

## Amalgam vs. Composite Resin Fillings



**Amalgam (silver filling)** - A mixture of metals, consisting of liquid mercury and a powdered alloy composed of silver, tin, and copper.

### Advantages of using amalgam:

- ✓ Strong, durable and stands up to biting force.
- ✓ Normally the least expensive material.
- ✓ Self-sealing with minimal-to-no shrinkage and resists leakage.
- ✓ Resistance to further decay is high.
- ✓ Frequency of repair and replacement is low.
- ✓ Only material that can be used in a wet environment, especially important when treating small children or special needs patients.

### Disadvantages of using amalgam:

- ✓ Can darken over time as it corrodes. This does not affect the function of the filling, but many find it less attractive than tooth colored materials.
- ✓ Placement of amalgam requires removal of some healthy tooth.
- ✓ Metal expands and contracts as temperature changes and may cause the filling to crack over time.
- ✓ Dental amalgam contains elemental mercury. The FDA, CDC and the WHO have not found evidence of harm from dental amalgam.



**Composite resin (tooth-colored, white filling)** - Made of a type of plastic (an acrylic resin) reinforced with powdered glass.

### Advantages of using composite resin:

- ✓ Require minimal removal of healthy tooth structure for placement.
- ✓ Color and shading can be matched to the existing tooth, does not corrode.
- ✓ Relatively strong material, providing good durability in small to mid-sized restorations that need to withstand moderate chewing pressure.
- ✓ Low risk of leakage if bonded only to enamel.
- ✓ Moderately resistant to further decay and moderately resistant to breakage.
- ✓ Frequency of repair or replacement is low to moderate.

### Disadvantages of using composite resin:

- ✓ Can break and wear out more easily than amalgam fillings, especially in areas of heavy biting force.
- ✓ Sometimes difficult and time-consuming to place. Can not be used in all situations.
- ✓ Composite generally is more expensive than amalgam.
- ✓ May wear faster than natural dental enamel.
- ✓ May leak over time with poor oral hygiene.