

# SCABIES

(Sarcoptic Itch, Acariasis)

## REPORTING INFORMATION:

- Class C
- Report when epidemic is suspected
- Report by telephone to local health department

## AGENT

*Sarcoptes scabiei* - a mite which burrows in the top layer of the skin where it feeds and lays eggs.

## CASE DEFINITION

There is currently no case definition for scabies in the CDC publication "Case Definitions for Infectious Conditions Under Public Health Surveillance." (*MMWR*, May 1997). In Ohio, cases to be reported will meet the signs and symptoms listed below with demonstration of the mite as described in "Diagnosis" below.

## SIGNS AND SYMPTOMS

The lesions of scabies are very small and difficult to see until sensitization occurs, a period of two to six weeks following the onset of the initial infestation. Symptoms appear in 1-4 days in persons who are reinfested. Lesions are distributed on the finger webs, inner aspect of the wrists and elbows, and, especially in adults, on the forearms and trunk. In the adult male, the penis and scrotum are almost always involved. Itching is intense, especially at night, and a patchy red rash is frequently present. Long-term, severe infestations, called Norwegian or crusted scabies, manifest with hyperkeratotic skin scaling, and occur most frequently in immunocompromised patients.

## DIAGNOSIS

Specific diagnosis is made by skin scraping of lesions that have not been scratched by the patient. Usually four or five areas of the most severe itching must be scraped to recover a sample of mites, their feces, or their eggs. Mineral oil should be used to coat the scalpel blade to prevent loss of the collected specimen when transferring it to a glass slide for viewing under a low power microscope. These "wet mount" slides cannot be mailed off the premises for viewing unless provided with a cover slip and packed in a microscope slide mailer. An alternate method of diagnosis is the "ink prep." A solution of water-soluble ink is applied over an area containing suspect lesions, then wiped off with an alcohol solution. Any burrows present will retain ink, making them visible to the naked eye.

## EPIDEMIOLOGY

### Source

Humans are the only host for these mites, but many other animal species have their own specific types of scabies mites, referred to as "mange."

### Occurrence

Worldwide. Most common in crowded urban areas. Institutional outbreaks are common. Infestation has been attributed to poor hygiene, promiscuity and high population mobility. All ages and both sexes are equally susceptible.

### Mode of Transmission

Direct skin-to-skin contact with an infested person. The likelihood of transmission may depend on the length and type of contact. Clothing, bedding, and personal articles are rarely involved in the transmission of the mites.

### Period of Communicability

Transmission is possible soon after initial infestation, during the asymptomatic period prior to development of sensitization. Therefore, additional persons can be asymptotically infested and capable of transmitting scabies prior to definitive diagnosis of the index case. Persons should be

considered communicable until 24 hours after the initial treatment with a scabicide.

#### **Incubation Period**

Persons infested with the mite for the first time will not become sensitized for two to six weeks. Repeat infestation results in symptoms within one to four days.

### **PUBLIC HEALTH MANAGEMENT**

#### **Case**

Individual case reports are not justifiable. The local health department may be called upon for assistance in the event of a scabies outbreak within an institution.

#### Treatment

A topical scabicide should be applied from the jawline down to, and including, the soles of the feet. Because the head, neck, and scalp can be affected in infants, young toddlers, and debilitated adults, these areas should also be treated in these individuals. Do not apply to mucous membranes. The medication should be applied to dry skin and washed off at the time interval specified by the manufacturer. **Do not over apply.**

Current scabidical products include Kwell, Eurax, and Elimite. Each is available only by prescription and must be used according to the manufacturer's directions to be effective. Retreatment is necessary in seven to ten days to kill any newly hatched mites that survived the initial treatment, except when using Elimite.

#### Isolation

The Ohio Administrative Code ([3701-3-13 \[W\]](#)) states that "a person with scabies shall be isolated for twenty-four hours following an initial treatment of an appropriate scabicide [see section 2 of this manual]. A person with the manifestation of scabies known as "crusted scabies" shall be isolated until the mite can no longer be demonstrated on the scabies preparation."

#### **Contacts**

Include all who have had skin-to-skin contact with the index case and with any persons who may be asymptotically infested through such contact. This includes all household and sexual contacts of the index case, care providers, and those persons who meet the above criteria.

#### **Hospitals and Extended Care Facilities**

Contact tracing and treatment should begin when scabies is diagnosed in one patient or one care provider. All health care workers having contact with the index case or any other worker who might be infested should be urged to undergo treatment. Depending on staffing patterns, this could be a large number of persons. Household and sexual contacts of these workers must not be overlooked, as they can be asymptomatic harborers of mites. Failure to treat these contacts can result in reinfestation of staff and reintroduction of the mite to the facility. All treatment should be simultaneous. Staff may be sent home with scabicide for overnight treatment, then return to work the following day. Patients need not be isolated after the initial treatment. Staff should wear gloves to provide patient care until treatment is initiated. Hand washing should be emphasized to lower the risk of transmission.

#### **Prevention and Control**

The scabies mite does not remain viable off the skin of the host for more than 24 hours. Environmental sprays and/or extermination are unnecessary. Routine washing and drying of clothing, bedding, and personal articles used by the index case and all contacts, or sealing those items which cannot be washed inside plastic bags for seven to ten days, is sufficient to kill the scabies mites.

Specific strategies for control in a health care facility should consist of an active surveillance program which will detect infestations promptly. A high index of suspicion that any undiagnosed pruritic skin condition might be scabies is important. Experience has shown that failure to implement aggressive

control measures can lead to protracted and costly outbreaks.

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