"SILVER AMALGAM FILLINGS" - A VIOLATION OF THE FTC ACT!!

A recent edition of the ADA News (4 June 1990, Pg. 10) told of a New York dentist whose license was REVOKED (not just temporarily suspended) for removing amalgam fillings from a patient who had so requested. This is ominous news, indeed! State Dental Boards have attacked anti-amalgam dentists in numerous other states; including California, Florida, Utah, Colorado, Arizona, Montana, Iowa, Michigan, and Missouri. Some dentists have already had their licenses suspended; others are under attack at this very moment.

It is obvious that the pro-amalgam dental establishment, sadly lacking scientific support for its position, has elected to fully utilize its only weapon - political power. This approach simply cannot be ignored any longer. It has too great an effect on the lives and livelihoods of conscientious anti-amalgam dentists and on the public health.

There are steps that can be taken without encountering the expense of long, drawn out legal proceedings. Since the pro-amalgam dental leadership insists on utilizing the vicious tactics of license suspension and revocation, we should now counter with an even greater weapon - THE TRUTH!

The pro-amalgam forces have been hiding behind a semantic cover-up for far too long. The use of the terms "silver fillings", "amalgam fillings", or "silver amalgam fillings" is a shameful attempt to conceal vital information from the public. By failing to include the word "mercury" in the representation of these fillings to the public, patients are denied information that could well influence their decision in the acceptance of these fillings. Furthermore, it has now been clearly proven that patients provided with these fillings will experience chronic exposure to mercury, a highly poisonous element with no established toxic threshold. If these fillings are represented publicly with the omission of the word "mercury", it is clearly in violation of the United States Federal Trade Commission Act and probably even the Dental Practice Act in most if not all of the states.

We can thank the pro-amalgam establishment for opening the door to the following knowledge. Recently, the Dental Board in one state attacked a dentist for advertising "mercury-free dentistry" in the telephone yellow pages. The dentist contacted the Federal Trade Commission and received a ruling that his
advertisements was not deceptive or in violation of the FTC Act. The phrase "mercury-free dentistry" was a statement of fact. As long as he did not utilize mercury in his practice, the statement merely informs the consumer of this limitation and is accordingly not deceptive.

The FTC went on to explain their evaluation of deceptive advertising. They focus on the content of the ad and its likely effect on the consumer. This entails: 1) whether the ad contains a representation or an omission of important qualifying information necessary to prevent a representation from being misleading; 2) the representation or omission is likely to mislead consumers acting reasonably in the circumstances; and 3) the representation or omission is "material" - one that concerns information important to consumers and is likely to affect their conduct or purchasing decisions.

There is no doubt that the omission of the word "mercury" in the representation of amalgam fillings to the public fulfills all three of the FTC requirements. FTC procedures for deceptive advertising are initially directed to merely correction of the deception. Offenders are fined only if they refuse to comply with the FTC directive.

Patients have the right to know that silver amalgam fillings are predominantly mercury. They also have the right to know that acceptance of these fillings will result in chronic exposure to mercury, throughout the lifetime of the fillings. Deliberately withholding this information from the public is a shameful blight on the dental profession and a travesty to professional ethics.

If public advertisements for amalgam fillings that omit the word "mercury" were reported to the Federal Trade Commission it would result in the cessation of this deliberate misrepresentation. The location of regional FTC offices may be obtained from the blue pages of the telephone directory by calling "general information" in the U.S. Government section.

This interesting information prompted us to look further into this issue. We obtained a copy of the Dental Practice Act in our state and reviewed the section on advertising. The Act contains the following wording: "As used in the rule of this Board, the terms 'advertisement' and 'advertising' shall mean any statements, oral or written, disseminated to or before the public or any portion thereof with the intent of furthering the purpose, either directly or indirectly, of selling professional services, or offering to perform professional services, or inducing members of the public to enter any obligation relating to such professional services."

The Act also states: "No dentist shall disseminate or cause the dissemination of any advertisement or advertising which is in any way fraudulent, false, deceptive, or misleading in form or content. Additionally, no dentist shall disseminate or cause the dissemination of any advertisement or advertising which: (h) Contains other representations or implications that in reasonable probability will cause an ordinary prudent person to misunderstand or to be deceived."

