

**DENTAL MERCURY HYGIENE  
RECOMMENDATIONS  
ADA COUNCIL ON SCIENTIFIC AFFAIRS**

The following recommendations, adopted in October 1998 by the ADA Council on Scientific Affairs, are provided to update mercury hygiene recommendations published by the former ADA Council on Dental Materials, Instruments and Equipment in 1991. They are intended to provide guidance to dental offices in adopting an appropriate mercury hygiene program. They are not intended to establish a standard of care or to set requirements that must be followed in all cases.

1. Train all personnel involved in the handling of mercury or dental amalgam regarding the potential hazard of mercury vapor and the necessity of observing good mercury hygiene practices.
2. Make personnel aware of the potential sources of mercury vapor in the dental operatory, that is, spills; open storage of amalgam scrap; open storage of used capsules; trituration of amalgam; placement, polishing or removal of amalgam; heating of amalgam-contaminated instruments; leaky capsules; and leaky bulk mercury dispensers. Personnel also should be knowledgeable about the proper handling of amalgam waste and be aware of environmental issues. Some state dental societies have published waste management recommendations applicable to their states.
3. Work in well-ventilated spaces, with fresh air exchanges and outside exhaust. If the spaces are air-conditioned, air-conditioning filters should be replaced periodically.
4. Periodically check the dental operatory atmosphere for mercury vapor. Monitoring should be considered in case of a mercury spill or suspected spill, or when there is a reasonable concern about the concentration of mercury vapor in the operatory. Dosimeters may be used for monitoring. Mercury vapor analyzers (that is, hand-held monitors often used by industrial hygienists), which provide rapid readout, also are appropriate, especially for rapid assessment after a spill or cleanup. The current limit for mercury vapor established by the Occupational Safety and Health Administration is 50 micrograms/cubic meter (time-weighted average) in any eight-hour work shift over a 40-hour workweek.
5. Use proper work area design to facilitate spill contamination and cleanup. Floor covering should be nonabsorbent, seamless and easy to clean.
6. Use only pre-capsulated alloys; discontinue the use of bulk mercury and bulk alloy.
7. Use an amalgamator with a completely enclosed arm.
8. Use care in handling amalgam. Avoid skin contact with mercury or freshly mixed amalgam.
9. If possible, recap single-use capsules from pre-capsulated alloy after use. Properly dispose of them according to applicable waste disposal laws.
10. Use high-volume evacuation when finishing or removing amalgam. Evacuation systems should have traps or filters. Check and clean or replace traps and filters periodically to remove waste amalgam (including contact amalgam) from the waste stream.

11. Salvage and store all scrap amalgam (that is, non-contact amalgam remaining after a procedure) in a tightly closed container, either dry or under radiographic fixer solution. Amalgam scrap should not be stored in water. If the scrap is stored dry, mercury vapor can escape into room air when the container is opened. If the scrap is stored under radiographic fixer solution, special disposal of the fixer may be necessary.

Note: Some recyclers will accept only scrap amalgam that is dry.

12. Where feasible, recycle amalgam scrap and waste amalgam. Otherwise, dispose of amalgam scrap and waste amalgam in accordance with applicable laws. When choosing a recycling company, it is important to check that the company has obtained all required government permits and has not been the subject of a state or federal enforcement action. Because of the nature of environmental laws the generator of the waste (for instance, the dental office) maybe held legally responsible if it is improperly handled by others further down the waste stream. Dentists would be wise to check with their state or local dental society about the laws that apply to recycling and to request documentation from the recycling company that the scrap or waste has been handled properly.

13. Disposal of mercury-contaminated items in sealed bags according to applicable regulations. Consult the state or local dental society about the regulations that apply in the area. Do not dispose in regulated (medical) waste containers or bags or along with waste that will be incinerated.

14. Clean up spilled mercury properly using trap bottles, tapes or freshly mixed amalgam to pick up droplets, or use commercial cleanup kits. Do not use a household vacuum cleaner.

15. Remove professional clothing before leaving the workplace.

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