



# Amalgam separators

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**W**e've been hearing a lot about dental amalgam lately, thanks in part to a recent announcement by the Environmental Protection Agency (EPA) of an impending nationwide regulation that will likely require amalgam separators. Since the EPA estimates that 50% of mercury entering our wastewater treatment facilities comes from dental amalgam waste, this issue represents one of the primary environmental concerns in the dental industry today.

Amalgam separators, however, have remained a bit of a mystery, and many dentists are hesitant to install them. Part of this hesitation has been due to the cost of purchasing the unit, though some dealers are offering discounts and other incentives to encourage adoption. Questions remain regarding how the mechanisms work, the difficulty of installation, and ongoing maintenance costs and hassles.

Fortunately, each of these issues can be clearly addressed. Amalgam separators are solids collectors installed on the vacuum lines of dental offices. They use gravity to capture all waste amalgam, along with any other solid material, before it reaches the sewer. As solids collectors, they don't separate mercury from the rest of the material that goes down the drain. All of the material is stored in one canister, and the mercury must be separated out at a recycling facility. Most separators are certified to

remove 99% of dental amalgam, a level of effectiveness that exceeds the ISO standard and meets all local regulations.

In general, amalgam separators are easy to install and operate. Chairside models may often be installed in just a few minutes by the dental team member, though central systems may require a little more time and the expertise of a plumber or technician. Maintenance is minimal and typically involves only replacing the container once it's full, generally every six to 12 months depending on the size of the practice and the number of chairs feeding into the system.

In evaluating separators, the dental practice will want to consider the number of operatories they have, and whether individual chairside separators or a central system installed at the vacuum pump makes more sense. It's also important that the model be ISO-certified for effectiveness, though most models exceed this standard.

Many brands of certified separators are available on the market, so discussing with a dealer about their differences and costs can help to identify the best model for your practice.

Once a separator is in use, full canisters must be sent to a waste management company that can handle amalgam waste. This step is important; full canisters must never be emptied into the trash or rinsed out in the sink. Doing so places the amalgam back into waste streams where it will be reintro-

duced into the environment, effectively negating the whole point of having an amalgam separator. Certified recyclers will separate the mercury from the rest of the sediment, where it will be reused in industry or properly disposed of.

It's important to note that the liability for amalgam waste rests solely with the dental practice, until the waste has been properly recycled. Dentists have been fined after their recycler was found to be illegally dumping amalgam waste. Reputable recyclers will send documentation to the dentist certifying that their waste was disposed of properly, providing proof should the office be audited.

As 12 states already require amalgam separators, and the ADA recommends installing them as part of its Best Management Practices (BMPs) it makes sense for dentists to do so now, ahead of any new regulations.

Since much of the mercury released into the atmosphere can be traced back to dental offices, it's an important issue to understand — and act upon. ●●●

Tricia Osuna, RDH, BS, FAADH, is a USC graduate and current president of the American Academy of Dental Hygiene. With over 30 years of experience as a dental hygienist, Tricia shares enlightening and participatory presentations with her audiences. Osuna is a lifelong CDHA/ADHA member and a previous member of the Dental Board of California. Licensed in both California and New York, her career spans a variety of roles in dental hygiene, including clinician, consultant, educator, author, and mentor, as well as business owner and president of Professional Insights, Inc.

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