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Dental Materials Fact Sheet

DENTAL FILLINGS, CROWNS (CAPS) AND BRIDGES

The chart following this introduction was developed to help dentists explain to their patients the relative advantages and disadvantages of various dental materials used in dental fillings, crowns (caps) and bridges. The chart, based on current (2002) science, is a simple overview of dental restorative materials and is not intended to be comprehensive. In addition, the attributes of a particular restorative material will vary from case to case depending on many factors.

In recent years there has been a marked increase in the development of tooth colored dental materials. The improvement in these materials, however, has not eliminated the value of traditional restorative materials such as gold and dental amalgam. The strength and durability of gold and dental amalgam remain very useful in the back of the mouth where heavy chewing forces must be resisted. In fact, dental amalgam is still the most commonly used filling material. It is the most thoroughly researched and tested. It is durable, easy to use and relatively inexpensive in comparison to other materials.

Concern has been raised about amalgam because of its mercury content. Although mercury by itself is a toxic material, the mercury in dental amalgam is bound to other materials that render it safe for use as a dental filling in all patients regardless of age. As questions have arisen about its safety related to its mercury content, they have been answered to the satisfaction of the major U.S. and international scientific and Health bodies, including The National Institutes of Health, the U.S. Public Health Services, the Center for Disease Control and Prevention, the Food and Drug Administration and the World Health Organization, among others.

Should you have any questions, your dentist will be happy to discuss them with you. You may also wish to review the "Consumer Update: Dental Amalgam" published on March 18, 2002 by the U.S. Food and Drug Administration (FDA), available on the FDA web site.

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	GENERAL DESCRIPTION	PRINCIPAL USES	RELATIVE COST	DURABILITY	APPEARANCE	PATIENT TOLERANCE
Porcelain And Similar Materials	Porcelain, ceramics and glass-like materials.	Crowns (Caps) And Veneers	High Requires at least 2 visits and laboratory services.	Varies May fracture under heavy biting loads.	Excellent Looks like the tooth.	Well tolerated.
Metals	Alloys of gold or other metals.	Crowns and bridges also used for partial dentures.	High Requires at least 2 visits and laboratory services.	Excellent Very strong and durable.	Poor Looks like the metal used.	Gold alloys are well tolerated. Other metals sometimes cause allergies.
Porcelain Fused To Metal	Porcelain fused to an underlying metal to add strength.	Crowns (caps) and bridges	High Requires at least 2 visits and laboratory services,	Excellent Very strong and durable.	Very Good Does not quite have the translucency of natural teeth.	Gold alloys are well tolerated. Other metals sometimes cause allergies.
Amalgam	Mixture of mercury and silver alloy powder forming a solid filling,	Fillings, especially where not easily seen and the bite is heavy.	Below Average	Good To Excellent	Poor Has a silver or blackened silver color.	Well tolerated, except in the rare case of allergy
Composite	Mixture of glass filler and acrylic.	Fillings which are easily seen.	Average	Good If filling is small or average size.	Good To Excellent Looks like the tooth but tends to stain.	Well tolerated.

Please see the US Food and Drug Administrations (FDA) February 2002 "Consumer Update on Dental Amalgam", available on the FDA web site <http://www.fda.gov/cdrh/consumer/arnalgams.html>.

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