original protein sequence and structure. The peptides can be released from hydrolysis of protein. They have some positive activities on cardiovascular, immune and digestive functions in the body. The biopeptides are composed of 2 to 20 amino acid residues. Some of these biopeptis have different roles and functions. Milk proteins are an important source of bioactive peptides. The fermentation process has an important role in the production of biopeptide compounds. Therefore, they are found in the fermented milk products. Casein is the main protein compound in milk with an approximate amount of 80% of the total milk proteins. The aforementioned protein is an important source of amino acids needed for baby growth. Casein contains some sections of alpha, beta, and kappa. Furthermore, two combinations of alpha-lactalbumin and beta-lactoglobulin are the most ingredients of whey proteins which are precursors of biopeptide compounds. Some useful compounds like casomorphin, casoxin, alpha lactorphin, bets lactopherin, immunopeptid and caseionphosphid are derived from casein and whey proteins. These derivatives has some various biological activities, such as soothing, anxiety and immune enhancement. The present study examines the different functions of biological active peptides derived from casein and whey proteins during various processes and their health effects in the human body.

Keywords: Casein, Whey, Bioactive Proteins, Proteolysis, Health Effects,