

## INTRODUCTION

ASOMAT would like to note that its original submission was presented in response to a request from NHAC in August 1997. At that time ASOMAT was specifically told not to make it too extensive or large because NHAC, due to workload, would not have time to read it. ASOMAT's suggestion of an overview without great detail was deemed to be appropriate for the purpose at the time, and that a more extensive submission could be made later. ASOMAT was therefore surprised to learn that its preliminary submission had been sent for a review by Prof. Moore. ASOMAT was also surprised that it was not given the opportunity beforehand to prepare a more thoroughly documented and extensive document for review, which would more accurately reflect the situation as seen by ASOMAT. ASOMAT is committed to cooperation with NHAC/NHMRC in the review of this issue and therefore urges that the review process be as transparent as possible in order to obviate any perception of bias. One method to achieve this would be timely consultation and communication with parties who have an acknowledged interest in the issue.

As far as Prof. Moore's review is concerned, ASOMAT notes that Prof. Moore has been publicly aligned with the Australian Dental Association's stand on amalgams for some years and has consistently been cited by the ADA as supporting their views. ASOMAT was not surprised, therefore, by the tenor of Prof. Moore's evaluation of its submission. ASOMAT offers the following observations to assist NHMRC in its objective evaluation of this issue.

Prof. Moore's comments that the amalgam problem is a diminishing one is correct in only one specific regard. That point is that as fewer amalgams are placed we can expect fewer NEW amalgam related problems in the future. As far as existing amalgam bearers are concerned, we can expect, if our present experience is any guide, increasing problems in the future as the heavy metal tissue loads increase over time. Amalgam derived mercury related health problems of this exposed group need to be acknowledged as a valid clinical entity so that affected people can receive appropriate care even in a situation where amalgams might no longer be in use. In this regard, Health Canada has distributed a letter to all dentists in Canada to bring this issue to their attention.

ASOMAT was formed in order to create awareness of research, hitherto ignored, which supports the view that amalgams are not harmless. This was done out of necessity because of the regrettable one sided portrayal and widespread misrepresentation of this issue by the dental associations. It should not be surprising, therefore, that ASOMAT has presented research which presents a view different to that held by the ADA and Prof. Moore. This does not invalidate the submission but should serve to stimulate a more thorough examination of the issue. It is then up to NHMRC to objectively evaluate both sides of the argument, using the same scientific standards for both.

Prof. Moore's assertion that ASOMAT's submission was based almost entirely on the work of Richardson is a regrettable misrepresentation, and completely untrue. The submission was based on the references supplied, references which Prof. Moore apparently did not read. Not having read them, of course, he was unable to recognise their connection to the ASOMAT submission. Prof. Moore's opinion that there is not much science in the ASOMAT submission is surprising. ASOMAT provided approximately 80 references with its original submission so Prof. Moore's characterisation of the ASOMAT submission is incongruent with the reality of the document. Prof. Moore may disagree with ASOMAT's assessment of the cited research, hopefully only after reading it first, but he cannot characterise it as 'not much science'. It can be judged as good science or bad science but not as 'no science'. ASOMAT is confident that if Prof. Moore had looked at the references he would have acknowledged their relevance and contribution to the overall understanding of this issue.

Prof. Moore has provided very few references himself, quoting only Eley's work which criticised Dr. Richardson's risk assessment study for Health Canada. It is ASOMAT's impression that Prof. Moore

has not read Dr. Richardson's study and that he is not completely familiar with its background. ASOMAT is surprised that Prof. Moore has accepted at face value the reported criticisms of Dr. Richardson's work without carrying out a more detailed assessment of both.

It needs to be pointed out that Dr. Eley is a dentist from the Periodontal Department of the King's College School of Medicine and Dentistry in London. He has, to the best of ASOMAT's knowledge, no formal background in toxicology or risk assessment. His criticism of Dr. Richardson contains errors of fact as well as evidence of a lack of understanding of the subject, and was published not in a peer reviewed journal appropriate for the subject, but in the journal of the British Dental Association. Just as one would not expect an article on the mechanical performance of dental fillings in a risk assessment journal, one would not, by the same token, expect any article detailing criticism of a major risk assessment study to be in a dental journal. It should be more appropriately submitted to a relevant journal, where knowledgeable and experienced reviewers can assess the merits of the criticism, not to one whose reviewers have no understanding of the subject, or a vested interest in unfounded criticism.

Dr. Richardson, on the other hand, is a specialist in this area who used standard accepted techniques and whose paper, the conclusions of which, incidentally, were validated by other researchers, was peer reviewed by 16 other people before being submitted to Health Canada and by a further three anonymous peer reviewers before being published, a total of 19 experts who found his approach and methodology to be appropriate. ASOMAT is perplexed by Prof. Moore's willingness to dismiss Dr. Richardson's work so readily on the assessment of someone with no demonstrated expertise in the field. ASOMAT requested, and has included in this submission, (Appendix 10) a letter from Dr. Richardson responding to Eley's criticism of his research. This will, hopefully, be helpful to NHMRC in determining the credibility of Dr. Richardson's work.

