

# Staph. Pyoderma

The word “pyoderma” is Latin for pus in the skin. It is the medical term used to describe a skin infection. The most common type of skin infection is caused by *Staphylococcus* (“staph”) bacteria, usually *Staphylococcus intermedius*. Hence the name “staph pyoderma.”

The infection usually looks like round areas of hair loss, redness and scaling. Sometimes pimple will be seen, but often the skin looks blotchy and red and the hair coat “moth eaten.” There are usually flakes or crusts of dead skin cells around the margins of the reddened areas. The abdomen and groin are the most frequently infected, although staph pyoderma can occur almost anywhere on the body.

A related type of skin infection is acute, moist, superficial dermatitis, commonly known as a “hot spot.” Hot spots are very localized areas of skin infection. They appear as a round, moist, raw lesion anywhere from an inch to many inches in diameter. These arise when a dog licks or scratches any area excessively, and they often start with an insect sting or minor injury. Hair may be gummed over the area, making it hard to see, and it may be very painful to the touch.

Our world is literally full of bacteria – they are on our skin, floating in the air and likely to be resting on anything we touch. Our skin, and the skin of dogs and cats, usually acts as a barrier to keep unwanted bacteria outside and not inside our bodies. If the skin is irritated or damaged by something else, the bacteria that live on the skin grow, multiply and set up housekeeping on and beneath the surface of the skin. Pyoderma is considered to be a secondary disease – a disease which arises because of some other problem which weakens the integrity of the skin or of the immune system.

Common problems which let these bacterial infections get started are:

- Parasites such as fleas, ticks, mites, or lice
- Allergies
- Hormonal diseases
- Biting insects such as gnats, mosquitoes, or flies
- Excessive moisture from swimming, wet bedding, or damp conditions
- Excessive skin folds, such as on the face, the base of the tail, leg creases or vulvar folds, which trap moisture and harbor bacteria
- A juvenile immune system – puppies are especially prone to these infections
- Genetic problems – some breeds seem predisposed to have poorly functioning immune systems

Sometimes we know what the initiating cause of the infection is, either because we find a problem such as fleas on our physical exam or because the owner can tell us something the dog was doing before the infection started, such as

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swimming, that precipitated it. Many times we never find out the cause of the infection or find it only after treatment has already been done. Because the skin reacts to a large number of diseases by getting red and itchy, and because there frequently are multiple skin problems going on at the same time, diagnosing and treating staph infection can be challenging.

When the skin infection or hot spot is mild, we can sometimes have the pet's owner simply bathe the infected area with an antibacterial soap or apply topical creams or sprays. Most often, however, the infection is deep enough into the skin layers that topical therapy is not sufficient. Oral antibiotics are then prescribed, in addition to clipping or bathing the infected areas. Skin infections tend to be slow to heal, so even mild cases often require three to four weeks of antibiotic therapy. The rule of thumb is to continue the medication until the skin has looked completely normal for at least one week. Stopping the medication too soon frequently leads to relapse, and often to antibiotic resistance as well. Frequent baths with antibacterial shampoos can help prevent relapses.

If the skin infection started as the result of a problem which we can quickly resolve, such as bug bites or swimming in dirty water, the infection usually clears up quickly and easily. If the infection is due to an allergy, seborrhea, or other longer term disease, infection may be difficult to resolve or may reoccur. Frequent rechecks may be needed to keep ahead of the disease and to keep the pet's discomfort to a minimum.

Occasionally, the infection will not respond to the first antibiotic tried and a change of medication is needed. In these cases we may recommend a bacterial culture to be done at the lab, to identify the best antibiotic to fight the infection. Additional medications, for allergies or fleas, for example, may also be warranted. If the infection is slow to resolve or other causes are suspected, further investigation may need to be done as to the underlying cause of the disease. Extra tests may include skin scrapings to look for mites, allergy medication or testing, fungal cultures or impression smears of the skin to look for yeast or fungal organisms, or skin biopsy to look for autoimmune diseases such as Lupus or pemphigus. Blood testing would be advised if hormonal diseases such as hypothyroidism or Cushing's disease are suspected.



Of course, keeping the staph infection under control depends on solving and treating the underlying cause. Sometimes the dog becomes allergic to the staph bacteria, as well as being infected by them. Then we have a primary disease, a secondary staph infection and a tertiary allergy!

As you can tell, staph pyoderma is not always simple to treat. In order to save your pet

from as much discomfort as possible and minimize your costs for re-treatment and antibiotic resistance, please follow the treatment protocol below and return for your scheduled rechecks. Working together we will have the best chance to treat your pet as quickly and effectively as possible.