

Sore Mouth (Orf) Fact Sheet

1. **What is sore mouth, or orf disease?** – Sore mouth, often known as orf, contagious ecthyma or “scabby mouth,” is a viral infection primarily of sheep and goats. The condition is caused by a poxvirus called orf virus. Sore mouth is commonly found throughout the world. In 2001, 40% of sheep and goat operations in the United States reported orf virus infections in the previous three years.
2. **What are the clinical signs of sore mouth?** - Early in the infection sores appear as blisters and then become crusty scabs. Sores are typically found on the lips, muzzle, and in the mouth. Sheep and goats may get similar sores or scabs on the lower legs and the teats, especially when ewes or does are nursing infected lambs or kids. Animals usually recover completely from orf virus infections within a month. Young animals may have difficulty nursing or feeding and may require supplemental bottle or tube feeding. Nursing ewes may abandon their lambs, and older animals may also require nutritional support. Some breeds, such as the Boer goats, are particularly susceptible and severely affected by this condition.
3. **How is sore mouth transmitted in animals?** - When virus-containing scabs from infected animals fall off, the virus can remain viable in the environment and serve as a source of infection to susceptible animals. A flock can become infected through contaminated bedding, feed or trucks, or by direct contact with infected animals. Young animals will have the most visible disease because they unlikely to have been previously exposed to the virus, and because their immune systems are still developing.
4. **Which animals can get sore mouth?** - Orf virus typically affects only sheep and goats, although musk oxen and gazelles are occasionally infected. Cattle are not naturally infected.
5. **What sheep diseases have a similar clinical appearance to sore mouth?** - Foot and mouth disease is a serious reportable animal disease that resembles sore mouth and can affect sheep, goats, cattle, swine, and other cloven-hoofed animals. In sheep, foot and mouth disease lesions can be confused with sore mouth lesions, so it is important that the diagnosis be made by an experienced veterinarian.
6. **What can I do to protect my animals from orf virus infection?** - There are protective measures that may help lessen the risk of infection. These include:
 - a. Reduce the likelihood of mouth/muzzle cuts (e.g. remove thistle from grazing areas).
 - b. Quarantine new animals until sore mouth can be ruled out.
 - c. Avoid bringing animals with orf virus infection to public events such as fairs and shows.
 - d. The orf virus survives in soil, and carrier animals may not show symptoms; as a result it is difficult to prevent infection, but using the measures above may assist in prevention.

- e. Since orf virus may be transmitted through saliva, some owners choose to assist the judges at shows by opening their own animal's mouth.
7. **Is there a vaccination for sore mouth?** - There are several commercial live virus vaccines available.
8. **What should I keep in mind when using a vaccine?** - Producers considering using an orf virus vaccine product in their flock should consult a veterinarian. Use of vaccine is only suggested for previously infected flocks, as vaccination will cause an orf virus infection in the animals and lead to contamination of the operation with virus-containing scabs. All orf virus vaccines contain live virus which can cause infection in humans.
9. **Can an animal become infected with orf virus more than once?** - Yes, animals may become infected more than once in their lifetime, but repeat infections usually occur after a year's time and are usually less severe.
10. **Can humans become infected with orf?** - Orf virus infection is most common among shepherds, veterinarians, and abattoir workers in areas producing sheep and goats. A person who comes into contact with virus from an infected animal or equipment (such as a harness that has rubbed the animal's sores) can become infected. People often develop sores on their hands. The sore may be painful and can last for two months. Infected people rarely infect other people. Sores usually heal without scarring.
11. **Which activities are associated with the greatest risk of becoming infected with orf virus?** - Since Orf is primarily an illness of sheep or goats, people who handle these animals are at greatest risk of infection. Specific activities that may put you at risk of infection include:
 - a. Bottle feeding, tube feeding, or shearing sheep or goats.
 - b. Petting or having casual contact with infected animals.
 - c. Handling infected equipment.
 - d. Working with animals when you have an open cut or skin sore.
 - e. Being bitten by an infected animal.
12. **What should I do if I think I have become infected with orf virus?** - Currently there is no approved specific treatment for orf virus infection. Sores may be painful and may become infected with bacteria if not properly managed by a doctor. If you are experiencing pain, fever, or notice that the sore is becoming rapidly larger or spreading, you should see your physician.
13. **How can I protect myself and others from infection with orf virus?** - The virus that causes sore mouth is spread to people by touching infected animals and their equipment.

Some animals may or may not have visible sores but may still be able to spread the virus. Two ways to protect yourself and others include:

- a. Wear non-porous (i.e. rubber or latex) gloves when handling sheep or goats, especially when you have an open cut or sore and are handling the mouth or muzzle.
- b. Practice good hand hygiene by washing with clean, warm water and soap for at least 20 seconds (or use a waterless alcohol-based hand rub when soap is not available and hands are not visibly soiled).

14. Should people with medical conditions work with animals that have sore mouth? - Most medical conditions do not affect the immune system enough to prevent your body from fighting off the orf virus on its own. However, if you have an autoimmune disease (e.g. lupus (SLE), rheumatoid arthritis), a transplanted organ, are taking chemotherapy for cancer or are taking corticosteroids (e.g. prednisone), you should talk to your primary care provider about potentially avoiding animal contact. People with these medical conditions have weakened immune systems and the orf virus can cause a serious infection.

15. For more information about sore mouth and the orf virus:

http://www.cdc.gov/ncidod/dvrd/orf_virus/

This fact sheet provides general information. Please contact your physician and/or veterinarian for specific clinical information related to you or your animal.