

• inflammatory resorption

Bowl-shaped areas of resorption involving cementum and dentin characterize **external inflammatory** root resorption. This type of resorption is rapidly progressive and will continue if treatment is not instituted. Since both a necrotic pulp and the presence of bacteria are necessary components of inflammatory resorption, the process **can be arrested** by immediate root canal treatment. The tooth is opened, and the canal is cleaned and shaped. A **calcium hydroxide paste** is placed in the canal. This is replaced every 3 months for 1 year. If, after 1 year, it appears that the resorption has stopped, a permanent root canal filling (*gutta-percha*) can be placed. A calcium hydroxide-based **root canal sealer** is strongly recommended.

Surface resorption is caused by acute injury to the PDL and root surface. It is very common, self-limiting, and reversible. If injury is not repeated, healing takes place with new cementum and PDL. Root surface resorption is limited to cementum, may heal itself, and is not radiographically visible.

Replacement resorption refers to resorption of the root surface and its substitution by bone, resulting in **ankylosis**. **Replacement resorption** accompanies dentoalveolar ankylosis due to extensive trauma to the tooth attachment apparatus (*PDL damage*). The tooth is often in infraocclusion due to progressive submergence with growth. There is a metallic sound on percussion. **Remember:** This is often seen in **unsuccessful** replant cases.

Remember the etiology of external and internal resorption:

- **External resorption:** periradicular inflammation, dental trauma (*resulting in damage to attachment apparatus*), excessive orthodontic forces, impacted teeth, internal bleaching of nonvital teeth.
- **Internal resorption:** dental trauma (*resulting in loss of vitality and subsequent infection*), dental caries, pulp capping with calcium hydroxide, cracked tooth.

Note: Invasive **cervical resorption** is a clinical term used to describe a relatively uncommon, insidious, and often aggressive form of external tooth resorption. Characterized by its cervical location and invasive nature, this resorptive process leads to progressive and usually destructive loss of tooth structure.

Resorption of coronal dentin and enamel often creates a clinically obvious **pinkish color** in the tooth crown as highly vascular resorptive tissue becomes visible through thin residual enamel.

Important: The majority of misdiagnoses of resorptive defects are made between internal root resorptions, cervical caries, and cervical resorption.