Dental Amalgam: Safety, Affordability and Utility
Fact Sheet for Dental Education

DENTAL AMALGAM HAS BEEN USED FOR the last 150 years for tooth fillings, and an estimated 100 million or more Americans are beneficiaries of dental amalgam.¹ Fifty percent of the restorative material is comprised of a metal alloy mixture of silver, tin and copper, and 50% is elemental mercury.² The use of mercury in dental amalgam has raised concerns as a potential health hazard. However, studies have shown that dental amalgam is a safe, affordable and widely used dental material for teeth restoration.

FOR MORE INFORMATION: Contact the ADEA Office of Policy and Education Research (OPER) at policy@adea.org.

ABOUT ADEA: The American Dental Education Association (ADEA) is The Voice of Dental Education. Our mission is to lead and support the health professions community in preparing future-ready oral health professionals. Our members include all 78 U.S. and Canadian dental schools, more than 800 allied and advanced dental education programs, 50 corporations and approximately 18,000 individuals. Our activities encompass a wide range of research, advocacy, faculty development, meetings and communications, including the esteemed Journal of Dental Education®, as well as the dental school application services ADEA AADSAS®, ADEA PASS®, ADEA DHCAS® and ADEA CAAPID®. For more information, visit adea.org.

Dental education plays a leading role in ensuring that future dentists are competent in restorative techniques, procedures and knowledge of all types of dental restorative materials.
### SAFETY
- Global organizations, such as the FDI World Dental Federation and the World Health Organization, have concurred that amalgam is a safe and effective material.\(^3\),\(^4\)
- No scientific evidence indicates that the small amount of mercury released from amalgam restorations poses adverse health effects, such as lower IQ or cognitive decline, or affects other physiological measures, like kidney function.\(^5\),\(^6\)
- The Food and Drug Administration considers dental amalgam fillings to be safe in adults and children over the age of 6.\(^1\)
- The Environmental Protection Agency requires amalgam separators for dental offices to ensure that mercury is safely recycled.\(^7\)
- Other worldwide initiatives, such as the Minamata Convention on Mercury global treaty, vow to protect human health and the environment from the adverse effects of mercury.\(^8\)

### AFFORDABILITY
- An amalgam filling costs less than most other filling materials.\(^9\)
- Due to the affordability of dental amalgam materials, dental health plans are more likely to cover between 25-50% of dental amalgam fillings (depending on the plan).\(^10\)

### UTILITY
- Dental amalgams are durable, long lasting and less likely to break than other types of dental fillings.\(^11\)
- The American College of Prosthodontists supports the use of dental amalgam as an alternative to surface resin-based restorations. Studies show that resin-based restorations need to be repaired or replaced at almost twice the rate of amalgam restorations.\(^12\)
- The American Academy of Pediatric Dentistry recommends the use of amalgam for Class I and Class II cavity restorations in children.\(^13\),\(^14\)

### DENTAL EDUCATION’S ROLE
- Dental education plays a leading role in ensuring that future dentists are competent in restorative techniques, procedures and knowledge of all types of dental restorative materials.\(^15\)
- The use of amalgam in posterior primary and permanent teeth restoration is still widely practiced and taught in predoctoral pediatric clinics in dental schools.\(^16\)
- Dentists have the responsibility to explore and recommend the best restorative and treatment options for each patient.
REFERENCES


AMALGAM RESOURCES AND LITERATURE

The following resources and literature provide a general overview as of February 2021; users should conduct a more in-depth or current review as needed.

U.S. Food and Drug Administration (FDA)
- Recommendations About the Use of Dental Amalgam in Certain High-Risk Populations: FDA Safety Communication
- Dental Amalgam Fillings

World Health Organization (WHO)
- WHO Consensus Statement on Dental Amalgam
  https://fdiworlddental.org/resources/policy-statements-and-resolutions/who-consensus-statement-on-dental-amalgam
- Promoting the Phase Down of Dental Amalgam in Developing Countries

National Institutes of Health (NIH)
- Studies Evaluate Health Effects on Dental Amalgam Fillings in Children

Environmental Protection Agency (EPA)
- Mercury in Dental Amalgam
  https://epa.gov/mercury/mercury-dental-amalgam
- Dental Effluent Guidelines
  https://www.epa.gov/eg/dental-effluent-guidelines

American Dental Association (ADA)
- Statement on Dental Amalgam
- Oral Health Topics—Amalgam
  https://ada.org/en/member-center/oral-health-topics/amalgam

Amalgam Peer-reviewed Literature