NUTRITIONALLY SPEAKING

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ROOT RESORPTION

DEAR DR. MEINIG: What can cause a root to resorb? Z.W.

DEAR Z.W.: There are a number of kinds of root resorption. The most common occurs at the end of the root because of infection in the tooth. Another kind of root end resorption is the kind that also occurs at the ends of the roots and causes teeth to become shorter. In these cases the teeth are apparently healthy but the cause for the shortening has not been found.

What you have had happen is probably external resorption that starts on the outer side of a root and proceeds inward or the opposite type, called internal resorption that starts on the inside of the tooth, at the nerve (pulp) canal border and travels outwardly to the boundry of the root. No treatment has been discovered for the internal type.

One other type of root resorption is the perfectly normal one that occurs to the roots of the deciduous (baby) teeth during the shedding process as the permanent tooth grows and starts to erupt. What triggers this mechanism is still not known but some believe it is caused by the pressure of the developing permanent tooth.

In the majority of cases of root resorption, the cause is said to be ideopathic, a fancy technical word that means we don't know the cause.

In spite of that fact there are numbers of conditions

that are known to be responsible for root resorption. The most common of these are the cases that result from trauma or injury. Teeth that have been bumped or hit in a fall or accident are more prone to this strange, eating away of the tooth substance. A large percentage of teeth that are knocked out and replaced shortly thereafter are quite likely to suffer resorption. Most of these when treated, last at least five years before they need to be extracted. In my practice, I replaced about 25 teeth that were knocked out in auto accidents, sport injuries, falls, etc. One of these was retained for 18 years before so much of the root resorbed that the tooth had to be removed.

Another form of trauma that occasionally takes place occurs to teeth from the pressures caused during orthodontic tooth straightening. A similar situation sometimes occurs when abnormal bite stress is concentrated on a tooth.

Patients who have root resorption view the condition as being tooth decay. It is not the same although the dentin of the tooth is softening and decaying away. The tooth decay process is one in which bacteria are involved but the breakdown of the tooth's dentin during resorption is quite different in appearance and character.

Another trauma is one that occasionally occurs after dark teeth are bleached. Usually in such cases a strong 30% hydrogen peroxide solution and heat have been used. Several appointments are necessary to restore the tooth's color. During a study of 58 bleached teeth at a dental school in Isreal,

researchers found 80 to 90% of teeth had good return to normal tooth shade but about half regressed and became dark again after a one to five year period. However, four of these 58 teeth (6.9%) experienced root resorption. Two of those treated appeared to arrest the resorption process but in the other two the loss of tooth structure continued around the treatment filling of the resorbed area resulting in the eventual loss of the teeth.

Quite often in these cases of external resorption, access to the root area involved is often impossible. When surgical approach is possible, the dentist cleans away all of the softened dentin and prepares the tooth for filling as is done during conventional tooth decay treatment. However, in many cases of the resorption process, the breakdown of the tooth keeps right on going along side of the filling.

Even though many of these teeth need to be extracted, treatment of them usually slows the resorption process sufficiently long to warrant the postponement of their loss. In some instances, the process is entirely stopped and the tooth saved.

Dentists all over the world are carrying out research on the problem of root resorption but because it so seldom occurs, the small number of cases that do take place accounts for the slow progress in learning the actual mechanism involved that causes this condition.