

## **Diagnosis**

Diagnosis of a scabies infestation usually is made based upon the customary appearance and distribution of the rash and the presence of burrows.

Whenever possible, the diagnosis of scabies should be confirmed by identifying the mite or mite eggs or fecal matter (scybala). This can be done by carefully removing the mite from the end of its burrow using the tip of a needle or by obtaining a skin scraping to examine under a microscope for mites, eggs, or mite fecal matter (scybala). However, a person can still be infested even if mites, eggs, or fecal matter cannot be found; fewer than 10-15 mites may be present on an infested person who is otherwise healthy.

### ***Suggested General Guidelines***

It is important to remember that the first time a person gets scabies they usually have no symptoms.

Symptoms can typically take 4-8 weeks to develop after they are infested; however they can still spread scabies during this time.

In addition to the infested person, treatment also is recommended for household members and sexual contacts, particularly those who have had prolonged direct skin-to-skin contact with the infested person. Both sexual and close personal contacts who have had direct prolonged skin-to-skin contact with an infested person within the preceding month should be examined and treated. All persons should be treated at the same time to prevent reinfestation. Scabies may sometimes be sexually-acquired in adults, but is rarely sexually-acquired in children.

Bedding, clothing, and towels used by infested persons or their household, sexual, and close contacts (as defined above) anytime during the three days before treatment should be decontaminated by washing in hot water and drying in a hot dryer, by dry-cleaning, or by sealing in a plastic bag for at least 72 hours. Scabies mites generally do not survive more than 2 to 3 days away from human skin.

Use of insecticide sprays and fumigants is not recommended.

### ***Medications Used to Treat Scabies***

Products used to treat scabies are called scabicides because they kill scabies mites; some also kill mite eggs. Scabicides used to treat human scabies are available only with a doctor's prescription. No "over-the-counter" (non-prescription) products have been tested and approved to treat scabies. The instructions contained in the box or printed on the label always should be followed carefully. Always contact a doctor or pharmacist if unsure how to use a particular medicine. Scabicide lotion or cream should be applied to all areas of the body from the neck down to the feet and toes. In addition, when treating infants and young children, scabicide lotion or cream also should be applied to their entire head and neck because scabies can affect their face, scalp, and neck, as well as the rest of their body. Only permethrin or sulfur ointment may be used in infants. The lotion or cream should be applied to a clean body and left on for the recommended time before washing it off. Clean clothing should be worn after treatment. Both sexual and close personal contacts who have had direct prolonged skin-to-skin contact with an infested person within the preceding month should be examined and treated. All persons should be treated at the same time to prevent reinfestation.

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Because the symptoms of scabies are due to a hypersensitivity reaction (allergy) to mites and their feces (scybala), itching still may continue for several weeks after treatment even if all the mites and eggs are killed. If itching still is present more than 2 to 4 weeks after treatment or if new burrows or pimple-like rash lesions continue to appear, retreatment may be necessary.

Skin sores that become infected should be treated with an appropriate antibiotic prescribed by a doctor.

### **Prevention & Control**

When a person is infested with scabies mites the first time, symptoms typically take 4-8 weeks to develop after being infested. However, an infested person can transmit scabies, even if they do not have symptoms. Scabies usually is passed by direct, prolonged skin-to-skin contact with an infested person. However, a person with crusted (Norwegian) scabies can spread the infestation by brief skin-to-skin contact or by exposure to bedding, clothing, or even furniture that he/she has used.

Scabies is prevented by avoiding direct skin-to-skin contact with an infested person or with items such as clothing or bedding used by an infested person. Scabies treatment usually is recommended for members of the

Bedding, clothing, and towels used by infested persons and people they are in close contact with should be decontaminated. To disinfect items,

- Wash them in hot water and dry in a hot dryer or dry-clean.
- Store items that can't be washed in a sealed plastic bag for at least 72 hours.
- Thoroughly clean and vacuum rooms.

### Scabies

- Skin infestation with the mite *Sarcoptes scabiei*, variety *hominis*, causes scabies. Although the prevalence of this infestation is not clearly identified in wrestling populations, worldwide annual prevalence is approximately 300 million cases.<sup>60</sup> This infestation is not common in wrestling populations; however, it is disqualifying.
- **Description/Diagnosis**
- Scabies are turtle-shaped, 8-legged parasites less than 0.5 mm in size, contracted by direct contact with infected persons or (rarely) from towels and linens of affected persons. Mites burrow into the skin, where female mites lay eggs that hatch into larvae. Mature mites return to the surface, copulate, and repeat the cycle.
- Symptoms appear within a few weeks of infection, usually as pruritus worsens at night. A papular rash arises shortly after pruritus begins. The resulting papules, which are typically erythematous and only a few millimeters in size, are nonspecific in appearance.
- Three features are useful for diagnosis: history of close contact with similar rash or known scabies infestation, a typical distribution, and linear skin lesions from burrows. The rash typically involves skin folds or areas of skin under increased pressure from clothing (eg, interdigital web spaces, axillary folds, groin, extensor surfaces of knees and elbows), with sparing of the head and back. Burrows sometimes cause narrow linear streaks (red, brown, or gray) a few millimeters long, which are helpful in diagnosis. Microscopic examination of skin scrapings confirms the diagnosis.
- **Treatment**
- Wrestlers with scabies should be isolated from contact sports until adequate treatment is ensured. Prevention relies on limiting direct contact with infected persons, treating all members of the household, washing and heat-drying all linens and clothing, and avoidance of shared linens.