

Periodontal disease is a progressive disease of the tissues surrounding the tooth root. (*see tooth anatomy*) As the support tissues of the teeth are destroyed, bacteria and by-products of the inflammation caused by the infection spread into the surrounding bone and can lead to sinus infections, pathologic fractures and stress on the heart, liver and kidneys. Bone damage from infection can lead to pathologic fractures of the jaw.

*Plaque* is the cause of periodontal disease. It is an invisible film that forms on tooth surfaces containing saliva, food products and normal oral bacteria. Plaque can be removed with preventive care, so that the periodontal disease does not progress.

*Stage 1 Periodontal Disease is gingivitis. Gingivitis* occurs when plaque remains on the tooth crown, causing inflammation of the gum line. As the first stage of periodontal disease, it is reversible with timely treatment. (See teeth cleaning: COHAT)



*Stage 2 Periodontal Disease* develops when the bacteria in the plaque cause more inflammation and deeper invasion beneath the gum line, leading to early loss of bone. Dental radiographs (x-rays) are necessary to evaluate the roots and bone, and to stage the periodontal disease. Bone loss may be permanent, and without proper intervention, will progress rapidly. Pockets under the gum line (subgingival) are curetted with ultrasonic and hand instruments. Pockets greater than 5mm or areas of bone loss that are not accessible with instruments will require *open root planing*. By surgically exposing the affected tooth root and bone, we can properly clean away diseased subgingival tissue and debris adhering to the root surface.

*Stage 3 Periodontal Disease* is reached when 30-50% of the bony support of the tooth root is lost. This may necessitate extraction, especially if the bone loss is in an area of close contact between two teeth. Some areas of bone loss can be treated with *open root planing* to remove all of the diseased tissue and clean the root surface. After the subgingival pocket has been treated, bone grafting materials and Doxirobe periosteal treatment, a specialized antibiotic gel, may aid in bone regeneration and stabilizing the disease at this level. It is imperative to maintain good daily preventive home care, and regular professional treatment to prevent progression.

*Stage 4 Periodontal Disease* indicates more than 50% loss of bone support of the tooth root. This stage requires extraction to prevent further spread of the infection and bone loss.



All four stages can be present in one mouth, so each tooth is assessed and treated accordingly. *Regular veterinary exams are important to detect any oral diseases and initiate treatment.*

Periodontal disease can be arrested with proper treatment, but the key to managing pre-existing periodontal disease and preventing progression is consistent daily home care. Because plaque is invisible, preventive care should be done even though the teeth do not appear “dirty”. (*See home dental care*) Early training and behavior modification to allow thorough daily tooth brushing for plaque removal is the key to success. Additional aids to plaque removal are VOHC ([www.vohc.org](http://www.vohc.org)) approved dental diets such as Hill’s T/D diet and treats such as Greenies.