

# Periodontal Disease



## What is periodontal disease?

Periodontal disease refers to disease of the tissues surrounding the teeth (periodontium). It is generally characterised by inflammation and infection of the gingiva (gums) and periodontal ligament, secondary to feed packing in between the teeth.

## Why does it happen?

Feed packing in between the teeth is largely due to the presence of diastemata (gaps between the teeth.) Diastemata are either primary (where the teeth are formed that way) or secondary (e.g. due to displacement/rotation, overgrowths, fracture, senility, or peripheral caries.)<sup>1</sup> The food that gets trapped in-between the teeth during chewing starts to ferment and attract bacteria, which proliferate and produce destructive enzymes that destroy the periodontal tissue. In an attempt to fight off this infection, the body also sends inflammatory cells to the area, which in turn also release enzymes that destroy bacteria but also damage the surrounding tissues. This destruction breaks down the attachment of the teeth to the bone and creates 'periodontal pockets' between the teeth, allowing more feed to then pack into these holes. This destruction of the periodontal tissues is incredibly painful, due to the exposure of sensitive underlying tissues.

## How do we diagnose periodontal disease?

Periodontal disease is diagnosed by visual examination of food packing in between the teeth by your veterinarian. The food packing in between the teeth is cleaned out and the depth of any periodontal pockets between the teeth is measured. Depths of up to 1-4mm can be considered normal, with any increase in depth indicating the presence of periodontal disease.<sup>2</sup>

## What treatment options are there for periodontal disease?

Treatment for periodontal disease includes removal of rotten food material from between the teeth, and treatment of the infection and inflammation of the periodontal tissues. Localised packing of antibiotics in each infected gingival sulcus allows a high concentration of effective antibiotics at the source of the infection, and gives the inflamed gingiva underneath a chance to heal. A single-dose or multi-day course of systemic anti-inflammatories (such as Flunixin or Phenylbutazone) may be recommended in cases of severe periodontal disease. In cases where the diastemata between teeth are wide enough, polyvinyl siloxane (PVS or human dental impression material) may be placed on top of the antibiotic packing to prevent food from re-entering the sulci while the gingiva underneath heals and fills in the gap.

## How regularly does my horse need to be treated for periodontal disease?

We recommend treatment every 2-3 months for more severe cases, or 6 monthly visits for milder cases. In many cases, with treatment, the gingival sulci may return to a normal depth (1-4mm), at which point your horse can return to his regular recommended dental schedule.

## What can I do at home to help my horse with periodontal disease?

We recommend regular flushing of your horse's mouth with the hose as often as possible to help flush out any food getting stuck between the teeth. Simply place the hose up the side of your horse's mouth (like you would with a wormer), turn it on a medium flow, and allow them to chew on the end of the hose. Hexarinse antiseptic mouthwash may also be prescribed which is a palatable mouth rinse and is squirted into the mouth after washing with the hose.



Equine periodontal disease, with food packing in between the teeth (left), cleaned out (middle left), with antibiotic packing (middle right) and polyvinyl siloxane (PVS) (right)

### References:

1. Kennedy, R. and Dixon, P. (2016). The aetiopathogenesis of equine periodontal disease – a fresh perspective. *Equine Veterinary Education*, 30(3), pp.161-168.
2. Jackson, K., Weber, L. and Tennant, M. (2016). A Retrospective Study of the Effectiveness of Four Different Treatments of Periodontal Disease in Equine Cheek Teeth. *Journal of Veterinary Dentistry*, 33(2), pp.83-89.