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Metal fragments in game meat: How soap blocks help to minimise health risks

Two-day symposium dedicated to the health risks of eating game meat

Meat from deer, wild boar or other game can be an alternative to meat from conventional animal husbandry. However, there are some special features to consider with regard to the food safety of game meat. For example, metallic fragments remaining in the meat from leaded and lead-free rifle bullets can pose health risks, especially for high consumers such as hunters and their families. How different bullets and hunting methods influence the distribution of metal fragments in meat or how the fragments can be detected and minimised are among the questions that experts will discuss at a two-day symposium on 14 and 15 March 2024 in Berlin. Test simulants such as gelatine or soap blocks, which are fired at with rifle ammunition, are used to investigate such issues. In order to ensure the comparability and reproducibility of such tests, the German Federal Institute for Risk Assessment (BfR), with the support of international experts, has developed a standardised evaluation procedure for firing ballistic soap and gelatine. The results will be presented at the symposium. An international round robin test to evaluate the test simulants is to be tendered this year. The programme also includes presentations on the influence of meat preparation on the possible intake of lead from bullets and on possible health risks from pathogens in game meat.

Under the title "Game - prepared?", the BfR is once again inviting international experts to Berlin to discuss issues of consumer health protection in connection with meat obtained from hunting. BfR researchers have been active in this area of food safety research for several years and have been working on the health risk assessment of lead, copper and zinc, which can enter game meat from bullets, among other things. With the aim of minimising exposure to such metals, the focus has recently shifted to the examination of hunting bullets and thus also to the development of the standardised test methods described above.

At the current symposium, BfR scientists will present a study that shows that the lead contamination of game meat varies greatly due to the wide distribution of bullet fragments. They also found that marinating venison before consumption can lead to a higher lead intake than simply cooking the game meat. For these experiments, the researchers fed deer meat to pigs and then measured the lead concentration in their blood.

In connection with the food safety of game meat, the contamination of the meat with pathogens also plays a role. It is known that this is also influenced by the hunting conditions, such as the choice of bullet, the species of transport of shot animals or the weather conditions on the day of the hunt. In a study with roe deer, researchers analysed the importance of different influencing factors in more detail and derived recommendations for the hygienic handling of shot game.

The symposium will end on Friday with a panel discussion in which the experts will also discuss the tasks still to be tackled in the investigation and assessment of the health risks of game meat.

You can find the programme and the registration form here: <https://www.bfr-akademie.de/english/events/wild2024.html>

Further information on health risks of game meat:

Press Information: Meat of wild game animals should become safer
https://www.bfr.bund.de/en/press_information/2023/17/meat_of_wild_game_animals_should_become_safer-312780.html

Press information: Game meat should be thoroughly cooked before eating
https://www.bfr.bund.de/en/press_information/2018/44/game_meat_should_be_thoroughly_cooked_before_eating-242263.html

About the BfR

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