

Materials Used for Tooth Restorations

This information is provided to help you make better decisions about the use of materials as tooth restoration in your mouth. Many types of metals are used in dentistry for the replacement and rehabilitation of oral structures. Most of these metals are considered to be inert when placed in the body while others have been criticized as potential toxins or allergens to some people. Plastic and ceramic are used commonly as tooth restoratives and have not had adverse biologic responses.

Which type of tooth restorations is best for you? The following information is provided to help you make that decision.

Restoration of Parts of Single Teeth (“fillings”)

Silver amalgam (an alloy which contains silver, tin, copper, zinc, and about 50% mercury) has been used for approximately 160 years for the restoration of teeth. It has been a highly successful but unsightly material. Use of mercury in the body had been criticized since its inception, but amalgam use is still supported strongly by the American Dental Association and other groups worldwide. A small percentage of people in the overall population may be allergic to the elements in silver amalgam. You do have several options.

Your Choices for Fillings

- a. **Silver Amalgam.** Average longevity is 15 years, silver color; low initial cost; best in small to medium sized restorations of posterior teeth.
- b. **Gold Inlays and Onlays.** Average longevity 20 years to life; gold color, moderate to high initial cost; may be used in any size restoration in any location where metal is not displayed. *Indirect two appointment placement.*
- c. **Resin Composite** (plastic). Average longevity 10-15 years; tooth colored; moderate cost; best used in small to medium size restorations for any teeth; *direct one day placement.*
- d. **Resin** (plastic). Average longevity (expected) 10-15 years; tooth colored; moderate to high initial cost; best in medium sized restorations for posterior teeth; *indirect two appointment placement*
- e. **Ceramic Indirect.** Average longevity 10-15 years; tooth colored; moderate high initial cost; best in moderate sized restoration for any teeth; *two appointment placement*

Crowns or Fixed Prosthesis (“bridges”)

Gold alloys have been used for many years for the construction of crowns or fixed bridges. They provide excellent, strong, long lasting service. Three major types of alloys are not available:

- a. **High Noble Metal.** Mostly Gold, also palladium, silver, occasionally platinum, zinc, copper.
- b. **Noble Metal.** Mostly palladium, also silver and gold.
- c. **Base Metal.** Mostly nickel, also chrome or cobalt and other base metals.

All of the above metals are used either as the sole constituent of a crown or as a base on which porcelain is fired (baked). Most people have no biologic response to the metals. If you have known allergies to metals, please tell us. We only use high noble metals as we believe them to be of the highest quality and least reactivity.

Your Choices for Bridges

- a. Metal Alone.** (high noble metal). Longevity 20 years to life, gold or “silver color”; moderate to high initial cost; may be used in any area where metal display is not objectionable.
- b. Porcelain Fused to Metal.** Longevity 20 years to life, tooth colored; moderate to high initial cost; may be used in any area where extreme stress or grinding habits are present.
- c. Ceramic Non-Metal.** Containing crowns (anything over a three-unit bridge constructed from ceramic alone is not advisable). Longevity 10-20 years; moderate to high initial cost; may be used in any area where extreme stress or grinding habits are not present.