According to this wording, any communication by dentists to patients or acquaintances (a portion thereof the public) would fall under the purview of the Dental Practice Act, if not the FTC Act. Once again, the intention should not be to punish dentists who use amalgam, but to ensure that information that could have a potential health effect is not illegally withheld from patients.

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CLEARING THE AIR ON SWEDEN

It would seem that it is necessary to once again portray the accurate situation regarding dental amalgam in Sweden. A great deal of misinformation has been circulating. Sweden has NOT banned the use of dental amalgam - at least not yet! KEMI (the Chemical Inspection Agency of the Swedish government) has declared that it will ban all mercury products, including dental amalgam. The reason for this action is the effect of mercury on the environment. KEMI is now preparing a timetable for banning mercury, along with several other dangerous chemicals, which it hoped to present to the Swedish government by 1 July 1990 (no word yet on this from Sweden).

The Environmental Safety Agency of the Swedish government has joined KEMI in calling for a ban on the use of amalgam. So have several political parties in the Swedish Parliament. The new Director of the
Socialstyrelsen, Dr. Kristina Doctare, has publicly gone on record questioning the continued use of dental amalgam considering the findings of the agency’s expert commission announced in May of 1987.

The Socialstyrelsen is Sweden’s National Board of Health and Welfare. They have no power to ban medical materials unless they are classified as drugs. They do, however, have considerable influence on medical treatment. In view of the Director’s public announcement, Bio-Probe wrote to the Socialstyrelsen requesting clarification of their formal position on dental amalgam. Dr. Hans Sundberg, the Chief Dental Officer of the Socialstyrelsen, has been instrumental and active in defense of the use of dental amalgam. He was, however, obliged to send us the official position of the Socialstyrelsen as documented in June of 1988. This document states: “At present there are no scientific data indicating that exposure to mercury from dental amalgam causes symptoms of poisoning.[Note the use of the word ‘symptoms’ rather than ‘harm’ or ‘damage’.] The National Board of Health and Welfare’s group of experts, however, underlined that amalgam is an unsuitable dental filling material from a toxicological point of view. The development should be stimulated of new dental filling materials which are technically and biologically satisfactory. While waiting for such materials to become available as general replacement for amalgam, amalgam may therefore still be used as dental replacement material. On the other hand the Board of Health and Welfare is of the opinion that treatment of pregnant women with amalgam should be avoided as far as possible. This judgement has been passed awaiting further research into disorders of the reproductive system related to exposure to mercury. Dentists shall always inform the patient about possible alternatives and take notice of the patient’s right to refuse certain treatment.”

The document goes on to state that the use of dental amalgam should be gradually decreased and that, even then (in 1988), alternative materials should be used whenever possible and when indicated for various other reasons (left unspecified). It is also interesting to note the official declaration of the patient’s right to know and freedom of choice.

Keep in mind, moreover, that this document was presented over two years ago. The dental division of the Socialstyrelsen has pointedly stonewalled the issue, in spite of the fervent concern and activity that has been generated inside and outside of governmental and scientific circles. It is for this reason, perhaps, that the dental division lost its autonomy and was placed under the direction of the medical authorities in January of 1990. In Sweden, the determinate of the continued use of dental amalgam has been removed from the authority of the dental profession.

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U.S. GOVERNMENT BANS MERCURY IN INTERIOR LATEX PAINTS

On 29 June 1990 the U.S. Environmental Protection Agency announced that it was banning the use of mercury in interior latex paint. The EPA stated that the toxic chemical (mercury) posed an unacceptable health risk. Latex paint for exterior use would soon be required to carry warning labels if they contained mercury. Up to now paint companies have not been required to list mercury among the ingredients in interior or exterior paints. In March of 1990 the U.S. Centers of Disease Control (CDC) warned consumers not to use mercury-containing interior paints.

Mercury is added to some latex paints to retard the growth of bacteria and mildew. Federal officials began investigating the potential health threats posed by mercury in latex paint in 1989 after a four year old boy became ill from mercury poisoning ten days after his home was painted. He was hospitalized for several months. Linda Fisher, the EPA’s Assistant Administrator for pesticides and toxic substances, said: "Given the wide exposure to paints, we are especially concerned about the possible hazards to children, pregnant women and painters."

