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Dental Disease and Its Relation to Systemic Disease in Pets

What is dental disease?

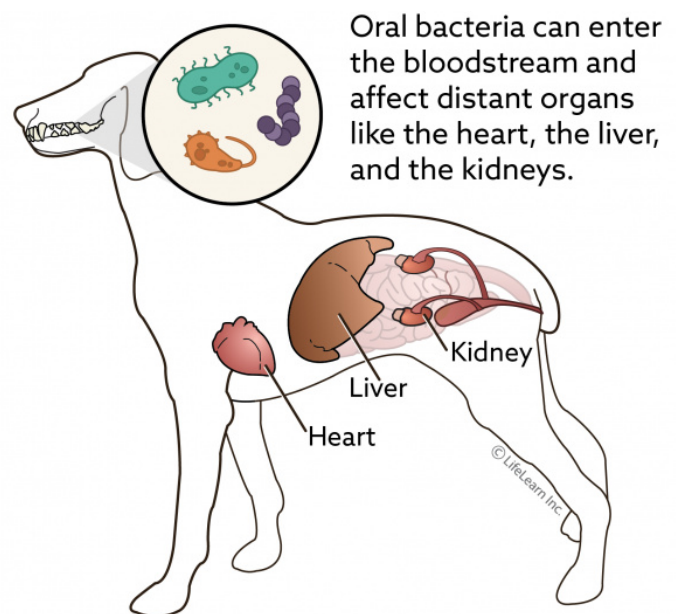
Dental disease, also known as periodontal disease, is a condition in which the tissues supporting the teeth become inflamed. In its most mild form, periodontal disease is associated with gingivitis, or inflammation of the gums. In more severe cases, periodontal disease may manifest as tooth root abscesses, bone infection of the jaw, or as a pathologic (disease-induced) fracture of the jaw.

Can dental disease cause systemic disease?

When a pet develops dental disease, significant quantities of bacteria reside within the mouth and the oral tissues. These bacteria can enter the bloodstream and travel to other areas within the body, causing distant or systemic effects. There are three organs that are especially susceptible to the spread of oral bacteria: the heart, the liver, and the kidneys.

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The bacteria that are found within the mouth of pets with dental disease are the same bacteria that are often implicated in heart disease. These bacteria are associated with both endocarditis (inflammation/infection of the interior of the heart) and valvular disease in dogs and cats. Additionally, the presence of periodontal disease has been linked to an increased risk of heart disease in dogs.



The liver and kidneys are especially susceptible to the effects of dental disease. Both organs function primarily to filter the blood, which allows bacteria from the oral cavity to easily spread to each of these organs. Infection and inflammation within the liver and kidneys can cause signs of systemic infection (such as fever, weight loss, and decreased appetite), while also interfering with the function of these organs.

How are pets screened for systemic disease?

Your veterinarian uses a number of tools to screen for dental disease.

The first of these tools is the physical examination. In many cases, systemic disease has effects on the body that can be detected on a physical examination. A pet with heart disease may have a detectable murmur that can be auscultated (heard) with a stethoscope. A pet with liver or kidney disease may have visible weight loss or pain on palpation of the abdomen.

Next, your veterinarian will likely perform screening blood tests, including a complete blood count (CBC) and serum biochemistry. These tests assess a number of different liver and kidney function markers; elevations in these values may suggest the presence of liver or kidney disease.

If the results of the physical examination and blood tests suggest the presence of underlying disease, your veterinarian may recommend additional diagnostic tests. If your pet has signs of heart disease, for example, your veterinarian may perform chest X-rays to look for heart enlargement and signs of heart failure. If your pet has signs of liver or kidney disease, your veterinarian may recommend additional blood or urine testing.

Can the systemic effects of dental disease be minimized?

The best way to minimize the systemic damage associated with dental disease is to proactively prevent and treat dental disease. Dental conditions should be addressed as early as possible, to minimize the risk of worsening and spread. There are two components to dental care: home care and veterinary dental care.

Home care consists of brushing your pet's teeth daily, if possible. If you are unable to perform daily brushing, your veterinarian can provide alternatives such as an oral rinse or medicated dental chews.

Veterinary dental care, also referred to as a comprehensive oral health assessment and treatment, is performed under general anesthesia. Your pet will be anesthetized, using a combination of injectable and inhalant anesthetics. First, the tartar will be scaled off your pet's teeth. Dental radiography (X-rays) may also be performed to evaluate the tooth roots and other tissues below the gumline. Once your pet's teeth are clean and visible, your veterinarian will perform a thorough oral exam. Finally, your veterinarian will devise a treatment plan for any dental issues that have been discovered. These treatments may include extractions or more advanced dental procedures, such as a root canal.

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If your pet is experiencing systemic signs associated with dental disease, antibiotics may also be recommended. These antibiotics will minimize the quantity of bacteria in your pet's mouth and bloodstream. In many cases, antibiotics are started prior to a dental procedure. It is important to note however, that antibiotics alone are not sufficient to treat dental disease or its systemic effects. Antibiotics are intended only as an adjunct to more definitive treatment.

Does systemic disease make anesthesia risky for my pet?

Although attempts to address dental disease are made as early as possible situations sometimes arise in which a pet's systemic disease increases the risk associated with anesthesia. After performing a thorough physical exam and pre-anesthetic bloodwork, your veterinarian may determine that your pet has a heightened anesthetic risk and needs additional diagnostics prior to anesthesia.

In some cases, your veterinarian may refer your pet to a specialist, such as a cardiologist or internal medicine specialist. The specialist can perform additional diagnostic tests to assess organ function and aid your veterinarian in creating an appropriate anesthetic plan for your pet. If your pet is especially high-risk, your veterinarian may even recommend having your pet's dental procedure performed at a specialty hospital. This ensures that board-certified specialists will be available during your pet's anesthesia and recovery, in order to ensure that your pet receives the best care possible.

Rarely, you and your veterinarian may determine that the benefits associated with a dental procedure do not outweigh the anesthetic risks. In this case, your veterinarian will work with you to create a palliative care plan that minimizes the pain and infection associated with dental disease, while maintaining your pet's quality of life for as long as possible. This approach is reserved **only** for pets with severe systemic disease, because it means that the dental disease will not be corrected and will continue to cause issues for the remainder of the pet's life. **It is always best to definitively treat dental disease when possible.**

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