Silver amalgam and composite resin are the two most common materials used to restore teeth damaged by decay. There are situations where one material is preferable over the other, and similarly, there are disadvantages to both of these filling materials. Additionally, there are some health experts who question the safety of amalgam fillings and say they should not be used under any circumstances.

The American Dental Association's official position regarding silver amalgam is that it is a "safe, durable and cost-effective material that dentists have used in tooth restorations for more than 150 years." But there are some practitioners who have expressed serious concern over the safety of amalgams, and the controversy over its use continues.

It's the fact that amalgam is composed of 35 percent silver, 15 percent tin or tin mixed with copper, a trace of zinc, and 50 percent mercury—a highly toxic heavy metal. It is also a fact that the only two places to dispose of mercury are in a toxic waste dump and your mouth.

Anti-amalgam dentists point out that the amalgam releases mercury vapor when there is friction on the surface of the filling, such as when you chew. Mercury vapor is cyto-toxic, which means that it kills cells, even when the exposure is minute.

Mercury is absorbed through the lungs and into the arterial blood and is stored by your body, primarily in your kidneys, liver and brain. And no level of this mercury vapor is considered safe. However, the ADA counters that, once bound to the other metals, the mercury in dental amalgam is completely harmless.

While it is highly unlikely that such small concentrations of mercury can or do harm the typical human, there is a remote chance that persons who have immunocompromised systems could have some negative influence from this mercury presence, or the presence of other metals.

It's important to note that no controlled scientific studies have been conducted that demonstrate ill effects to human health resulting from amalgam fillings. The evidence, to date, is all anecdotal.

The World Health Organization has stated that it recognizes the importance of continued monitoring of the safety and effectiveness of all dental restorative materials, including dental amalgam.

Next week we will compare silver amalgam and composite resin.

All previously written columns can be found at www.dentalhealthforlife.com. If there are certain topics you would like to see written about or questions you have please email them to me at jpstclair@dentalhealthforlife.com.