

Danish survey evaluates the content of chemical contaminants in food

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In general, Danes have no reason to worry about unwanted chemical compounds in the food they put on their table—especially if they eat a varied diet. However, a monitoring survey puts focus on certain compounds—e.g. inorganic arsenic and acrylamide, the intake of which should be reduced due to health risk. These findings are presented in the latest report on chemical contaminants in food prepared by the National Food Institute, Technical University of Denmark.

The National Food Institute, Technical University of Denmark has evaluated the content of chemical contaminants in food in the period 2004-2011 at the request of the Danish Veterinary and Food Administration.

The content of [chemical contaminants](#) is evaluated in relation to which specific foods Danes eat, and how much. The latest monitoring report includes even more compounds than the one from 2003.

"Monitoring of unwanted compounds is performed to ensure that the food eaten by the Danish people does not contain too many [harmful compounds](#). In general, Danes should not be concerned about unwanted [chemical compounds](#) in [food products](#). However, it would be advantageous if the intake of certain compounds was reduced", says Annette Petersen, senior adviser at the National Food Institute.

The report shows that it would be an advantage to focus efforts on reducing Danes' intake of inorganic arsenic, acrylamide, the metals lead

and [cadmium](#) as well as the environmental toxicants PCB and [dioxin](#). The intake of lead and cadmium remains more or less unchanged since the last monitoring survey in 2003. In contrast, the intake of dioxin and PCB shows a falling tendency, however, focused efforts are still necessary.

Acrylamide in food may cause cancer

In recent years, the National Food Institute has indicated that Danes' intake of acrylamide constitutes a health risk as it increases the risk of developing cancer. Acrylamide is formed when you fry, bake, grill or broil [carbohydrate](#)-rich foods at temperatures above 120 degrees.

The report shows that on average a Danish adult takes in 16 micrograms acrylamide per day. This is a decline compared to the latest calculations from 2007, where the intake was 24 micrograms on average. The decline is mainly due to the fact that the contribution from fried potatoes has been reduced. In calculating the intake it was presumed that Danes meet the recommendation of preparing the potatoes at a maximum of 175 degrees until they are gold brown.

The National Food Institute has calculated that even an average intake of 16 micrograms constitutes a health risk and thus considers this amount too high. Adults get most of their acrylamide from potato products (36 %), while 30 % comes from coffee and 13 % from bread. Children get 43 % from potatoes, 20 % from chips and chocolate and 16 % from bread.

Based on new results concerning the risk associated with acrylamide, the National Food Institute in cooperation with several European sister institutes in 2012 asked the European Food Safety Authority (EFSA) to undertake a new assessment of acrylamide. The institute continuously works on accelerating international work in this regard.

Inorganic arsenic in rice products

The intake of inorganic arsenic is also mentioned in the media. Particular focus has been put on babies' and young children's exposure to inorganic arsenic from rice crackers and rice porridge. In Denmark, rice is a significant source of inorganic arsenic for all age groups. After a long period of intake, inorganic arsenic may increase the risk of developing cancer. The National Food Institute has assessed that the dietary intake of [inorganic arsenic](#) is so high that seen from a health point of view it should be reduced.

"For all compounds mentioned it holds true that if you eat a varied diet you reduce [health risks](#). You may vary your intake of meat and fish as well as your side order of potatoes, vegetables, rice and bread", says Christine Nellemann, head of division.

More information: www.food.dtu.dk/~media/Institutional/Contaminants.ashx

Provided by Technical University of Denmark

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