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URANIUM-FREE DENTAL PORCELAIN!

As a matter of habitual practice, manufacturers of dental porcelain have long added depleted uranium to their products in order to provide them with a natural appearance. The Food and Drug Administration, after
testing dental porcelains and detecting radiation emanating from them, "suggested" that manufacturers of
dental porcelain find some other means of providing them with a natural appearance. We are pleased to
report that one company has now provided us with written confirmation that their porcelain does not
contain depleted uranium. The following letter, dated 16 October 1989, was received from Jeneric/Penatron
Inc.: "This is to confirm, in writing, that none of our porcelains, including Optek hsp, has any Uranium
present in them. The fluorescence agent in our porcelain does not belong to the Uranium compounds. The
Optek hsp's typical composition falls in the following range: silicon dioxide = 60-65, aluminum oxide =
16-19, potassium oxide = 12-15, sodium oxide = 1-3, lithium oxide = 1-3, magnesium oxide = 0.5-1.5,
calcium oxide = 0.5-1.5. It is hoped that the above suffices your need. Thanking you." [Although not
indicated, we assume that the listed figures represent percentages by weight.]

It may be noted that the company did not disclose the name of the fluorescence agent that is used in their
products; this is proprietary information that does not have to be revealed. It is indeed possible that some
other radioactive material is used in lieu of depleted uranium. Our dental readers are encouraged to write
the manufacturers of the dental porcelain they use requesting written notification of the fluorescence agents
used in the product. Please forward the responses to Bio-Probe for dissemination to all readers.

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SCIENTIFIC REVIEW

Eedy, MB; Burrows, D; Clifford, T; Fay, A.
Elevated T cell subpopulations in dental students.

ABSTRACT: The absolute numbers of circulating white cells and lymphocyte subpopulations were
studied in 25 final-year dental students and compared with a control group of 28 medical students. The total
lymphocyte count, total T cell numbers (CD3), T helper/inducer (CD4), and T suppressor/cytotoxic (CD8)
numbers were significantly elevated in the dental students as compared with the control group. There was
no significant difference in the T helper/inducer to T suppressor/cytotoxic cell ratios or the circulating B
cell (CD21) and natural killer cell (CD16) numbers between the study and control groups. Patch testing to
mercury and mercuric compounds in both the study and control groups showed no evidence of cutaneous
hypersensitivity to mercury. The reason for the observed elevations in T cell subpopulations in dental
students is not clear. However, one possible explanation is the dental student's occupational exposure to
mercury. Further work is underway to examine this relationship and it is suggested that dental personnel
take adequate measures to reduce their exposure to mercury until the results of these studies are available.

Although significant variations in T cell subpopulations were discovered, no significant elevations in
total white blood cell count was found. The authors did point out that the reference range was obtained
from a population of 18-65 years of age whereas the subject cohort was in ages 20-23. The patch testing
materials should also be noted. They were mercury in petrolatum (0.5%), aqueous phenyl mercuric acetate
(0.01%), and 50% amalgam powder in petrolatum.

BIO-PROBE COMMENT: This study was published in a standard dental journal with wide
distribution, so its results are readily available to the dental profession. Moreover, one of its authors, Dr.
Desmond Burrows, was a featured speaker at the 1984 NIDR/ADA Symposium on the Biocompatibility
of Metals Used in Dentistry, thereby establishing the study's credibility in the dental community. The study
presents critical information in three areas of interest:

1. It is clear from the study results that skin patch testing is not a valid procedure for detecting the effects
   of mercury on the immune system. Subjects with positive immune effects exhibited a 100% false negative
   response to skin patch testing with mercury and mercuric compounds.
2. As a result of this finding, consideration should be given to the probability that the influence of mercury on the immune system is primarily TOXIC rather than ALLERGIC (Hypersensitivity is an allergic response).

