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Foodborne infections: New video makes the invisible visible

Black light images illustrate how pathogens spread in the kitchen when hygiene is poor

Raw chicken meat is often contaminated with pathogenic bacteria such as *Campylobacter* or *Salmonella*. They can cause food-borne infections in humans, which is not only unpleasant but can also be serious and sometimes fatal in susceptible people. A [new video](#) from the German Federal Institute for Risk Assessment (BfR) impressively illustrates how easily these bacteria can spread unintentionally if hygiene in the kitchen is poor. It visualises possible transmission routes under black light - and thus stresses the importance of good kitchen hygiene in the prevention of foodborne infections.

Foodborne pathogens such as *Campylobacter* or *Salmonella* are widespread in livestock. Infected animals do not usually fall ill. However, the pathogens can be transferred onto and into food during slaughter and further processing of the meat. Meat packaging can also be contaminated with bacteria from the outside. In the [video](#), such bacterial contamination is simulated using a specially produced paste that glows under black light. In this way, the images visualise the path of bacteria in the kitchen - from the meat via hands, surfaces and kitchen utensils to the prepared food.

Right at the beginning, it is shown why washing raw chicken under running water is not a good idea: the water jet spreads the glowing paste in the sink and beyond. In this way, bacteria can also contaminate areas that have not come into direct contact with the meat. When processing meat, it is best not to touch it with bare hands, but rather with a fork or kitchen tongs. Alternatively, hands should be washed thoroughly afterwards. Otherwise, a careless touch to the face or objects in the kitchen can spread the pathogens further. As *Salmonella* can survive in the environment for a long time, this risk of infection may then persist for a long time.

In addition to the classic "hand washing", one of the basic rules of good kitchen hygiene is to use different knives and chopping boards separately for preparing raw meat and fruit or

vegetables. This prevents bacteria from getting onto food that is eaten raw or at least not heated for long enough (known as cross contamination). Cooking or roasting – that’s the good news – kills the pathogens so that there is no longer a risk of foodborne infections when eating meat that has been heated sufficiently. To achieve this, the meat should have reached a temperature of 70 degrees Celsius in all parts for at least 2 minutes. Appropriately prepared meat looks well done when cut.

These rules of kitchen hygiene apply not only to the preparation of chicken, but also to other types of meat and foods of animal origin in general. It is particularly important to follow them because contaminations with *Campylobacter* or *Salmonella* do not lead to food spoilage. Therefore, consumers cannot recognise the presence of the bacteria in food by the appearance or smell of the goods.

Every year, around 100,000 illnesses are reported in Germany that may have been caused by bacteria, viruses or parasites in food - in fact, there are probably far more cases because not all illnesses are recorded by doctors or reported.

Further information on foodborne infections

Video Explainer: Don't touch raw chicken

https://www.bfr.bund.de/en/explainer__dont_touch_raw_chicken-319032.html

FAQ: Campylobacter: The diarrhoea pathogen is often found on poultry meat

https://www.bfr.bund.de/en/campylobacter_the_diarrhoea_pathogen_is_often_found_on_poultry_meat-317843.html

FAQ on foodborne infections in private households

<https://www.bfr.bund.de/cm/349/foodborne-infections-in-private-households.pdf>

BfR-consumer tip: Protection against foodborne infections in private households

<https://www.bfr.bund.de/cm/364/protection-against-foodborne-infections.pdf>

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