

BfR recommends the setting of maximum levels for the fortification of foods with omega-3 fatty acids

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Long-chain omega-3 fatty acids from fish oil (DHA and EPA) are said to have health-promoting properties. Among other things they are claimed to prevent cardiovascular diseases and angiopathy disorders. Fish oil is, therefore, used in food supplements and to fortify foods. Two DHA-rich oils from marine microalgae are also authorised within the EU for the fortification of dairy products (except beverages), breakfast cereals and margarine spreads as well as for food supplements and dietetic foods.

Of course, long-chain omega-3 fatty acids are also found in fatty saltwater fish and other seafood. The European Commission is currently examining whether the range of foods which may be fortified with novel algae oils can be extended. Against this backdrop the Federal Institute for Risk Assessment has assessed the health risk from the elevated intake of the omega-3 fatty acids DHA and EPA.

Within the framework of a normal diet consumers in Germany ingest on average between 127 mg (young women) and 295 mg (older men) DHA and EPA daily. High intake levels for both groups are 369 mg and 827 mg/day respectively. Against the backdrop of a novel food application for DHA-rich oil from marine microalgae, BfR has estimated that fortification of foods from 14 food groups with algae oil could increase previous intake of long-chain omega-3 fatty acids roughly fourfold. In various studies, however, high intake levels of this scale have been associated with an elevated cholesterol level, impairment of natural immune defence, in particular in older people and a heightened tendency to bleed. Nor has there been any definitive clarification up to now of the long-term effects of an elevated intake of the omega-3 fatty acids DHA and EPA.

BfR, therefore, recommends the setting of maximum levels for the fortification of foods with DHA and EPA irrespective of whether they are contained in fish oil, algae oil or fatty acid ethyl ester. Furthermore, foods which do not normally contain any fats like, for instance soft drinks, should not be fortified with omega-3 fatty acids either.

The full version of the BfR Opinion in German is available on http://www.bfr.bund.de/cm/208/fuer_die_anreicherung_von_lebensmitteln_mit_omega_3_fettsaeuren_emfiehlt_das_bfr_die_festsetzung_von_hoehstmengen.pdf