3. Dental authorities maintain that dentists, on the average, are healthier than the general population. Unless immune dysfunction is considered healthy, this study belies that claim. The results of this study verify previously published findings of immune dysfunction in dental students. (White & Brandt. Development of mercury hypersensitivity among dental students. JADA. 92:1204-7. 1976) (Miller et al. Prevalence of mercury hypersensitivity in dental students. J Dent Res. 64:338. Abs. #1472. Mar 1985). It should be noted that these previous studies utilized only skin patch tests and would therefore reflect considerable false negative responses. As dental students are closely monitored for mercury hygiene, amongst other things, it is highly unlikely that practicing dentists would exhibit significantly better findings.

Katsunuma, T; Ikura, Y; Nagakura, T; Saitoh, H; Akimoto, K; Akasawa, A; Kindaichi, S.
Exercise-induced anaphylaxis: Improvement after removal of amalgam in dental caries.

**ABSTRACT:** Exercise-induced anaphylaxis (EIA) is a unique syndrome consisting of warning symptoms of generalized body warmth, itching, and erythema that progresses on continued exertion to confluent urticaria, angioedema, gastrointestinal symptoms, headache, and sometimes unconsciousness. In many cases, an exercise related elevation in serum or plasma histamine is recognized. This syndrome is known to be a distinct form of physical allergy.

In terms of therapy, there does not seem to be any prophylactic medication that successfully reduces the severity, occurrence, or intensity of the symptoms. The usual emergency therapy for the anaphylactic reaction includes the subcutaneous administration of epinephrine, oxygen therapy, and the administration of antihistamine drugs and corticosteroids. In some cases, anaphylaxis occurs only when exercise is preceded by the ingestion of certain foods; fasting for a few hours before or after exercise is preventative.

The authors, all physicians, describe an EIA patient in whom drug and food elimination therapies were not effective: "We present a case of exercise-induced anaphylaxis with improvement following the removal of dental amalgam. Although her symptoms were unresponsive to various kinds of therapy until removal of the amalgam, her symptoms related to exercise improved remarkably after the removal. The increase in plasma histamine levels for exercise provocation test also improved. This suggests that sensitivity to metals might cause exercise-induced asthma in some patients."

Before amalgam removal the patient’s symptoms included urticaria, erythema, itching, fainting, atopic dermatitis, chest tightness, abnormal electrocardiogram, abnormal electroencephalogram, nausea, joint pain, and rigidity of extremities. Two months following amalgam removal only mild itching and erythema remained. Approximately one year after the removal, the patient enjoys a normal daily life, including gymnastic exercise without any medication.

**BIO-PROBE COMMENT:** The authors cited numerous other published reports of allergic reactions to dental metals, including mercury. Most were of allergic dermatitis. In the case of EIA, a far more serious potential exists. Anaphylaxis can be life threatening. It is also known that allergic responses can become progressively more acute and serious with repeated exposure.

In the case of exercise-induced anaphylaxis, the role of perspiration must be considered. It has been known since antiquity that perspiration is one of the routes of elimination of mercury from the body. Exercise would obviously increase perspiration, thereby increasing body mercury mobilization and skin exposure.

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Leggott, PJ; Jacob, RA; Zambon, J; Walsh, M; Armitage, GC; Robertson, PB.  
Periodontal effects of experimental vitamin C deficiency in humans. 

**ABSTRACT:** The purpose of this study was to determine the effects of experimental ascorbic acid deficiency on measurements of plaque index (PI), gingival index (GI), pocket depth and attachment loss in subjects with preexisting mild to moderate periodontal disease. Twelve healthy non-smoking male volunteer subjects were confined to a metabolic unit for 13 weeks and fed a diet balanced in all nutrients except ascorbic acid (AA). The subjects received 60 mg AA/day for a baseline period. Depletion periods included 5 mg AA/day for 32 days, followed by 10 or 20 mg AA/day for 28 days. Repletion (60 or 250 mg AA/day) constituted the final 28 days. Systemic ascorbic acid levels were monitored about every 10 days. Oral examinations were conducted at baseline and at the end of each experimental period under conditions wherein the examiner was unaware of the subjects' AA status. Oral hygiene was reinforced throughout the experimental periods. The mean PI and % sites with visible plaque at the baseline examination was 1.0 ± 0.8 and 32%, and remained constant throughout the study. Leucocyte ascorbate levels decreased significantly from baseline (35.7 ± 4.9 mcg/10^6 cells) to the end of the depletion periods to 21.4 ± 4.5 mcg/10^6 cells, and increased significantly to 38 ± 4.9 mcg/10^6 cells at the end of the repletion period. Concurrently, mean GI and % of sites which bled to probing showed significant increase from baseline (1.2 ± 0.9, 21.3%) to depletion (1.6 ± 0.8, 39.1%) and decreased to baseline values following repletion. Mean pocket depth at baseline was 2.0 ± 1.4, increased to 2.3 ± 1.0 following depletion, and remained constant to the end of the study.  

