

## DENTAL MATERIALS FACT SHEET

By far, the most commonly used materials in restorative dentistry are gold, porcelain, composites, and amalgam. Each has its own advantages and disadvantages, risks and benefits. Each restorative material contains some ingredients, which may preclude its use on some patients who have sensitivities, allergies, or other special health care needs. Information contained in this fact sheet is intended to encourage discussion between the patient and dentist in the selection of dental materials best suited to the patient's dental health. It is not intended to be a complete guide to dental materials science.

Dental amalgam, used as a primary dental restorative material for over 150 years, is composed of numerous metals mixed together in varying percentages (43 to 54 percent liquid mercury and 46 to 57 percent alloy powder). The mercury component allows for the other metals in the alloy powder (largely silver, copper and tin) to form the "amalgam". Although elemental mercury has been known to be a toxic substance, it was long believed that once it became bound to the metals in the amalgam, it lost its toxicity. Recent research, however, has shown that minute amounts of free mercury can escape from amalgam filling and be absorbed by the body during placement, adjustment, or by vigorous chewing. The preponderance of scientific evidence, to date, fails to show that exposure to mercury from amalgam restoration poses a health risk, except for a small number of allergic and/or sensitive patients.

Direct composite fillings have become an acceptable alternative for dental amalgam when used appropriately. Composites are comprised of numerous elements such as dimethacrylates, bisphenol compounds and beryllium. Some elements contained in composites have been determined to be cytotoxic and carcinogenic. Since the use of composites as a restorative material is relatively new, scientific research has not yet determined the long term benefits or risks involved. However, composites are gaining wider acceptance as a restorative material.

In contrast to the above restorative materials, research has uncovered no health hazards from cast gold or porcelain restorative materials (aside from allergies). However, some non-precious alloys used in place of gold or porcelain have been known to cause sensitivities or allergic reaction in small percentage of patients. Patients should be aware of the risks when choosing these options.

Restorative materials such as composite and amalgam fillings and crown, orthodontic appliances such as brackets and wires, and other materials used in dental treatment contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

I have read and understood this information.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_