Risiken erkennen – Gesundheit schützen

BfR sees need for research into the influence of milk processing on the allergenic potential of cow's milk

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In the case of an allergy the immune system shows a disproportionately strong reaction to what are in fact harmless substances in the environment. Sometimes, they are food components, e.g. the protein in cow's milk. This is called a cow's milk allergy. In this case the sufferer's immune system forms antibodies that react with the proteins in the cow's milk. Possible symptoms range from skin reactions over digestive disorders down to stomach cramp, diarrhoea and intestinal inflammation. Respiratory disorders and neurological symptoms may also occur. Even very small amounts of protein may trigger allergic reactions of this kind in the individuals affected. At the present time, there is no standard treatment for milk allergies. Patients must simply try and avoid the allergen, i.e. refrain from consuming lactoprotein-containing foods.

Cow's milk contains 30-35 gram proteins per litre. The main allergen is deemed to be the heat-stable protein, casein, which accounts for 80 % of the protein. Other proteins in cow's milk with known allergenic action are, for instance, alpha-lactalbumin and beta-lactoglobulin. At the present time, little is known about how the proteins react to technological processing of milk like pasteurisation and homogenisation and whether they undergo any changes. Scientific statements differ as to whether these methods may increase or reduce the allergenicity of the lactoproteins. The Federal Institute for Risk Assessment (BfR) has reviewed the scientific literature on this subject and identified a shortage of data. The goal of more extensive research should be to improve the data situation on the basis of which statements can then be made about whether technological processes can lead to a clinically relevant change in the allergenic potential of milk in humans.

Not every milk intolerance is caused by an allergic reaction. Similar symptoms may manifest in the case of a lactose intolerance without the immune system reacting to the lactoprotein. The persons affected have an enzyme deficiency (lactase deficiency) which means that the lactose cannot be broken down in the gastrointestinal tract and leads to disorders there.

The full version of the BfR Opinion in German is available on
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