

## Resistant bacteria in the cowshed

The BfR has been able to detect methicillin-resistant *Staphylococcus aureus* (MRSA) in the milk of cows and in swab samples of calves, young cattle, the environment of the animals, as well as in milking equipment and personnel. MRSA have been occurring in hospitals for many years (HA-MRSA) and can cause severe illness. The bacteria are resistant to many antibiotics. Certain MRSA (LA-MRSA) are also frequently found in livestock and farm workers. They have also been found in cow's milk. To better understand the spread, the BfR analysed milk and swab samples from 20 German dairy farms at which MRSA were previously discovered. The results show that raw milk can contain MRSA and that milking and personnel hygiene are particularly important on affected farms. To protect against food-borne infections, the BfR recommends using pasteurised milk or milk heated at high temperatures, and boiling raw milk before consumption. The investigation is part of the “#1Health-PREVENT” project, which is funded by the Federal Ministry of Education and Research.

### More information:

Schnitt, A. et al. 2020. The occurrence and distribution of livestock-associated methicillin resistant *Staphylococcus aureus* ST398 on German dairy farms. *J. Dairy Sci.* 103:11806–11819. DOI: 10.3168/jds.2020-18958



## Vegan diet bone test

Is a complete exclusion of animal-based food associated with poorer bone health? The BfR examined the bone health of 36 vegans and 36 people on a mixed-food diet using an ultrasound measurement of the heel bone. The result: on average, people following a vegan diet had lower ultrasound values compared to the other group. This indicates poorer bone health and may mean that the bones have lower density, which is associated with a higher risk of fractures. In the study, the BfR also investigated biomarkers of nutritional status and bone metabolism in blood and urine to explore the differences in ultrasound measurements more extensively and derive a possible biomarker pattern. Scientists were able to identify a pattern of twelve parameters that were most closely linked to bone health. This could be a possible explanation for the poorer bone health of the vegan group. Further studies are necessary.

### More information:

Menzel, J. et al. 2021: Vegan Diet and Bone Health – Results from the Cross-Sectional RBVD Study. *Nutrients.* 13(2), 685. DOI: 10.3390/nu13020685



## Rooted and half-eaten

Pigs need suitable materials to perform natural behaviour, such as rooting. A BfR team observed how fattening pigs deal with different materials, such as rooting soil and disinfectant powder, and whether they might consume a portion thereof. It quickly became clear: the pigs' interest depends on the type of material. But no matter how fascinating, the pigs consumed all materials. Modern analytical methods confirmed this observation. The substances naturally occurring in rooting soil, for example, were detected in the pigs' faeces. Enrichment materials are not covered by the definition of feed material. However, they may contain substances that are considered as undesirable in feed (heavy metals, for example). Hence, undesirable substances may enter the food chain. To better estimate the risk, it is now aimed to determine the amount of these materials actually ingested by pigs.