

# SALMONELLA



## Human pathogen information sheet – hygiene keeps you safe!

### What are salmonella?

Salmonella are bacteria that appear around the world. Salmonella is a typical food infection that causes diarrhoea. The pathogen reproduces in the gastrointestinal tract of people and animals. Larger outbreaks happen in Germany now and then as well.

### How are salmonella transmitted?

#### *Via foodstuffs*

Most frequently, salmonella enter the human digestive tract via foodstuffs. They can spread quickly on non-refrigerated foodstuffs. The bacteria may also get into food as a result of poor kitchen hygiene, e.g. via contaminated cutting boards or worktops.

#### *Foodstuffs that are particularly likely to be contaminated with salmonella:*

- ▶ Raw or incompletely cooked eggs and egg products such as mayonnaise, cream or egg-based salads or cake batter
- ▶ Ice cream
- ▶ Raw meat, raw minced meat or steak tartare, raw sausage types such as ground pork, salami

#### *Important: Plant-based foodstuffs can also be settled by salmonella!*

#### *Person-to-person*

Infection person-to-person is possible by way of contact infection, particularly in cases of poor hygiene. The bacteria are transferred from the intestine through minute traces of stool residue on patients' hands. From the hand, the pathogens enter the mouth.

#### *By direct animal contact*

Infection by direct contact with local animals is rare. Reptiles such as snakes, bearded dragons - a type of lizard - or turtles excrete salmonella more frequently. The animal owner is most likely to become infected by contact with animal faeces. Contaminated areas may also be a source of infection.

### What symptoms do the patients show?

Sudden diarrhoea, headache and stomach ache, generally feeling unwell and sometimes vomiting are common symptoms of salmonella disease. High fever is common. Symptoms often continue for several days before then resolving on their own.

In rare cases, the disease may take a more severe course, which can involve blood poisoning (sepsis), occasionally accompanied by a high fever.

### What's the incubation period – and how long are you contagious?

After infection, the onset of illness takes between 6 and 72 hours with 12 to 36 hours being typical. Adults may be contagious for up to 1 month after the diarrhoea and stomach ache end. In young children and very old persons, pathogens may be excreted for several more weeks. In case of severe progress, this may be up to or even more than half a year.

### Who is most at risk?

Infants, toddlers, older people and people with weakened immune systems are also particularly at risk. They may suffer from a longer and more severe progress of the illness. Diarrhoea and vomiting will cause loss of liquids and salts. Infants, old and sick persons react particularly sensitively. This loss may cause a more severe case involving circulatory collapse or kidney failure. Very rarely, severe cases may even be fatal.

### What should I do if I fall ill?

- ▶ It is important to drink a lot in case of strong diarrhoea and vomiting.
- ▶ To balance out the loss of salts, it may be sensible to use electrolyte replacement solutions from the pharmacy.
- ▶ Eat easy-to-digest food with a sufficient salt supply.
- ▶ Do not prepare any meals for others if you are ill yourself.
- ▶ The sick should avoid physical strain during the active phase of the illness.
- ▶ Medical advice should always be sought in cases involving infants, pregnant women, the weak and the elderly, especially if diarrhoea or vomiting has persisted for two to three days and a fever is also present.
- ▶ Salmonella is subject to the rules of the German Prevention of Infection Act. Children younger than 6 years who have been diagnosed with infectious vomiting and/or diarrhoea or where this is suspected, must not attend community facilities such as schools or nurseries. Parents must inform the community facility of the child's illness. The facility usually must not be attended again until at least 2 days after the symptoms disappear. The precise time is determined by the relevant health office. A written medical certificate is not required.
- ▶ If you handle food in your job and suffer from any contagious vomiting and/or diarrhoea, you must not attend work for the time.



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### How can I protect myself?

#### *Good kitchen hygiene: Correct handling of foodstuffs*

Salmonella spread primarily at temperatures between 10°C and 47°C. They can survive in and on foodstuffs for several months. Even freezing does not kill the pathogens!

- ▶ Always put raw meat and sausage, poultry, seafood, eggs and cream, salads, ice cream and mayonnaise with raw eggs into the refrigerator or the freezer at once after buying them. Ensure foods are cooled during transportation, e.g. in a cool bag, and keep refrigerator temperatures under 7 °C.
- ▶ Do not freeze ice cream again after it has started thawing or has thawed.
- ▶ Prepare meat and vegetables or salad on different worktops.
- ▶ To safely kill off salmonella, food must be heated to over 70 °C for at least 10 minutes. This temperature must also be reached inside the food.
- ▶ When heating frozen food or heating food in the microwave, ensure the cooking time is long enough.
- ▶ Eat hot food within 2 hours of last heating it.
- ▶ Always use up minced meat on the day of the purchase.
- ▶ Prepare instant products right before eating them.
- ▶ Dispose of the thawing water from meat at once, rinse all objects and worktops that have come into contact with it with hot water and then wash your hands thoroughly.
- ▶ Change kitchen towels and cloths often, and machine-wash these at a minimum temperature of 60 °C.

#### *Good hand hygiene*

Generally: Wash your hands at regular intervals!

Wash your hands thoroughly with soap and water after using the toilet, before preparing meals and after preparing food involving raw animal products, before eating, and after contact with animals – and reptiles in particular. Then dry your hands carefully with a clean cloth.

#### *Information for parents with young children*

- ▶ Prepare food for infants with water that has been heated to at least 70 °C. Before feeding, cool the bottle off quickly and check the temperature to keep the child from being scalded. Use the prepared food as freshly as possible.
- ▶ Reptiles are not recommended as pets in households with small children, even if the children have no direct contact with the animals.

### Where can I find out more?

Your local health authority can provide you with further advice. Since contagious diarrhoea is subject to the rules of the German Prevention of Infection Act, they will also have the latest information and be very experienced in dealing with the disease.

Useful consumer advice can also be found on the websites run by the Federal Institute for Risk Evaluation ([www.bfr.bund.de](http://www.bfr.bund.de)) and the Federal Office for Consumer Protection and Food Safety ([www.bvl.bund.de](http://www.bvl.bund.de)).

More (specialist) information is also available online from the Robert Koch Institute ([www.rki.de/salmonellen](http://www.rki.de/salmonellen)).

For more information on how hygiene can guard against infection, please visit the Federal Centre for Health Education website ([www.infektionsschutz.de](http://www.infektionsschutz.de)).



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