



Information on pathogens in humans

– vaccinations protect you!

What are chickenpox and shingles?

Chickenpox is highly infectious. It is caused by the *varicella-zoster virus* and occurs everywhere in the world. Infection usually occurs in childhood and manifests in a high temperature and an itchy rash. Once the patient has recovered, the virus remains dormant in the body and can reactivate many years later, causing **shingles**. Sufferers of shingles present with a rash that can be very painful. Chickenpox has become much rarer in Germany due to vaccinations, but it is still one of the most common infectious diseases that are preventable by vaccination.

How are chickenpox and shingles spread?

From person to person

Chickenpox is known as "Windpocken" (wind pox) in German and the clue is in the name: the pathogens can be carried long distances "by the wind"; in other words, it is an airborne disease. In most cases, the virus is absorbed by breathing in minuscule droplets of saliva that are spread in the air by sufferers through breathing, coughing, sneezing or speaking. Almost all contact between an unprotected person and a chickenpox sufferer leads to infection. The fluid in the blisters is particularly infectious, if they burst. This means that the virus can get onto a sufferer's hands if they scratch the rash or scabs and then be passed on from hand to hand. The virus is easily transferred from hands to the mucous membranes of the mouth or nose.

Unlike chickenpox, **shingles** is not caused by contact with chickenpox or shingles sufferers, but by the reactivation of the dormant virus in the body. Shingles is also less infectious. The virus is not spread by droplet infection expelled into the air by breathing, coughing, sneezing or speaking. Only the fluid in shingles spots is infectious. This means that the main channel of infection is smear infection, particularly through hands. People who have never had chickenpox and have not been vaccinated against it can become infected with the *varicella-zoster virus* through contact with shingles spots and develop chickenpox in the first instance.

Through contaminated objects

The virus can remain infectious outside the body for several hours or even a few days. It may be transmitted, for instance, by touching door handles, handrails, taps or toys with germs on them.

During pregnancy and in newborns

Very occasionally, the disease can be transmitted to the unborn child through the bloodstream during pregnancy if the mother develops chickenpox in the first six months of the pregnancy. If, however, a pregnant woman goes down with chickenpox shortly before or after giving birth, there is a considerable risk of infection for the newborn.

There is no danger to the unborn child if a mother develops shingles, however.

What are the symptoms?

Chickenpox

Sufferers will firstly feel slightly unwell for a day or two and may have a high temperature. Then the classic skin rash appears and the temperature can rise to more than 39°C. The intensely itchy rash spreads from the head and torso over the whole body. Liquid-filled blisters quickly form that may also affect the mucous membranes, genitals and scalp. They subsequently dry out and scab over. Typically, all stages of the rash present at the same time. The blisters themselves usually heal after 3 to 5 days, but heavy scratching or an additional bacterial infection of the skin can cause them to scar. Severe outcomes occur most often in newborns or people with compromised immune systems, but are also possible in otherwise healthy people.

Possible complications

- ▶ Additional bacterial infections of the skin are possible.
- ▶ Pneumonia is a concern. It occurs in roughly one in five adults, usually beginning 3 to 5 days after symptoms appear and can be severe. Pregnant women are particularly at risk.
- ▶ Rarely, the central nervous system can be affected. This can result in vestibular disorders and irritations of the meninges.

During pregnancy

- ▶ In rare cases, chickenpox in the first six months of pregnancy can lead to skin changes, damage to the eyes, severe malformations and neurological disorders in the child.
- ▶ If the mother becomes ill around the end of her pregnancy, a chickenpox infection can be life-threatening for the child. Up to 30% of children die.

Shingles

Fluid-filled blisters typically appear. They redden, swell and cause pain. In most cases, they are limited to a single section of skin on one half of the body, usually on the torso and radiating round to the back like a belt or, less commonly, on the head or neck. The blisters heal and scab over after a week or two. The pain usually disappears along with the rash, but it can continue even after recovery, in some cases for several years. Possible but rare complications include inflammation of the nerves or brain.

When does the disease break out and how long is a person infectious?

