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.