

# ENAMEL HYPOPLASIA



## The Carolinas Animal Hospital & Dental Clinic

Enamel is the hard outer layer of the crown of the tooth in humans and carnivores and is the hardest substance that the body makes. Once the enamel is removed or worn, the body cannot replace it.

**Enamel Hypoplasia (dysplasia)** is defined as an incomplete or defective formation of the organic enamel matrix of the teeth during development of the tooth. The result is defective soft and porous enamel that is easily worn from the tooth. Causes of enamel hypoplasia can be trauma, systemic (such as illnesses as a puppy/kitten where there is a fever or a fractured baby tooth can lead to enamel hypoplasia in the developing adult tooth, nutritional deficiencies) or hereditary (genetic) factors. Depending on the underlying cause, one, many or all of the teeth may be affected.



**Before Treatment**



**After Treatment**

Teeth with enamel hypoplasia may appear normal at the time of eruption, but they soon become discolored (brownish) as the defective (porous) enamel soaks up pigments from food, soil, the environment, etc. In severely affected teeth, the defective enamel may flake off. The layer of the tooth just below the enamel, is the dentin layer which is porous and sensitive.

**Poorly protected or exposed dentin is painful.** Bacteria can travel through the dentinal tubules (pores) and into the pulp (nerve and blood vessels of the tooth) and cause death of the tooth/teeth.

If the enamel hypoplasia is found early enough, these teeth can be treated. We cannot replace the enamel, however if the tooth/teeth are living then a composite filling material can be placed over the areas of the missing enamel to protect the exposed dentin (from pain and bacteria). This composite does wear down over the life of the pet and may need to be touched up annually. If a tooth is no longer living or too badly malformed due to the enamel hypoplasia, then we will surgically extract these teeth.

When a patient presents for evaluation of enamel hypoplasia, a treatment plan is discussed. One of the most important diagnostic tools is dental radiographs (taken on an anesthetized patient). These dental radiographs allow the veterinarian to evaluate whether the tooth is healthy enough to try to save with the composite filling material. Often times, if enamel hypoplasia affects most of the teeth in the mouth, this procedure may be split into several visits to minimize the length of time the pet is anesthetized.