

## Scabies

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Scabies is caused by the scabies mite. The mites, tiny in size, live in tunnels that they burrow into the skin. The scabies mite is a parasite found only in humans. Itching and a pimple-like rash are caused by sensitisation to the mites and their secretions. Scabies is still common.

### Symptoms

The most common symptom is itching, which is at its worst in the evening and during the night. There are small or larger papules on the skin as well as skin breakdown caused by scratching. As a rule, the areas where symptoms are most commonly seen are the fingers and wrists, the elbow creases and armpits, the buttocks and feet. Small blisters and pustules are relatively common. Thin, winding burrows 5 mm in length are most commonly found on the wrists and between the fingers. Crusted scabies that covers the entire skin surface may develop in the elderly and in people suffering from an immune deficiency. In young children and old people, scabies may also spread to the scalp.

### Transmission

The scabies mite spreads through close skin-to-skin contact from one person to another. The infection is contracted through sexual activity or from family members. Scabies spreads more easily among groups of people, such as children in day care or old people in nursing homes. Outbreaks occur in care facilities, in which case, both nursing staff and patients' families may become infected. A short contact, such as shaking hands, does not usually lead to a transmission of infection. Scabies can be transferred from other surfaces such as beddings, clothes and furniture.

### Incubation time

After infection with scabies mites, there is a symptom-free period of 2–4 weeks. Towards the end of this period, scabies may already be transmitted from one person to another. In the case of a recurring infection, the symptom-free period is shorter, 1-3 days.

## **Diagnosis**

A definite diagnosis requires the identification of burrows in the skin made by the mites. The doctor or nurse may find a mite at the end of the burrow, by a method of dermoscopy or extract it with a pin and place it under a microscope.

## **Treatment**

Treatment consists of medication targeting the scabies mite, changing the clothing worn and bedding used, and treating the person who infected you and people who may have been infected by you. A repeat application of medication after one week is necessary to ensure the effect of the treatment. All family members are treated at the same time twice.

Returning to work/school is allowed 24 hours after completion of treatment as instructed.

## **Anti-scabies medication**

Medication for scabies comprises permethrin cream (Nix®) and bentsylbensoate/disulfiram cream (Tenutex®), available over the counter and also ivermectin tablets (Scatol®), available by prescription, and sulfur-Vaseline cream (an extemporaneous preparation).

### **Tenutex® cream (bentsylbensoate/disulfiram) and Nix® cream (permethrin; 30 g tube)**

Tenutex and Nix cream are being used in the same way, by applying on the whole body two times in one week apart. Cream should be used preferably in the evening on a clean skin from the edge of the chin to the top of the toes, also neck and area behind the ears. Tenutex is applied for 24 hours and Nix cream for 8-14 hours (6-8 hours for babies). Tenutex 100g cream is usually enough for an adult use twice and Nix cream 30g for a single use. After the treatment, skin should be washed with soap and water. If you need to wash your hands or genital area in the meantime, the cream should be re-applied. Tenutex and Nix treatment is always repeated after one week. Also, family members are treated twice. Tenutex and Nix cream affect on a pregnancy is not researched enough, that is why the treatment is not to be advised for those patients without consulting a physician.

### **Scatol® tablets (ivermectin 3 mg tablets)**

Scabies may also be treated with Scatol tablets. The dose is 0.2 mg ivermectin/kg. For a person weighing 60 kg, the dose is 12 mg, i.e., 4 tablets as a single dose. The tablets are taken as a single dose with food. Orange juice and alcohol should not be taken at the same time as medicine. Ivermectin can interact with other drugs. The treatment is repeated after one week. Family members and contacts are treated twice in a period of 7 days between.

## **Sulfur-Vaseline cream (an extemporaneous preparation)**

10% sulfur-Vaseline mix for adults, 5% sulfur-Vaseline mix for elementary school children or younger. Apply the cream on clean, dry skin. Apply the cream carefully to all skin areas from the chin down, including armpits and groin area, elbow creases and behind the knees, between the toes, around the fingernails, the navel, and the genital area. For children under 2 years, apply the cream to the scalp and face as well (not around the eyes).

Apply the cream once a day, three days in a row. Do not wash the skin between the applications. If washing the skin is necessary (hands, genital area), reapply cream to the same areas. After the third day, wash the skin carefully with soap and water, clean the house, and change and wash the bedding. After one week, repeat the treatment in the same way. Sulfur-Vaseline is safe to use during pregnancy and for babies under 2 months old.

## **Other treatment**

After the initial administration of anti-scabies medication, the rash is treated with a cream that contains cortisone, e.g., Hydrocortison® 1%. Apply the cream twice a day for as long as the rash persists. If necessary, tablets (Atarax®) available from the pharmacy by prescription may be used to relieve the itch.

## **Handling clothing, bedding and towels**

Wash the clothes, towels and bedding that were in use at the time of the initial medication use in the washing machine as normal (at least at 60°C). If there are articles (such as shoes) that cannot be washed with water, place them in a plastic bag and put the bag in the freezer (-20°C) for 24 hours, or keep them in a bin bag for at least a week. Vacuuming of the mattresses and other furniture should be done the day after treatment. Use protective gloves to do this. When the treatment is repeated, change your clothes like the first time.

## **Symptoms after treatment**

The itching and skin symptoms caused by scabies infection usually persist for 2–4 weeks. This is caused by an inflammation reaction in the skin and does not mean that the treatment of scabies mites has failed. Do not use Nix® cream more than twice on your own as the cream can cause skin irritation. Both Nix cream and Scatol tablets are generally well tolerated. The treatment may sometimes fail for various reasons. If you are not sure about the outcome, you must see a doctor again.