

Human pathogen information sheet

What is scabies?

Scabies is a contagious human skin infection caused by the itch mite. The mites are only 0.3 to 0.5 mm in size and therefore barely visible to the naked eye. The mites burrow into the top layer of human skin, where the female then lays several eggs per day over her lifetime of four to eight weeks. After a while, the person's skin will break out in a rash, as a reaction to the mites' excretions. Itch mites are more likely to spread where people live close together, which is why clustering of the disease occasionally occurs, especially in community or care facilities.

How is scabies transmitted?

Person-to-person

Itch mites can spread between humans, especially during prolonged skin contact (longer than five to ten minutes), for example while playing together, cuddling, helping with personal hygiene, when sharing a bed or during sexual intercourse. Shaking hands or a brief hug usually does not lead to transmission. In the case of crusted scabies (scabies crustosa), a highly contagious form of scabies, the number of mites on the skin is very high, which is why even short-term skin contact may lead to an infection.

From animals to humans

Although itch mites may occasionally pass on to humans from infested domestic animals, they quickly die there. The skin irritations usually disappear within a short period of time without requiring treatment.

Via clothing or objects

Outside the host, itch mites can survive for around two days in clothing or bedclothes. Transmission via shared bed linen, blankets, cushions or clothing is rare, however, although it is possible in the case of crusted scabies because of the large number of itch mites.

What symptoms do the patients show?

The first symptoms of scabies often include skin burning and itching, which are made worse by warmth. Itching may even affect skin areas that are not directly infested by itch mites. The spaces between fingers and toes, the wrists, ankles, armpits, elbows, nipples and genitals are affected primarily. In infants and young children, however, the scalp, face as well as the palms and soles may also be affected.

Typical symptoms include fine, dark and irregular lines in the skin that are difficult to see with the naked eye. They correspond to the burrow tracks of the mites. After a while, the skin reacts by developing blisters the size of a pinhead, reddened raised nodules or pustules. In addition, skin areas injured by scratching may also develop purulent inflammation. In the case of prolonged infestation, a large-scale allergic skin rash may develop in response to the mites' excretions.

People with a weakened immune system are at particular risk of developing crusted scabies. In these patients, a great number of mites are present in the skin, accompanied by pronounced encrustation.

What is the incubation period and how long are you contagious?

Upon first infection, the symptoms become apparent after only two to five weeks, while they occur as soon as after one to four days on reinfection. Scabies is therefore contagious long before patients exhibit any symptoms and remains so while itch mites are present on the skin. Skin changes may be minor and a mite infection can go unnoticed for a long time in patients who maintain strict personal hygiene and use cosmetics. Scabies often becomes chronic if left untreated.

Who is most at risk?

Scabies occurs worldwide and may affect people of any age. In Central Europe, children, seniors in nursing care and people with a weakened immune system are affected more frequently. Clustering of the disease typically occurs in community facilities such as nurseries and nursing homes, where the supervisory and care staff are also at increased risk.

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What should I do if I fall ill?

- ▶ If you experience the symptoms described above or suspect that you have scabies, you should consult a doctor immediately.
- ▶ Scabies can be treated effectively by medication referred to as scabicides. They are usually applied to the skin in the form of creams, sprays or ointments. In some cases, an oral medication can be taken in the form of tablets.
- ▶ To protect others from getting infected, ill persons should temporarily limit their contact with other people and, in particular, avoid direct skin contact. Patients are usually no longer contagious after applying external scabicides or 24 hours after taking tablets. Crusted scabies may require repeat treatment until patients are no longer contagious. Itching may persist for one to two weeks after the treatment.
- ▶ Change the clothing, underwear as well as the towels and bedding of ill persons once a day and wash them at a minimum temperature of 60°C. Objects with prolonged body contact such as shoes or cuddly toys that cannot be washed or cleaned should be stored in a dry place in sealed plastic bags at temperatures above 21°C for at least three days. Upholstered furniture can be cleaned with the vacuum cleaner or should not be used for at least two days.
- ▶ Scabies is subject to the regulations of the German Prevention of Infection Act. Children and adults diagnosed with or suspected to have scabies are temporarily prohibited from attending or working at community facilities such as schools or nurseries. Affected persons must inform the community facility of the diagnosed or suspected infection.
- ▶ The community facility will notify the competent health authority of the diagnosed or suspected infection. The competent health authority or the attending doctor will determine when the affected person may resume attending or working at the community facility.

How can I protect myself?

- ▶ Safety precautions are usually almost impossible to take, since itch mites can be transmitted without being noticed before any symptoms appear.
- ▶ Close contacts, i.e. persons who had close or prolonged skin contact with an affected person, should avoid close skin contact with others for about five to six weeks. They should monitor themselves for potential symptoms of scabies. If any symptoms become apparent, a doctor should be consulted immediately.
- ▶ If you cannot avoid contact with patients, for example when caring for children or persons in need of care, you should wear long-sleeved clothing and disposable gloves.

Where can I find out more?

Your local health authority can provide you with further advice and information. They will also have the latest information and be very experienced in dealing with the disease.

More (specialist) information is also available online from the Robert Koch Institute (www.rki.de/skabies). For more information about infection prevention, please visit the website of the Federal Centre for Health Education (www.infektionsschutz.de).



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