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Tardy, S.J., Bowles W.H. and Chambless L.A.  
Preliminary clinical evaluation of Visine® as a gingival retraction agent. 
J Dent Res. 69 (Spec issue):250 abstract 1134, March 7-11, 1990  

**ABSTRACT:** Previous studies in dogs have shown that Visine® an over-the-counter eye wash, with local vasoconstrictor actions (tetrahydrozoline), appears to be a safe and highly effective alternative to epinephrine as a gingival retraction agent. The present study was undertaken to compare the effectiveness of Visine® with epinephrine as a gingival retraction agent in humans. Twelve patients were selected who were free of known cardiovascular problems and who where in need of multiple single unit crowns or at least two fixed bridges. Tissue displacement was accomplished by packing the sulcus with cotton cord saturated with Visine® or commercially prepared cord containing racemic epinephrine, 8%. Cardiovascular responses were monitored with a DINAMAP electronic monitor. Crevicular widths were compared on stone models, using a low-power microscope with a lens containing a standardized grid. Mean crevicular width of the Visine® group was 0.78 ± 0.11 mm, compared to 0.51 ± 0.04 mm for the epinephrine group. This difference was significant (p<0.001 by Student's t-test. No cardiovascular effects were noted in the Visine® group. These studies confirm animal studies showing the safety and effectiveness of Visine® as a gingival retraction agent and suggest that it is superior to epinephrine for this purpose.  

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Bumgardner, J.D., Lucas, L.C., and Tilden A.B.  
The effects of copper-based dental alloys on lymphocyte proliferation.  

**ABSTRACT:** Copper based alloys have been considered for dental applications since 1934. While these alloys have demonstrated mechanical properties similar to traditional gold alloys, high corrosion rates have been reported. In-vitro cell culture studies have shown significant decreases in cellular proliferation, as measured by ^3^H-thymidine uptake after 24 hrs contact with the Cu alloys. The placement of Cu crowns in dogs for 12 mo resulted in significant levels of Cu release which was associated with moderate to severe inflammatory response. Since inferior corrosion properties and both in-vitro and in vivo cytotoxicity responses have been reported for Cu alloys, the objective of this study was to determine the effects of 3 commercially available copper dental alloys, Duracast MS, Goldent, and Trindium on proliferation of
lymphocytes in cell culture. Fresh, human peripheral blood lymphocytes/monocytes, and a standardized T-cell line were exposed to the Cu alloys for 24-72 hrs. Decreases in the proliferation of the lymphocytes/monocytes, using ³H-thymidine were observed. In 72 hr, the CEM T-cell line experienced severe reductions in proliferation. In 24 hr, the CEM T-cells experienced a reduction in proliferation of 41%-47%. In conclusion, the responses of the lymphocytes/monocytes and the CEM T-cells causes added concern over the continued use of the Cu alloys.

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The following abstract was presented by Prof. Dr. med. R. Schiele at the European Association of Poisons Control Centers meeting on "The Use of Chelating Agents in Metal Poisonings." The meeting took place at the University of Munich, May 31- June 3, 1989.

**ABSTRACT:** 300 mg DMPS (3 capsules Dimaval(R), Fa. Heyl, Berlin) were given orally in a single dose to 30 persons without occupational exposure to mercury and also to some workers with past exposure to metallic mercury (Hg).

The total Hg-excretions with 24 h-urines were analyzed by cold-vapour technique before and after the DMPS-administration.

The basal Hg-excretion in the normal persons was below the upper normal-limit of 5 ug/24 h. After DMPS intake the Hg-excretion increased up to about the 5-10 fold of the basal values in most persons, but in some up to more than the 20 fold, with a maximum of about 80 ug/24 h. The increases seem to depend mainly on the actual number of amalgam-fillings.