In his communication with ASOMAT, Dr. Richardson also stated that he would be willing to collaborate with Prof. Moore in helping to establish appropriate TDI levels for mercury exposure from dental amalgams. He would also be willing to confer with NHMRC during a planned trip to Australia in September 1998. ASOMAT respectfully encourages NHMRC to take advantage of Dr. Richardson's willingness to assist in this matter.

It is correct that neither Germany nor Sweden have banned amalgam fillings with the one exception being the banning of one specific form of amalgam. The overall situation in Europe is that the German and Norwegian Health Departments have issued directives that dentists not use amalgams in pregnant women or in children. This is advice which ASOMAT believes is accurate but NHMRC should confirm this independently. ASOMAT is also reliably informed that the Swedish Social Services Department recently announced that reimbursement for amalgam fillings will cease by the year 2000. This is not a department of the Swedish Government concerned with environmental aspects but with the health care of the community. NHMRC should confirm this independently as well.

There is some truth in Prof. Moore's comment about reductions in mercury use being for environmental reasons. Indeed one of NHMRC guidelines state 'salvage all amalgam scrap and store in a tightly closed container. Storage under water offers no protection'. Further, the American Dental Association (JADA 105: pp930 1982) recommended that amalgam scraps be stored under photographic fixer solution in a tightly closed container. In light of such warnings it would seem that the only safe place to store this material is in teeth. Nevertheless, ASOMAT applauds efforts to reduce mercury in the environment and is comforted by reassurances that authorities would never use such statements as a convenient rationale for avoiding a full and frank discussion of the dangers of mercury toxicity from dental amalgams.

ASOMAT generally agrees with Prof. Moore's comment that dentists and dental staff are at risk and has presented a range of studies showing health problems in this group. Whether they are more or less at risk than the 'caries-challenged' patient has not yet been proved.

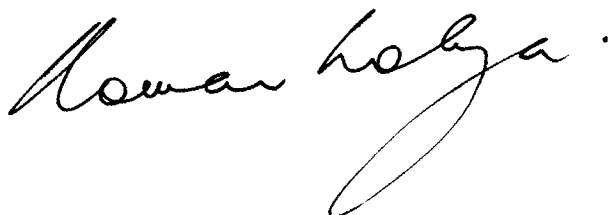
ASOMAT has noted the abstracts supplied by Prof. Moore and is disappointed that a broader selection was not chosen. Almost all the abstracts appear to support the pro-amalgam view and, as such, do not reflect the reality of the wide divergence of views present in the literature. ASOMAT has taken the liberty of enclosing its own selection of abstracts for NHMRC consideration. ASOMAT acknowledges they reflect the anti-amalgam view, but it seems that this is necessary in order to achieve some balance. NHMRC will, in due course, decide the worth of these various articles and abstracts but if it is not even aware of their existence in the first place then a considered decision is impossible.

Prof. Moore mentions the contaminated sites group investigation. ASOMAT has not seen this monograph but assumes it deals with mercury in the soil. If this assumption is correct, then ASOMAT would draw NHMRC's attention to the fact that this monograph would most likely be dealing with ionic mercury which is the most common form in soil. If this is true then the monograph is of limited relevance here because the pharmacokinetic and toxicological characteristics of ionic and vapour forms of mercury are different.

A comprehensive review will obviously incur some costs. Any decision to proceed with such a review must consider the possible benefits to be gained in undertaking such a review, as opposed to the costs. ASOMAT contends that there is a significant underlying reservoir of ill health, poorly defined and inaccurately diagnosed where a major factor is mercury exposure from dental amalgams. The extent

of this is unknown but a small clue is evident in a 1992 study carried out by the Social Insurance Office of Stockholm County. Results showed that the incidence of sick leave by amalgam affected patients in Sweden fell by 50% in the two years after amalgam fillings were removed. If only a minute fraction of health costs in Australia were attributable to mercury exposure from amalgams, and appropriate corrective and preventive measures were instituted, the savings would justify the cost of a review countless times over. More importantly NHMRC needs to consider the costs of failure to prevent mercury contamination of the Australian populace. To cite just one example, research presented by ASOMAT in the following formal response shows neurological damage by mercury in young children at levels previously considered safe. The societal costs associated with such interference with our children's potential is enormous. In this particular issue it is not appropriate to wait until irrefutable evidence exists. Many times judgements need to be made where complete certainty about every single aspect of a problem does not exist. This is one such time. ASOMAT believes that NHMRC's responsibility is to err on the side of caution particularly when the consequences of not doing so have the potential for irreversible damage.

ASOMAT believes that in the light of recent research, detailed in the following sections, the current evidence clearly raises serious concerns regarding the safety of dental amalgam. As such ASOMAT believes that a full review of the current literature with a view to formulating a new policy and establishing TDI levels of mercury from dental amalgams is not only justified but necessary.

A handwritten signature in black ink, reading "Roman Lohyn". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Roman Lohyn  
President ASOMAT

**May 1998**