

ADDITIONAL INFORMATION ABOUT SORE MOUTH IN HUMANS

WHAT IS “SORE MOUTH” (CONTAGIOUS ECTHYMA, ORF)?

“Sore mouth,” also called “scabby mouth” and “contagious ecthyma” is a viral infection of goats and sheep, caused by a poxvirus (orf virus). Orf virus is found throughout the world.

CAN PEOPLE BECOME INFECTED WITH ORF VIRUS (THE VIRUS THAT CAUSES SORE MOUTH)?

Yes, people can become infected with orf virus.

Animals infected with orf virus typically have sores in their mouth, or on their muzzle, lower legs, or teats. Activities such as bottle / tube feeding, shearing, petting, or being bitten by an infected animal (or touching contaminated equipment) can increase a person’s chances of becoming infected with orf virus.



A) Orf lesion, B) erythema multiforme rash, C) characteristic bull’s-eye rash caused by lyme disease. These three illnesses are all associated with skin lesions presenting with a target-type appearance, however, a lyme disease-associated rash will remain typically flat (macular), and an erythema multiforme rash (due to allergic reaction) will often develop at multiple sites on the body, while an infection with orf will typically cause 1-2 raised lesions on the hands or forearms. A & B: Courtesy of D. Kouba, MD and B. Cohen, MD, DermAtlas (<http://www.dermatlas.org>); C: Courtesy of J. Gathany, CDC.

WHAT ARE THE CLINICAL SIGNS OF ORF VIRUS INFECTION IN HUMANS?

Infection with orf virus is usually confined to the epidermis (top layer) of the skin. Lesions will often occur on the fingers, hands, or the forearms.

Orf lesions typically progress as follows:

- Maculopapular stage (days 1-7) - Flat or raised discolored lesion
- Target stage (days 7 - 14) - Red center surrounded by a white halo further surrounded by a red halo
- Acute stage (days 14 - 21) - Disappearance of normal looking skin at the lesion site
- Regenerative stage (days 21 - 28) - Regenerating of normal skin (epidermis)
- Papilloma stage (days 28 - 35) - Raised epidermal lesion
- Regressive stage (days 35+) - Skin returns to its normal appearance, often without scarring

The size of orf lesions generally range from 2-3 cm but can be as large as 5 cm. Lesions may be painful and associated with nearby swelling of lymph nodes.

Persons with a compromised immune system (e.g., HIV, lupus, cancer) can develop a serious illness, including large tumor-like lesions, progressive disease, development of multiple lesions, or erythema multiforme reactions involving rashes on the mucous membranes and skin.

CAN I GET SORE MOUTH MORE THAN ONE TIME?

Yes. Immunity against infection with orf virus is short lived; therefore people can be infected multiple times throughout their life. Lesions, after re-infection, are typically smaller and resolve sooner.

SHOULD I SEEK MEDICAL ATTENTION IF I THINK I HAVE BECOME INFECTED WITH ORF VIRUS?

A number of infectious agents can be transmitted from goats to humans. Some may even resemble orf in appearance but may cause a more serious disease. One such agent is anthrax, which can cause lethal disease in goats.

You should seek medical attention if:

- You notice a lesion(s) that you cannot explain – macule, papule, vesicle, or pustule – or the lesion is becoming rapidly larger, AND
- You've had contact with goats or objects that have been in contact with goats 1-2 weeks prior to the time the lesion developed, WITH or WITHOUT
- The presence of a low grade fever lasting a few days, mild lymphadenopathy (swollen lymph nodes) or lymphangitis (red streaking at infection site)

WHAT INFORMATION SHOULD I BRING WITH ME TO THE DOCTOR?

If you seek medical care for your lesion(s) please bring along this information sheet. While knowledge of sore mouth may be common among farmers and veterinarians, orf is a relatively rare infection of people.

If you have been vaccinating your goats with the live virus orf vaccine, please alert your health care provider and have the brand and lot number handy.

HOW SHOULD I CARE FOR MY LESION?

The lesion should be kept dry and covered to prevent a secondary infection with bacteria. While working with animals or during manual labor in which the lesion might get wet a water tight bandage should be used. To promote healing a non-weeping lesion can be uncovered at bedtime or covered loosely if still weeping. Consult your physician for additional information on wound care.



Orf lesion after exposure to infected ewes. Image courtesy of C. Verros, MD, DermAtlas (<http://www.dermatlas.org>)



Cutaneous anthrax (caused by the bacteria *Bacillus anthracis*) lesion after contact with sheep. Image courtesy of A. Khan, MD, DermAtlas (<http://www.dermatlas.org>)

ARE THERE ANY LABORATORY TESTS TO DIAGNOSE ORF VIRUS INFECTIONS IN HUMANS?

Currently, the Centers for Disease Control and Prevention (CDC) has a specific laboratory test that can detect sore mouth in humans. Specimens must be submitted for testing through a doctor or health department.

For more information on sore mouth in humans please contact your physician or health department or visit http://www.cdc.gov/ncidod/dvrd/orf_virus/

For more information regarding CDC's diagnostic testing, please call (404) 639 – 4129.



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