

TOOTH RESORPTION

TOOTH RESORPTION IS THE DESTRUCTION OF THE ROOTS, AND SOMETIMES THE CROWN, OF TEETH. TOOTH RESORPTION IS MORE COMMONLY SEEN IN CATS THAN DOGS; APPROXIMATELY 35% OF MIXED BREED CATS, AND UP TO 70% OF PEDIGREE CATS, WILL DEVELOP TOOTH RESORPTION DURING THEIR LIVES.

The jaws are unique components of the skeleton; they are the only bones to have non-bone material embedded into them, the teeth. The teeth sit in sockets of bone lined with a specialised ligament which suspends and supports them. The bone of the skeleton is being continuously removed and replaced as part of the normal housekeeping function of the body.

The cells responsible for removing the bone, named osteoclasts, are regulated through hormones and local receptors. Tooth resorption is the destruction of the roots, and subsequently the crowns, of a tooth by osteoclasts that are inappropriately targeting the teeth rather than the surrounding bone.



Arrow indicates early tooth resorption lesion of the left mandibular 4th premolar tooth.

An irreversible process

Tooth resorption is a progressive and irreversible process. Once an individual has had a tooth affected by tooth resorption, it is highly likely that other teeth will be affected.

Where it starts

The process of resorption starts on the tooth root's surface, which is not thought to be painful. But as soon as the area of resorption is exposed to the environment of the mouth, the tooth becomes highly sensitive.



After extraction of the tooth, seen in above photo, resorption and cleaning of the teeth.

As the destruction of the tooth continues, the pulp may be exposed and this is painful. Cats and dogs sadly may demonstrate such subtle symptoms of oral pain that they can be hard to detect. In fact, the previous presence of oral pain may only become evident when the painful problem is resolved, and how they are in themselves is improved.

The different types of tooth resorption

There are two different types of tooth resorption in cats; although the process of tooth destruction is the same, the initiation of the destruction is different in the two types:

- Type I resorption is initiated by gum disease and causes a focal destruction of the tooth
- Type II resorption is believed to be initiated by a genetically governed increased sensitivity of receptors that regulate the activity of the bone removing cells, the osteoclasts. Type II resorption can begin at any point on the root surface and commonly results in resorption and replacement, by bone, of part or the entirety of the tooth's roots.



The arrow indicates severe resorption of the lower molar tooth.

Treatment for the type I and II lesions alters, so differentiation is critical – this can only be performed by taking an X-ray. Performing an X-ray ensures the correct treatment is chosen and prevents inappropriate and potentially damaging surgery being performed to your pet.

If a single tooth is identified with tooth resorption, it is strongly advised that all of your pet's teeth be assessed by X-rays to see whether any other teeth are affected.



X-ray of the lower molar tooth shown in the above photo. Extensive resorption of the crown (the black area marked by the arrow) has occurred, with exposure of the sensitive pulp.

At the moment, the only option for management of this painful condition is extraction of affected teeth.

Next steps

You have been given this information sheet by your vet as they are concerned your pet has tooth resorption. The next step will be to arrange for your pet to have further investigation, including dental X-rays, and then treatment if needed.