

Composite Restorations or “Tooth-Colored” direct Restorations and Amalgam (silver) Restorations

Composite Resin Restorations

Directly or indirectly restoring one or more of your teeth with tooth-colored materials (“composite resin”) is a common procedure. The resin (composite) material used contains small “filler” particles for strength and wear resistance. These restorations will serve you well for several years. They contain the finest and most up-to-date materials available today. Please be aware of the following information about your new restorations:

Chewing: Avoid chewing excessively hard foods such as hard candy, corn nuts, ice, bones, etc., because the resin material can be broken from the tooth with extreme force. If breakage occurs, replacement of the restoration is not difficult in most cases.

Recall Visits: Professional six-month examinations are necessary. Developing problems can be detected at an early stage and repaired easily. Waiting for a longer time may require redoing the entire restoration. We will contact you when it is time for your recall appointment.

Preventive Procedures: To provide optimum longevity for your restorations and to prevent future dental decay and supporting tissue breakdown, please use the following preventive procedures:

- a. Brush with a fluoride-containing toothpaste after meals, and clean your teeth with floss at least once a day.
- b. Swish vigorously for 30 seconds daily with a fluoride-containing rinse available from many stores without a prescription. Use the rinse before bedtime.
- c. Use a Water Pik as directed
- d. Use 1.1% neutral sodium fluoride as a brush-on material. These products require a prescription from us.
- e. Use a mechanical toothbrush.

The Future: We expect several years of service from these restorations. However, after a service period of years, we have seen the following situations occur

- a. Slight stains may occur at locations around the juncture of the tooth restoration and the tooth. Often, we can remove these stains without redoing the restoration.
- b. Slight chipping at the juncture of the tooth and restoration. Usually, these chips can be smoothed.
- c. The gums (gingiva) may shrink from the restorations, displaying an unfavorable appearance underneath. This condition may require remaking the restoration or modifying the gums.

Silver Amalgam Restorations

Silver amalgam restorations are the traditional “silver filling” materials. They have been used with success by all dentists for more than 150 years. Silver amalgam fillings were originally meant to be a low-cost substitute filling material for those patients who could not afford the standard-of-care gold restorations. They can be used to replace small or large amounts of tooth structure lost through decay or fracture. They are not as technique sensitive as some other restorations, but still require great care in placement and the patient must wait to function on these due to a delayed set of the material. They are composed of about 50:50 silver:mercury, but in addition to the silver and mercury, may also contain very small amounts of tin, copper, and other small amounts of metals. Some of the newer silver amalgam materials are mercury-free. We have no long-term studies on how well these mercury-free amalgams will serve, so in this practice they are not used. An alternative is a composite resin tooth colored material, or "resin" restoration, which has its own set of advantages and disadvantages, but has largely replaced the use of amalgams in the majority of most dental practices today.

I no longer use any amalgams in my practice, but do not recommend removal unless there is a specific reason for replacement or removal. I do not agree that all amalgam restorations are bad (for your health), as many dentists will advocate removal of all. These have proven clinical effectiveness after placement for 50 years of service and can be left in place in the absence of a reason to remove. Now that being said, if there is a dark area and the esthetics are not good then that can certainly be a reason for replacement. However, if you have dental insurance, the reimbursement must be related to a clinical problem, such as fracturing, decay, etc. Dental insurance does not typically reimburse for esthetic restorations.

The silver amalgams available have a life expectancy of 14 years with a plus/minus deviation of 14 years. However, properly placed and maintained they have performed over 50 years.

They can last a long time or may need to be replaced within a year of when they were originally completed. As with resin restorations, the smaller the filling, the longer it can last. Amalgam's use is declining rapidly due to esthetic demands from patients. Previously, most chairside restorations for back teeth, regardless of size, were silver amalgam. With the advent of the newer bonded resin materials, most posterior (back) teeth that previously would have been restored with amalgam are now being restored with the more conservative and more naturally appearing tooth colored resin and porcelain materials. This is dependent on the size of the anticipated restoration.

Disadvantages: The primary disadvantage of the silver fillings are esthetics. It is impossible to have them look like a natural tooth when they are silver, and the appearance can deteriorate as time goes by. If the surrounding enamel is thin, the gray/black color of the metal will show through. So, they can make the tooth look

darker. They add no strength to the tooth, unless bonded, but if the size is too large, then like any restoration it needs to be covered with a crown. Depending on the shape of the filling, they can weaken the tooth because they have a higher expansion/contraction ratio than the surrounding tooth. These forces can, after time, cause the tooth to fracture. They are not considered a conservative restoration because they require more tooth prepared (drilled) than is actually necessary to be removed due to the decay because it requires mechanical retention, not adhesive retention. This extra drilling is strictly to allow the retention of the restoration, which is primarily by mechanical means even though bonding agents can be used to seal and bond the restoration. In some instances, it might be more cost-effective and better for the gingival (gum) health to place a cast restoration (crown or onlay). This would be the case when the silver filling would be very large. When there are extensive amounts of tooth structure to be rebuilt/replaced, it is often quite difficult to establish the proper physiologic contour to the tooth. In addition, the remaining tooth structure, especially the root(s) may be more prone to fracture. While many people advocate, they are a health danger there have not been well controlled clinical studies to indicate this, only anecdotal reports. That being said, if you choose to remove amalgams, do so, but not because someone, or some online source said they are all poisonous. Removing a restoration and replacing it will always remove more of your natural tooth in the process and may even require a more costly restoration such as a crown. So, we are here to discuss your alternatives and help you make informed decisions.

Advantage: Silver amalgam fillings are quick and easy to place, relatively inexpensive, and have a long-term proven record of success.

Disadvantage: Better methods of restoration are now available with composite resin bonding which are more conservative and esthetic.

If you have any questions about composite/tooth-colored restorations, or amalgam “silver” restorations please feel free to ask us.