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## When should you treat scabies empirically?

### Evidence-based answer

Empirically treat patients when they have pruritus and lesions typical of scabies in at least 2 places—even if there is no known household contact diagnosed with scabies, and even if the diagnosis cannot be confirmed by light microscopy (strength of recommendation [SOR]: **B**, based on a single large cohort study). Also give empiric treatment to all sexual and household contacts of anyone diagnosed with scabies

(SOR: **C**, based on expert opinion).

In institutional settings such as hospitals, nursing homes, or residential facilities, treat the entire at-risk population empirically to prevent epidemics (SOR: **C**, based on expert opinion). In hospital settings, give empiric treatment to health care workers with skin exposure to patients with scabies (SOR: **B**, based on case-control study).

### Clinical commentary

#### Treating empirically saves money (and unnecessary itching)

During my medical training and years in the military, I have seen patients who suffered prolonged itching because they had no microscopic confirmation of scabies, but who cleared quickly with treatment after a skin biopsy identified scabies. This has given me a “short fuse” for treating empirically in my own clinics.

Though I always encourage the residents to do a scraping—since the microscopic confirmation is one of those “Oh, wow!” findings when it is positive (**FIGURE**)—it is reassuring to know that

evidence exists for opting to treat without confirmation. It also saves the patient the cost of the skin scraping and microscopy—important for the increasing numbers of cash-paying, uninsured patients.

Permethrin is relatively safe (rated category B in pregnancy), usually affordable, and well-tolerated; the hardest part of the empiric treatment may be the emotional impact on the patient who is told his skin has a “parasitic infestation.” (I’m itching at the thought!)

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### FAST TRACK

**Don’t bother with skin scrapings—just treat patients with itching and typical lesions**

### Evidence summary

Clinical diagnosis of scabies begins with pruritus, typical lesions in a distribution consistent with scabies—finger webs, wrists, axillae, elbows, buttocks, genitalia of men, breasts of women—and possible exposure. Clinical diagnosis can be

confirmed by skin scrapings from characteristic lesions, such as burrows. When these scrapings are examined under light microscopy, they can show mites, eggs, or feces from the mites (**FIGURE**). However, this technique depends greatly on operator experience and skill, and a lack of



*Diagnostic mineral oil scraping that “unroofed” the mite, with feces (small pellets) and 3 ovoid eggs evident.*

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## FIGURE

### The “Oh, wow!” test

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It is reassuring to know that evidence exists for opting to treat without confirmation. It also saves the patient the cost of the skin scraping and microscopy—important for the increasing numbers of cash-paying, uninsured patients.

—Barbara Walker, DO

light microscopy findings does not rule out scabies.<sup>1</sup>

The only study we found that investigated the sensitivity of clinical features in diagnosing scabies was done in sub-Saharan Africa.<sup>2</sup> In this study, the presence of diffuse itching, plus lesions in at least 2 locations typical with scabies or a household member with itch, had 100% sensitivity and 96.9% specificity for scabies infection. This study used the evaluation of a dermatologist as a gold standard. The authors propose that treatment based on clinical findings with or without microscopic confirmation is appropriate; however, it is not clear how these data translate to a primary care population with a lower prevalence of scabies.

#### Long stretches without symptoms play role in treatment

To date, no controlled trials address whether empiric treatment of asymptomatic contacts or family members of those with scabies decreases its spread.

However, it is known that an initial infestation with scabies will not lead to pruritus for up to 4 to 6 weeks.<sup>1</sup> Asymptomatic contacts can be infected with scabies, and can transmit this infection to others before symptoms even occur.

Given the long period of asymptomatic infestation, prevention of epidemics in institutions such as hospitals, nursing homes, and residential facilities is of particular importance. One case-control study, performed at a large tertiary-care teaching hospital, demonstrated that health care workers on a service having a patient with undiagnosed scabies were 5.3 times more likely to develop a pruritic rash than those in other units.<sup>3</sup>

Health care workers with more skin-to-skin contact with the patients (nurses, nursing students, and physical therapists) were 4.5 times more likely to develop scabies compared with those in less physical contact (physicians, medical students, and occupational therapists). Among the symptomatic health

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### Empirically treat:

- sexual/household contacts of those diagnosed
- hospital health care workers having skin contact with those diagnosed
- anyone at risk in a hospital or nursing home setting

TABLE

## Recommended treatment for scabies infection

DIAGNOSIS	RECOMMENDED THERAPY	SOR
High-risk individual with exposure	Permethrin 5% topical solution (single overnight application)	A
Typical scabies infection	Permethrin 5% topical solution (single overnight application)	A
Crusted (Norwegian) scabies	Oral ivermectin 200 mcg/kg single dose repeated in 14 days	B
Scabies in patient with HIV	Oral ivermectin 200 mcg/kg single dose repeated in 14 days	B

Data taken from 2000 Cochrane Systematic Review<sup>4</sup> and 2002 update.<sup>5</sup>  
SOR, strength of recommendation.

care workers, 17% of their household contacts developed scabies, too.

#### Permethrin vs lindane? Which is better?

A 2000 Cochrane review, updated in 2002, concluded that permethrin was superior to lindane for topical treatment of scabies.<sup>4,5</sup> Combining 4 trials with 718 patients, permethrin 5% appeared better than lindane 1% (odds ratio=0.66; 95% confidence interval, 0.46–0.95). However, there was significant heterogeneity between the studies, and the largest trial (n=467) found no difference.

Oral ivermectin, though costly, is an effective alternative for those who do not tolerate topical treatment. See the **TABLE** for a summary of treatment recommendations.

#### Recommendations from others

Guidelines released by the Centers for Disease Control and Prevention in 2002 regarding the treatment of sexually transmitted diseases state that both sexual and close personal or household contacts of patients diagnosed with scabies within the preceding month should be examined and treated.<sup>6</sup>

Another guideline, developed by the

British Association of Sexual Health and HIV, recommends empiric treatment of sexual, household, and institutional contacts of those with scabies. This guideline recommends treating those who were in contact with the scabies patient within 2 months of his diagnosis; this time frame, though, is arbitrary.<sup>7</sup> No evidence grading was given for these recommendations, which are based on expert opinion. ■

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**Topical permethrin is the preferred treatment. If oral medication is needed, prescribe ivermectin**