Some workers with former Hg-exposure showed also increases from relatively low levels to more than 20 fold of the basal values, up to about 750 ug/24 h.

Beside this clinical use as an antidote DMPS seems therefore also to be useful in testing the Hg-accumulation in persons with or without occupational exposure to Hg.

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M. Farahani, F.C. Eichmiller and W.L. McLaughlin
Dose enhancement effects of dental materials

**ABSTRACT:** Soft tissue damage adjacent to dental restorations is a deleterious side affect of radiation therapy which is associated with low-energy electron scatter from dental materials of high electron density. This study was designed to investigate the enhancement and detailed dose distribution adjacent to gold, amalgam, Ni-Cr alloy, tooth structure, and a soft tissue simulating polymer when exposed to 100 Gy of ⁶⁰Co gamma rays. Each material was sandwiched between stacks of 12 calibrated GafChromatic dosimeter films spaced with interleaved plastic and backed by a 1 cm slab of tissue-equivalent polymer on each side. The gamma ray collimation was determined with a 20 X 20 cm and a 10 X 10 cm aperture at dose rates of 0.4 and 0.16 Gy/min, respectively. A whole human tooth phantom restored with a MOD amalgam, a full gold crown, a full Ni-Cr crown, and an unrestored tooth were exposed and measured similarly. Results indicate a surface backscatter dose enhancement factor of 2.1 for gold and amalgam, 1.6 for Ni-Cr, 1.3 for tooth, and 1.2 for tissue simulating polymer. Enhancement factors were much smaller on the forward scatter side. Dose enhancements and profiles correlated between the materials tested individually and whole tooth phantom trials.

**BIO-PROBE COMMENT:** This study demonstrates that oral tissues adjacent to metal restorations receive more than twice the radiation than tissues not adjacent to metal. This previously unknown factor deserves serious consideration by the dental profession.

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IAOMT SIXTH ANNUAL SCIENTIFIC SYMPOSIUM

Date: 14-16 September 1990.
Site: Terrace Garden Inn
3405 Lenox Road, N.E.
Atlanta, GA. 30326
(800) 241-8260 or (404) 261-9250.

Hotel Rates: $90/Double; $80/Single. Designate "IAOMT" for these special rates and make reservations before 22 August 1990.

Tuition: Members - $225 ($250 at door). Non-members - $275 ($300 at door). Spouse - N/C with full paid doctor. Auxiliaries, technicians, others - $95 when attending with doctor; otherwise first attendee pays doctor's fee. Students (with ID) - $65.

Meals: On your own.

Schedule:
Thursday, 13 September, 7:00 p.m. = President's Reception.
Friday-Saturday, 14-15 Sept., 8:30-5:30. = Scientific Sessions.
Saturday, 15 September, 7:30 p.m. = Banquet.
Sunday, 16 September, 8:30 a.m. = IAOMT Annual meeting.

Speakers:
- Anne O. Summers, Ph.D. "Bioconversion of Hg by the oral and fecal microbial flora."
- C. Orion Truss, M.D.: "The Role of Candida Albicans in Human Health Problems."
- Sandra Denton, M.D.: "Infertility and Birth Defects."
- James Masi, Ph.D.: "A method for the investigation of Mercury Uptake."
- Mats Hanson, Ph.D.: "Current Dental Materials Research in Europe."
- Fredrik Berglund, M.D.: "Biochemical pathways of mercury and the effects of chlorine."
- Olympio P. Pinto, C.D. MSc: "Mercury Intoxication in Dentistry."
- Walter J. Clifford, MS: "The Role of Immunologic Procedures in Assessing Individual Patient Compatibility with Dental Restoratives."
- Phillip P. Sukel, DDS: "Management of the Biocompatible Dental Practice."
- Arron Rynd, Ph.D., I.A.O.M.T. Canadian Legal Counsel.
- Joel M. Berger, DDS, JD: "What American Courts Have Said About the Legal Dilemmas of the Mercury-Free Practice."

Registration: Mail checks payable to I.A.O.M.T. and send to:
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