Waste mercury from amalgam draws regulatory attention

By John Hoffman
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Waste mercury from spend amalgam restorations is drawing increased attention from state and federal agencies. Although the Environmental Protection Agency has not yet issued national guidelines on the disposal of mercury from dental amalgam, 25 states and the District of Columbia have adopted local regulations or guidelines. EPA estimates that 0.7 tons of mercury are emitted from medical wastes, including dental preparations, each year.

“Medical facilities, because of the large variety of uses for mercury-containing equipment and items, have an increased responsibility for proper disposal and treatment of their mercury waste,” the EPA says. “Many states also are undertaking both regulatory and non-regulatory activities to ensure proper management of mercury-containing dental amalgam.

Various states have proposed or enacted legislation as well as set up voluntary programs that address the use and management of dental amalgam.

In addition, some federal and national organizations have developed outreach materials to provide information exchange, training and general education for the public and dental professionals.”

On its Web site, the Northeast Waste Management Officials’ Association, a nonprofit, nonpartisan interstate association that has a membership composed of the hazardous waste, solid waste, waste site cleanup and pollution prevention program directors for the environmental agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont, provides a list of state programs aimed at collecting mercury from dental amalgam and other sources.

New Jersey is on the verge of becoming the latest state to regulate the disposal of mercury from dental wastes. Once New Jersey’s new guidelines are adopted, most dentists in the state will have a year to comply with best management practices for controlling mercury and two years to install amalgam separators.

The World Health Organization reports that the use of amalgam in dentistry continues to decline because of improvements in dental hygiene and preventive care, as well as competition from other restorative materials. In the 1970s, the use of amalgam restorations in the U.S. was 38 percent higher than it was in 1990, according to 1993 data from the U.S. Department of Health and Human Services. The use of dental amalgam is also declining in the U.K. The annual replacement rate in National Health Service patients in England and Wales fell from 50 million amalgam restorations in 1980 to 12 million to 15 million in 1996.

The Food and Drug Administration, the Centers for Disease Control and Prevention, and the National Institutes of Health continue to review dental amalgam but have found nothing to indicate that it is unsafe for patients.

“To date, the agencies have found no scientific studies that demonstrate dental amalgams harm children or adults, but we continue to review the literature and ask experts their opinions on the safety of dental amalgam,” FDA says.

In September 2006, an advisory panel reviewed FDA’s research and heard presentations from the public about the benefits and risks of mercury and amalgam. “The panel generally agreed that there is no evidence that dental amalgams cause health problems in the majority of the population,” FDA says. “However, the panel did raise concerns about the lack of knowledge concerning the effects of dental amalgam on specific groups, including pregnant women, small children, and people who are especially sensitive to mercury.”

Dental amalgam restorations are a very common treatment that is often used to help prevent and treat tooth decay. It is a compound made of a mixture of metals, including silver, tin, copper, and mercury. The mercury is not toxic in small amounts, but when released into the environment, it can be harmful to people and the environment.

In addition, dental amalgam restorations can contain other metals that are known to be toxic, such as lead and cadmium. These metals can leach into the environment and harm people who come into contact with them.

To help reduce the environmental impact of dental amalgam restorations, many dentists are using alternative materials, such as composite resins, to fill cavities. These materials are less toxic and have a lower environmental impact than dental amalgam.

Dental amalgam is also a concern because of its potential to release mercury into the environment. The metal can leach into water systems and soils, and it can also be released into the air during the manufacturing and disposal processes.

To help reduce the release of mercury from dental amalgam, many dentists are using amalgam separators in their offices. These devices trap the mercury before it is released into the environment.

Despite these efforts, the environmental impact of dental amalgam restorations is still a concern. Dentists and their patients can help reduce the environmental impact by using alternative materials and by ensuring that dental amalgam is disposed of properly.