

## The temperature at which food is kept warm should be higher than 65 °C

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Certain pathogens like, for instance, *Bacillus cereus*, are capable of forming spores, persistent forms, which are extremely resistant. In food these spores can constitute a health problem. They can survive the cooking of food even when the germs themselves are killed. If this food is then kept warm at low temperatures over longer periods, the spores can “germinate” and quickly multiply. They then form toxins which can provoke an acute case of food poisoning with diarrhoea or vomiting.

*Bacillus cereus* (*B. cereus*) is seen as a problematic germ in food technology and hygiene. It is found in soil and on many plant products. In particular rice and cereal products, raw milk and insufficiently cooked milk, spices, dried mushrooms, potato salad, sauces and dessert products are frequently contaminated with *Bacillus cereus*.

Against this backdrop the Federal Institute for Risk Assessment (BfR) examined the temperatures at which and the periods during which food can be kept warm without this leading to the germination of any spores that are present.

One result of the study is that the Institute recommends keeping food like rice or casseroles warm in a temperature range of 75-65 °C and eating them at the latest three hours after preparation. This helps to minimise the risk of food poisoning. Alternatively, the food can be quickly cooled and then reheated prior to consumption.

The full version of this BfR Opinion is available in German on [http://www.bfr.bund.de/cm/208/warmhaltetemperatur\\_von\\_speisen\\_sollte\\_ueber\\_65\\_grad\\_betragen.pdf](http://www.bfr.bund.de/cm/208/warmhaltetemperatur_von_speisen_sollte_ueber_65_grad_betragen.pdf)