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**Dental Offices Get “Greener”
New Guidelines Encourage Dentists To Recycle X-Ray, Dental Filling Waste**

CHICAGO, August 21, 2003 – New guidelines from the American Dental Association (ADA) encourage dentists to recycle silver, lead and amalgam waste generated during x-ray and dental filling procedures.

“Dentists want to do their part for the environment we all share,” states James B. Bramson, D.D.S., ADA executive director. “By implementing these guidelines, dentists will continue to make their offices more environmentally friendly.”

Silver Recovery From X-Ray Solution

Dental offices use the same fixer solution to process x-rays that photo processors use to develop photographs. Compared to commercial photo processors, however, dental offices generate a very small amount of fixer solution waste.

Used fixer solution contains silver thiosulphate complexes, which are extremely stable and contain virtually no free silver ion. It is generally accepted that silver in used fixer solutions has little, if any, adverse environmental effect. Nevertheless, out of heightened awareness of environmental issues, the ADA encourages minimizing and recycling dental office waste.

The new ADA guidelines provide dentists with many options for recycling used fixer solution; some of which include:

Using a pick up and recycling service for the used solution

Sending the solution to a silver-reclaiming facility or medical radiology laboratory or commercial photographic processing laboratory

Contacting the fixer solution manufacturer or distributor to see if they will take back used fixer solution if new solution is purchased from them

Lead Recycling

Dental x-ray film packets are packaged in lead foil to prevent the film from being exposed. After an x-ray film packet is opened, the lead foil packaging should be collected and recycled through a licensed facility. According to the ADA, at least one dental x-ray film manufacturer provides a lead foil recycling service.

Lead aprons and collars are used in dental offices to minimize patient exposure to radiation during x-rays. These aprons and collars are typically used for several years.

According to the ADA, lead aprons and collars that are no longer used should be given to a recycler licensed to handle lead waste.

Amalgam Recycling and Mercury Recovery

In a successful effort to minimize waste mercury, dentists use prepackaged capsules to make amalgam dental fillings. These capsules contain powdered metals such as silver, copper, tin and zinc at one end and, separated by a seal, elemental mercury at the other end. Dentists place the capsules in a machine that breaks the seal and mixes the contents together.

According to the ADA, similar to the way sodium and chlorine (both hazardous in their pure state) combine to form ordinary table salt, the mercury in dental amalgam combines with the other metals to form a stable alloy that dentists have used for generations to treat decayed teeth.

Organizations such as the ADA, Centers for Disease Control and Prevention, the U.S. Public Health Service and the World Health Organization support the use of dental amalgam to fill cavities. The ADA goes further in recommending that dentists capture and recycle amalgam to minimize the impact to the environment.

According to Dr. Bramson, “While the ADA recognizes that dental amalgam is a safe material for filling cavities, its waste should be handled properly, recovered and recycled, just as we do with other waste products.”

ADA guidelines advise dentists to recycle used amalgam capsules, disinfect and recycle extracted teeth that contain amalgam fillings, and recycle amalgam particles that are removed by the handheld suction device dentists use when placing or removing patients’ fillings. Suctioned amalgam particles are captured in dental office chair-side traps and vacuum filters.

Up to 80 percent of waste amalgam particles are captured in dental office chair-side traps and vacuum filters. Most of the remaining 20 percent of amalgam particles (those too tiny to be caught in the chair-side traps and vacuum filters) are captured at wastewater treatment plants. These facilities capture a variety of materials that enter the sewer system, such as egg shells, coffee grounds and even miniscule particles such as sand, preventing these captured materials from being discharged into surface waters.

According to a 1997 report from the Environmental Protection Agency (EPA), primary sources of mercury in the environment from human activity are combustion of fuels (53 percent), combustion of waste (34 percent) and other manufacturing and consumer activity (13 percent). Dentistry contributes less than 1 percent of all mercury released to the environment from human activity.

Because environmental conditions vary widely throughout the country and wastewater regulations are set at the local level, the ADA recommends that its state and

local dental societies meet with local waste water and environmental regulators to determine what approach is best for them.

Some areas may decide recycling meets their criteria, while other areas may require dentists to take additional steps.

The ADA serves as a clearinghouse for dental societies and individual dentists, providing information to help them work with local authorities on a variety of environmental issues.

“Protecting the public’s health through responsible handling and disposal of dental waste is a natural extension of dentists’ top priority—to provide the best possible oral health care to patients,” Dr. Bramson concludes.

The not-for-profit ADA is the nation's largest dental association, representing more than 147,000 members. The premier source of oral health information, the ADA has advocated for the public's health and promoted the art and science of dentistry since 1850. The ADA's state-of-the-art research facilities develop and test dental products and materials that have advanced the practice of dentistry and made the patient experience more positive. The ADA Seal of Acceptance long has been a valuable and respected guide to consumer and professional products. For more information about the ADA, visit the Association's Web site at www.ada.org.