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Dr. James Brookfield,
President
Canadian Dental Association
1815 Alta Vista Drive
Ottawa, Ontario

Dear Dr Brookfield

In November 1995 the Canadian Dental Association circulated to its members a position statement on dental amalgam and a set of questions and answers on amalgam to be used by dentists in responding to inquiries from patients. At our recent amalgam meeting in Toronto, I mentioned some inaccuracies in that policy and you invited our comments. This letter is to provide you with comments on the policy statement and the Questions and answers.

Firstly the use of the term "silver dental amalgam" may be misleading to lay readers. It is technically correct that the word "amalgam" by definition means an alloy of metals with mercury, and therefore "silver amalgams" means an alloy of silver with mercury, however, many patients may not know this and may assume that the filling material is mostly silver. This is not true, since current dental amalgam contains no more than about 35% silver. Mercury is the principal ingredient, and so it might be more accurate to leave the word "silver" out of the title.

COMMENTS ON THE QUESTIONS AND ANSWERS

Q. Who is responsible for the safety of medical devices and dental materials?

A. In Canada, medical devices and materials require approval of the Health Protection Branch of Health Canada.

Not all devices and materials require approval by the Health Protection Branch. Only those listed in the table to Part V of the Medical Devices Regulations must obtain "approval" (more precisely a Notice of Compliance) before they may be sold. Dental filling materials are specifically exempted from this requirement.

Q. Is dental amalgam approved for use in Canada?

A. Yes, dental amalgam is approved for use in Canada by Health Protection Branch.

This statement is categorically false. Dental amalgam has never undergone pre-market review in Canada because it was in use before the Medical Devices Regulations were established. The CDA previously published this misinformation in a paper in the CDA Journal in May 1995. At that time, we informed the CDA of this error, but CDA has repeated it here.

Scientific literature on the topic, as a whole, supports the position that amounts released are generally less than mercury picked up from natural sources.

This may be a misleading over-simplification. The World Health Organization states that dental amalgam is the largest single source of mercury exposure for persons not occupationally exposed (reference World Health Organization. 1991. Inorganic Mercury. Environmental Health Criteria 1 18. International Program on Chemical Safety. (Geneva)). In some individuals the mercury exposure from amalgam may be as great as from all natural sources combined.

Q. Is the mercury which is released from fillings absorbed into the body?

A. Yes, but in extremely small amounts, i.e. in MILLIONTHS of a gram (this is very small amount, 0.000001 grams.

This answer is rather condescending and insulting to the intelligence of readers. By emphasizing only how small a microgram is it implies that a microgram of toxic material could not be harmful. What is significant is not now many zeroes there are in a microgram, but how many micrograms of mercury are released by and compared to the number of micrograms required to cause illness. The fact is that a level of only one hundred millionths of a gram (only 0.0001 am) of mercury per gram of Creatinine in urine is considered to indicate clinical mercury poisoning.

Some researchers claim to detect higher mercury in the blood of people with amalgams than in those without amalgams but other researchers could not detect mercury in the blood of patients even with new amalgam restorations.

Although I am not familiar with studies that could not detect mercury in the blood of patients even with new amalgam restorations, there are several reliable studies (one of them by Dr Anders Berglund) which show higher levels of mercury in blood and urine of people with amalgam fillings than in these without. There are also studies which show a strong correlation between the number of amalgam surfaces and mercury levels in the brain and kidney. These studies are discussed in the 1993 US Department of Health and Human Services report "Dental Amalgam; A Scientific Review and Recommended Public Service Health Strategy for Research, Regulation and Education", Appendix 3, pp 10-15

Q. Is the dental profession suppressing information on the dangers of amalgams?

A. No, the dental profession believes in informed patient consent and recognises the patient interest above any other considerations.

You are in a better position than we are to determine the degree to which this statement is correct. The CDA policy states that "Dentists want patients to be aware of conclusions from the range of scientific studies on dental amalgam so that the appropriate choice can be made." This statement is difficult to reconcile with the CDA's sweeping dismissal of research such as that discussed above, linking mercury levels with the number of amalgam fillings.

Thank you for providing us with the opportunity to comment on the CDA policy on dental amalgam, and the Questions and Answers. I hope that the comments are helpful to you in revising these documents to present more accurate information on this subject.

Yours sincerely,

Richard S. Tobin, Ph.D
Director

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