

Canada-wide Standard on Mercury for Dental Amalgam Wastes

1. What is the Canada-Wide Standard on Mercury for dental amalgam wastes?

The standard addresses the key parts of the dental amalgam life-cycle of environmental concern. The objective of the standard is to reduce environmental releases of dental amalgam waste from Canadian dentists by 95% by 2005 through the application of improved waste management practices. This 95% will be achieved by the collection and recycling of dental amalgam wastes through the addition of advanced amalgam separator units at dental clinics. Adoption of best management practices under the standard will ensure appropriate management of the collected mercury dental amalgam wastes.

2. What is the science on mercury?

Mercury is a naturally occurring substance as well as a toxic pollutant originating from various human activities. Levels in soils, water and fish can vary across the country depending on the geology of the rocks and soils and the amount of pollution. Once mercury is released into the air, it can circle the globe several times before being deposited into lakes, streams, forests and fields. Present levels in fish from some water bodies are unsafe for fish-eating wildlife, such as loons and otters. Fish in many areas cannot be eaten safely by humans. Elevated levels of mercury in the

fish eaten by women of child-bearing age pose a threat to the health of their newborns, which are much more sensitive than adults. Because of concerns about possible release to the water of mercury in the amalgam particles that can be discharged from dental clinics, efforts to improve capture and management of these particles is considered appropriate.

3. Extent of the problem

Mercury levels in fish, typically in remote areas, have an impact on recreational and subsistence fish consumption in most jurisdictions, and affect First Nations' traditional way of life and food sources. These impacts are significant across northern Canada, though the source of most of the mercury is likely due to human activities in the industrialized south emitting mercury to the atmosphere.

Potential releases to waterbodies due to dental amalgam waste complicates the already complex impacts from airborne deposition, and may inhibit the timely recovery of lakes and rivers. In addition, amalgam waste can be methylated, releasing methyl-mercury into the environment. Also some dental amalgam waste winds up in sewage sludge that is incinerated or applied to farm fields, thereby expanding the areas of contamination.

Presently some amalgam particles, perhaps representing 60% of those that might be otherwise emitted, are captured by existing

equipment. This collected material should be disposed of wisely or recycled. Recently available technology complements the current equipment and can raise the collection efficiency for amalgam particles to over 95%. Installation of such equipment is gaining popularity in a number of municipalities where bylaws limit mercury levels in the sewers. This standard is complementary to many local bylaws, as both direct dentists to consider adopting these advanced separators, and managing the collected waste wisely, through best management practices.

Taking action to minimize releases of mercury from ongoing uses is a pollution prevention initiative based on the precautionary approach, as the direct link between waste amalgam discharges and environmental levels may be difficult to establish.

4. Achieving the Standard

Achievement of this CWS will begin with the initial actions listed in the companion document to the CWS. Negotiations with the Canadian Dental Association and local dental associations are being undertaken to promote early implementation of the final standard. Jurisdictions' detailed plans for achieving the CWS will be developed and implemented following the signing of the CWS, expected in September, 2001.

From an international perspective, this CWS will help Canada and its jurisdictions to meet international commitments (e.g. Canadian delivery of the North American Commission for Environmental Co-operation's Mercury Action Plan and the New England Governors/Eastern Canadian Premiers Mercury Action Plan). This CWS will also enhance our ability to secure the necessary international efforts to reduce or

eliminate mercury releases to the global pool.

Further information is available from the CCME's website at www.ccme.ca/.