

Acrylamide and Human Health

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Dietary habit beginning from early years of life is one of the factors determining health status of people. It is required for people to consume useful food for health in order to have a good dietary habit. Acrylamide is component formed as a by-product in cooking process as the result of a reaction between sugar and protein at high temperatures (>120°C). It was found in the studies that asparagines are aminoacids responsible for the formation of acrylamides and formed as the result of Maillard reaction under effect of heat. Acrylamides are observed to form in fried food at high temperatures (chips, fried potato, flakes etc.). It is known that this substance, to certain doses, may have poisonous effects on human and animal nerve system and also cause cancer in animals. Food should not be excessively fried at high temperatures for long. However, all types of food, especially meat and meat products, should be cooked enough to kill bacteria causing food poisoning. It is possible to reduce the formation of acrylamide by altering components, processing and pH conditions of food. A dietary habit rich in fruits and vegetables is needed not to expose to excessive acrylamide intake. Effects of acrylamide are not known exactly. Several findings have been obtained as the results of studies about the formation mechanism of acrylamide, its unfavourable effects on health and the reduction of acrylamide formation. However, no method has yet been developed to cease fully the formation of acrylamide. It is emphasized in the present review study that the contents of mentioned substance having so many effects on human health in different food groups should be determined and required measures should be taken.