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Current Issue

European panel updates amalgam science

'Effective restorative material for general population'

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Luxembourg — Current scientific evidence does not preclude use of amalgam or alternative materials in dental restorative treatment, a European Commission scientific committee said in a final opinion on their safety for patients and users.

"The SCENIHR [Scientific Committee on Emerging and Newly Identified Health Risks] concludes that current evidence does not preclude the use of either amalgam or alternative materials in dental restorative treatment," said the opinion developed at the request of the European Commission. "However, the choice of material should be based on patient characteristics such as primary or permanent teeth, pregnancy, the presence of allergies to mercury or other components of restorative materials and the presence of impaired renal clearance."

The Commission asked the panel of independent scientists to update, if appropriate, the panel's 2008 opinion "in the light of recent developments and studies on dental amalgam." The 2015 opinion evaluates the scientific evidence about any links that may exist between either amalgam or possible alternatives and allergies, neurological disorders or other adverse health effects. "In some areas there are not enough scientific data to provide firm answers to the questions formulated by the EU Commission," the panel said.

"As with any other medical or pharmaceutical intervention, caution should be taken when considering the placement of any dental restorative material in pregnant women," the opinion said. "A decision to perform dental treatment during pregnancy should take into account the dental therapeutic needs of the patient and balance any potential risks (including the use of anesthetics, along with all dental materials) against therapeutic benefits to the patient. Generally, extensive dental treatment during pregnancy is discouraged."

"The SCENIHR recognizes that dental amalgam is an effective restorative material for the general population," said the 115-page [opinion](#) posted at the Commission website. "From the perspectives of longevity, mechanical performance and economics, amalgam has long been considered the material of choice, especially for certain types of restorations in posterior teeth, including replacement therapy for existing amalgam fillings."

Dental amalgam has been used for more than 150 years for the treatment of dental cavities and is still used, in particular in large cavities, due to its excellent mechanical properties and durability, the panel said. "The SCENIHR concludes that dental restorative treatment can be adequately ensured by amalgam and alternative types of restorative material. The longevity of restorations of alternative materials in posterior teeth has improved with the continuing development of these materials and the practitioner's familiarity with effective placement techniques, but is in certain clinical situations (e.g. large cavities and high caries rates) still inferior to amalgam."

Dental filling materials in general can be classified into those used for direct and those used for indirect restorations and some used for both, the opinion said, citing such possible alternatives as resin-based composites, glass ionomer cements, ceramics and gold alloys.

The panel called for further research and said there is a need for the development of new alternative materials with a high degree of biocompatibility.

The ADA offers patient information about amalgam restorations on its consumer website, MouthHealthy.org.



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