

## Use of iron in food supplements and for the fortification of food

BfR Opinion, No. 016/2009, 2 March 2009

Iron is an essential trace element that has to be ingested with food. The main sources of iron are meat as well as some types of fruit and vegetables, pulses and cereals. The body needs iron to form haemoglobin and transport oxygen in the blood. For a few years now some breakfast cereals have been fortified with iron. Furthermore, several iron-containing food supplements are also on the market. In 2004 the Federal Institute for Risk Assessment (BfR) already spoke out against food supplements of this kind and fortified foods.

It still cannot be ruled out that a persistently high iron intake increases the risk of the onset of cardiovascular diseases, cancer and diabetes. Given the complex nature of the onset mechanisms of these diseases and the numerous contributory factors, no dose-response relationship can be established between iron and the above-mentioned diseases. Consequently, there is considerable uncertainty about the dose upwards of which negative effects are to be expected in groups in the population. Nor is it possible to set a maximum level for the use of iron in food supplements and fortified foods.

Furthermore, we do not know of any positive effects of elevated iron intake. As large sections of the population have an adequate iron intake and elevated intake would expose them to a health risk, BfR continues to advise against the fortification of food with iron. Iron-containing food supplements should only be taken in conjunction with an established iron deficiency and after consulting a doctor.

The full version of the BfR Opinion in German is available on  
[http://www.bfr.bund.de/cm/208/verwendung\\_von\\_eisen\\_in\\_nahrungsergaenzungsmitteln\\_und\\_zur\\_anreicherung\\_von\\_lebensmitteln.pdf](http://www.bfr.bund.de/cm/208/verwendung_von_eisen_in_nahrungsergaenzungsmitteln_und_zur_anreicherung_von_lebensmitteln.pdf)