Amalgam Separators
OVERVIEW

Dentistry and the Environment

Dental Amalgam, BMPs and Separators

Regulatory Alternatives

The Proposed EPA Separator Rule

Help for You
Dentistry is committed to doing its share to protect our environment.

While dentistry contributes less than 1% of the mercury in the environment, we can do more to recycle.
Dental amalgam remains a safe and effective treatment option. But mercury in dental office wastewater originates from waste particles associated with the placement and removal of amalgam fillings.
ADA Policy

ADA included amalgam separators as part of the ADA Best Management Practices (“BMPs”) in October 2007. Separators allow waste amalgam to be captured in the dental office so that the mercury may be recycled.

In 2010, the ADA House of Delegates passed a resolution supporting a national separator rule – provided that rule was not onerous to dentists. These “nine principles” can be found here.

BMPs, National Separator Mandate
Dental Amalgam Separators

• Amalgam separators can capture over 95% of the amalgam discharged by dental offices into sewer systems.
• Increasing amalgam-related mercury captured in dental offices will reduce the amount of mercury entering POTWs and allow for recycling of amalgam waste.
• Most amalgam waste particles generated during placement and removal of amalgam restorations are discharged into a dental unit vacuum line. Chairside traps and vacuum pump filters remove 40 – 80 percent of the amalgam particles from this waste.
Dental Amalgam Separators

Amalgam separators are effective in increasing the amount of amalgam that is recycled.

Separators keep mercury out of treatment plant sludge. This sludge (biosolids) is often incinerated (releasing mercury into the environment) or placed on the land.

Separators usually are easy to install and maintain.

In 2014, the ADA endorsed the HealthFirst Amalgam Recovery Program.
Dentists are Targeted

- Dentists are the number one contributor of mercury to wastewater
- This is why regulators are looking to dentistry to reduce the flow of mercury into treatment plants.
- Treatment plants want to minimize mercury.
Current Regulatory Climate

• 12 states and at least 19 localities have mandatory pretreatment programs that require the use of dental mercury amalgam separators.

• Norway banned most uses of amalgam. Sweden has a similar ban. Both acted for environmental reasons.
Pending EPA and State Action

In 2014, the EPA introduced a proposed national amalgam separator rule, which it expects to finalize in June 2016.

The ADA could not officially support the rule in its current form, but it offered comments on how the EPA could improve the rule.

Of course, states and local governments can insist on their own mandates, rules and conditions.
Our Response, ADA Position

The ADA supports a reasonable separator mandate –provided that certain conditions are met.

The EPA’s proposed rule is a good first step, but would impose unnecessary burdens on dentists and municipalities that operate sewage treatment plants.

The ADA has submitted extensive comments to fix inconsistencies in the rule and make enforcement less onerous for dentists.

The ADA has long supported amalgam separators, and their use is widespread.
Do use precapsulated alloys and stock a variety of capsule sizes
Do recycle used disposable amalgam capsules
Do salvage, store and recycle non-contact amalgam (scrap amalgam)
Do salvage (contact) amalgam pieces from restorations after removal and recycle the amalgam waste

Do use chair-side traps, vacuum pump filters and amalgam separators to retain amalgam and recycle their contents
Do recycle teeth that contain amalgam restorations. (Note: Ask your recycler whether or not extracted teeth with amalgam restorations require disinfection)
Do manage amalgam waste through recycling as much as possible
Do use line cleaners that minimize dissolution of amalgam
Don’t…

- Don’t use bulk mercury
- Don’t put used disposable amalgam capsules in biohazard containers, infectious waste containers (red bags) or regular garbage
- Don’t put non-contact or contact amalgam waste in biohazard containers, infectious waste containers (red bags) or regular garbage

- Don’t rinse devices containing amalgam over drains or sinks
- Don’t dispose of extracted teeth that contain amalgam restorations in biohazard containers, infectious waste containers (red bags), sharps containers or regular garbage
- Don’t flush amalgam waste down the drain or toilet
- Don’t use bleach or chlorine-containing cleaners to flush wastewater lines
Non-Contact (Scrap) Amalgam

- Place non-contact, scrap amalgam in wide-mouthed, container that is marked “Non-contact Amalgam Waste for Recycling.”
- Make sure the container lid is well sealed.
- When the container is full, send it to a recycler.
Amalgam Capsules

- Stock amalgam capsules in a variety of sizes.
- After mixing amalgam, place the empty capsules in a wide-mouthed, airtight container that is marked “Amalgam Capsule Waste for Recycling.”
- Capsules that cannot be emptied should likewise be placed in a wide-mouthed, airtight container that is marked “Amalgam Capsule Waste for Recycling.”
- Make sure the container lid is well sealed.
- When the container is full, send it to a recycler.
Disposable Chair-Side Traps

- Open the chair-side unit to expose the trap.
- Remove the trap and place it directly into a wide-mouthed, airtight container that is marked “Contact Amalgam Waste for Recycling.”
- Make sure the container lid is well sealed.
- When the container is full, send it to a recycler.
- Traps from dental units dedicated strictly to hygiene may be placed in with the regular garbage.
Reusable Chair-Side Traps

- Open the chair-side unit to expose the trap.
- Remove the trap and empty the contents into a wide-mouthed, airtight container that is marked “Contact Amalgam Waste for Recycling.”
- Make sure the container lid is well sealed.
- When the container is full, send it to a recycler.
- Replace the trap into the chair-side unit (Do not rinse the trap under running water as this could introduce dental amalgam into the waste stream.)
Vacuum Pump Filters

• Change the filter according to the manufacturer's recommended schedule. Note: The following instructions assume that your recycler will accept whole filters; some recyclers require different handling of this material, so check with your recycler first.

• Remove the filter.

• Put the lid on the filter and place the sealed container in the box in which it was originally shipped. When the box is full, the filters should be recycled.
Amalgam Separators

• Select an amalgam separator that complies with ISO 11143.

• Follow the manufacturer’s recommendations for maintenance and recycling procedures.
Line Cleaners

• Use non-bleach, non-chlorine-containing line cleaners, which will minimize amalgam dissolution.
Dental Amalgam Separators – Made Easy to Install, Easy to Use, Easy to Maintain

There are resources available to you on in the amalgam separator section at ADA.org:

Separator manufacturers (turnkey operation)

State Dental Society
Dental Amalgam Separators in the ADA Professional Product Review—Fall 2007—Product reviews, buyer’s checklist, expert discussion

Directory of Amalgam Recyclers

Laboratory Evaluation of Amalgam Separators (May 2002)
THANK YOU!

For doing your share