THE PHYSIOLOGY OF GLUTAMIC ACID

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Abstract
Glutamic acid (abbreviated as Glu or E) is a non-essential amino acid, whose salt is known as glutamate (also known as sodium glutamate, monosodium glutamate, Natrium Glutaminat, E 621). Human excessive consumption of nutrients having a high glutamate level (beer yeast (*Saccharomyces cerevisiae Meyen*,), certain mushrooms, tomatoes (*Lycopersicon esculentum Mill*.), soy (*Glycine max.(L).Merr*.)), may rise the blood level of the substance, as glutamate is adsorbed very quickly in the alimentary duct (unlike the glutamic acid).
The glutamic acid obtained through crystallization from kelps belonging to the orders of *Laminariales* and *Fucales of class Phaeophyta (brown algae)* more specific the specie Saccharina japonica (*Laminaria japonica*), is accountable for the human perception of the fifth basic sense of taste – umami (delicious in Japanese). Through the industrial production of glutamate there is made a product that potentiates the taste of food. Glutamate is part of a class of chemical substances known as excitotoxins, where a high level of substance in the human blood stimulates excessively the specific cellular receptors, leading to a higher cellular permeability to Ca+2. This mutation can cause damage (cytotoxicity and cell death) at the level of brain areas that are unprotected by the blood-brain barrier.
On the top of the neurotoxicity hypothesis in case of human consumption of large amounts, glutamate and aspartate interfere with the visceralgia transmission.

Key words: glutamic acid, glutamate

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