

Cadmium level in pine nuts is safe

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Oil seeds like pine nuts, sunflower seeds or linseeds sometimes contain elevated levels of cadmium. When examining pine nuts (which belong to the category of indehiscent fruit according to the commercial designation for nuts and kernels), food control authorities and the European Federation of the Trade in dried fruits, edible nuts, preserved food, spices, honey and similar foodstuffs (FRUCOM) detected elevated levels of cadmium. All samples exceeded the maximum level of 0.05 mg cadmium per kilogram laid down by the European Commission. Dietary cadmium can cause kidney damage in humans. Against this backdrop the Federal Institute for Risk Assessment (BfR) examined whether the consumption of pine nuts could constitute a health risk for consumers. Based on its exposure assessment the Institute comes to the conclusion that there is no risk to consumers arising from current eating habits.

Cadmium is a metal that occurs naturally in the earth's crust and is also introduced by humans into the environment. The World Health Organisation (WHO) stipulates the value of 0.007 milligram per kilogram body weight as the provisional tolerable weekly intake (PTWI) of cadmium that can be taken in daily over a lifetime without any health risk. For an adult weighing 60 kg this means a PTWI of 0.42 mg.

Less than one percent of the population in Germany eat pine nuts. This means that these oil seeds rank amongst rarely eaten foods. According to the nutrition survey, based on consumers, on average around 5 gram pine nuts are eaten every week. The pine nuts examined had an average cadmium level of 0.19 mg per kilogram. The highest level was approximately 0.5 mg cadmium per kilogram pine nuts. According to the BfR exposure assessment, roughly 0.2 percent of the PTWI for cadmium is exhausted through the consumption of pine nuts with average cadmium levels by an adult weighing 60 kg. In the case of pine nuts with high cadmium levels, only 0.65 percent of the PTWI is exhausted.

In the current EU Contaminants Regulation 1881/2006 of 19 December 2006, the maximum level for cadmium in pine nuts is not listed. BfR is of the opinion that the occurrence of elevated cadmium levels on the scale mentioned above in pine nuts is safe as, given the eating habits in Germany, these kernels scarcely contribute at all to elevated cadmium intake from food.

The full version of this BfR Opinion is available in German on http://www.bfr.bund.de/cm/208/cadmiumgehalt_in_pinienkernen_ist_gesundheitlich_unbedenklich.pdf