Chickenpox develops eight days to four weeks after infection, in most cases after a good two weeks. Sufferers are already infectious for a day or two before the rash appears. Sufferers are no longer infectious once all the blisters have scabbed over (usually 5 to 7 days after the rash first appears). In **shingles**, the risk of infection also ends once the last blisters have scabbed over.





Information on pathogens in humans – vaccinations protect you!

Who is most at risk?

Chickenpox most commonly occurs in early childhood, mostly in children under the age of 10 attending kindergarten or school. Unprotected teens and adults are also at risk of infection, however, and chickenpox is often more severe in adults. People who have had the disease and recovered are usually immune to chickenpox for life, but anybody who has had chickenpox can develop shingles. **Shingles** most commonly affects people over the age of 50 or those with a compromised immune system.

What should I do if I become ill?

- ▶ During the acute phase of the illness, sufferers should stay at home while they recover and avoid contact with people suffering from immune deficiencies.
- ▶ In **chickenpox**, only the symptoms are usually treated. This includes careful skin care with baths and medication to soothe the itching. Skin care also helps to avoid bacterial skin infections.
- ▶ Antibiotics are ineffective against diseases caused by viruses. They may be used if complications caused by bacteria occur.
- ▶ **Shingles** is generally treated with careful skin care and additionally prescribed anti-viral medicines.
- ▶ Please notify the practice team before visiting your doctor's surgery with a suspected case of chickenpox, so that they can take the necessary protective measures.
- ▶ The regulations of the German Infectious Disease Protection Act apply to **chickenpox**. Children and adults who have been diagnosed with chickenpox or are suspected of having the disease may not visit or work in any public institutions such as schools or kindergartens. This also applies to people who do not have sufficient protection against chickenpox if a case or suspected case of chickenpox has occurred in their household. Sufferers must inform the public institution of the disease. Public institutions may be visited as soon as sufferers are no longer contagious.
- ▶ Unprotected pregnant women or people with a compromised immune system who come into contact with sufferers should immediately notify their doctor.

How can I protect myself?

Vaccination against chickenpox

The German Standing Committee on Vaccination (STIKO) recommends vaccination against chickenpox.

- ▶ **For children**, it is recommended that immunisation protection be built up in two stages. The first vaccination should be administered at the age of 11 to 14 months and the second at the age of 15 to 23 months.
- ▶ **Unvaccinated children and young people and those who have been vaccinated only once** should catch up on the missing vaccinations as soon as possible.
- ▶ **Unvaccinated adults** who have never suffered from chickenpox are advised to seek a two-stage vaccination if:
 - ▶ they work in healthcare or are about to start work in public institutions for pre-school children,
 - ▶ they are women hoping to have children,
 - ▶ they are to undergo any treatment that lowers resistance,
 - ▶ they are waiting for an organ transplant,
 - ▶ they suffer from severe neurodermatitis,
 and persons in contact with the last three.

People who have had contact with chickenpox sufferers and are not protected can, in some circumstances, still be vaccinated. Find out more from your local health authority.

Vaccination against shingles

The German Standing Committee on Immunisation (STIKO) recommends vaccination against shingles with an inactivated vaccine for:

- ▶ all people over the age of 60,
- ▶ people over the age of 50 whose immune systems have been weakened by illness or medical treatment,
- ▶ people over the age of 50 with underlying conditions such as diabetes, rheumatoid arthritis, chronic inflammatory bowel disease, chronic obstructive pulmonary disease or asthma.

The vaccination consists of two doses to be taken between two and six months apart.

Where can I find out more?

Your local health authority can provide further advice. As chickenpox is a notifiable disease, you will also find information there on the current situation and a great deal of experience dealing with the illness. You can find additional (specialist) information on the website of the Robert Koch-Institut (www.rki.de/varizellen). Further information about infection protection through vaccination is available on the website of the Bundeszentrale für gesundheitliche Aufklärung (www.impfen-info.de).



STEMPEL

Published by:

Bundeszentrale für gesundheitliche Aufklärung, Cologne.
All rights reserved.

Produced in cooperation with the Bundesverband der Ärztinnen und Ärzte des Öffentlichen Gesundheitsdienstes e.V. and in consultation of the Robert Koch-Institut.

This public information is available to download free of charge at www.infektionsschutz.de.

