

Improper restorations common reason for root canal problems

Quite often, patients initially say "no" to root canal therapy because they know of someone who has had a bad experience. Although some people have heard that root canal therapy is painful, the most common horror stories are about endodontically treated teeth (those that have had root canal therapy) cracking, breaking, or shattering and the subsequent loss of the tooth. There is a very straight-forward explanation for these unfortunate occurrences.

Endodontic therapy involves removing the unhealthy pulp of the tooth (the blood vessels, nerve cells, and cells involved in healing and growth of the tooth), cleansing and sterilizing of the space where the pulp originally was (the root canal itself), and filling the canal with a rubber material called gutta percha. (Incidentally, gutta percha is what is used to create the resilient inside of a golf ball.) It is accomplished using long tiny spiral-shaped files that are shaped to fit the canal space.

Most often, a rubber dam is used to create a protective barrier between the mouth and the tooth that is being treated. With modern anesthetic techniques and medications, the only reason that root canal therapy might be painful is if an uncontrolled infection is



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present and the resulting acidic environment at the base of the root inhibits the chemical reaction that allows anesthetic medication to work properly.

Once root canal therapy is performed on a tooth, a hollow shell of dentin and enamel is left. Since the pulp keeps the tooth hydrated and somewhat flexible, the tooth becomes brittle after root canal therapy. It is generally recommended that an endodontically treated tooth is treated with a bonded filling, called a core, and then a restoration such as a crown is made to strengthen the hollow tooth.

Occasionally, if there is significant remaining tooth structure above the gumline after root canal therapy, a bonded filling alone may be adequate. Because root canal therapy is relatively costly, many patients opt not to have crown therapy completed when it is indicated to strengthen endodontically treated teeth.

In an effort to stabilize teeth for the least amount of additional cost to the patient, dentists often do the best they can to build large core build-ups out of composite resin or silver

amalgam filling materials, hoping that the patient will choose to have crown therapy performed as soon as possible. Unfortunately, most patients forget about the problem once the tooth no longer hurts. The result is that pieces of the tooth begin to break off, the tooth cracks vertically through the root, or the tooth "shatters."

Root canal therapy is an excellent way to save teeth with unhealthy pulps. However, proper restoration of endodontically treated teeth is a must. When teeth fracture vertically, they are usually not able to be saved. Since each case involving root canal therapy is unique, communication between the dentist and the patient about what to do with a tooth after root canal therapy is complete and how soon it should be done is essential.

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