FLUORIDATION DENOUNCED!
An article on 25 April 1999 in the Toronto Star by reporter Michael Downey announced the defection of a leading Canadian promoter of fluoridation! Dr. Hardy Limeback is a professor of dentistry at the University of Toronto, a long time consultant to the Canadian Dental Association, and a leading authority on fluoride who has been frequently cited by health officials in their defense of fluoridated water. However, when interviewed by Mr. Downey last week, Dr. Limeback conceded that fluoride may be destroying bones, teeth and overall health. He cited areas of the world with naturally high fluoride in the water where skeletal fluorosis is a widespread problem. This debilitating disease occurs when fluoride accumulates in the bones over time and results in a situation where “residents tend to age early and die before the age of 50, weak, arthritic and hunched over. ‘Old’ men of 30 drag themselves around, leaning on sticks; their bones shatter like glass when they fall. Women give birth to dead babies after pregnancies of only four months.”

Dr. Limeback went on to cite the instance of a New York boy who died from a fluoride treatment and others in Alaska who died when too much fluoride was accidently added to the water. Although these acute cases are tragic, Dr. Limeback says he worries most about the cumulative effect of long term exposure to lower doses of fluoride, stating: “We absolutely know about the tragic consequences of higher levels of fluoride, and we know it builds up over time. These people haven’t done any studies to find out what effect fluoride accumulation will have at current levels. How can they say it’s safe when the studies haven’t been done.”

Dr. Limeback added: “Children under three should never use fluoridated toothpaste. Or drink fluoridated water. And baby formula must never be made up using Toronto tap water. Never. In fluoridated areas, people should never use fluoride supplements. We tried to get them banned for children but (the dentists) wouldn’t even look at the evidence we presented.”

As more and more respected scientists and authorities are beginning to speak out against the harmful effects of chronic exposure to fluoride, hopefully dentists will be obliged to finally look at the documented research. When they finally do, the unfortunate situation of adding this highly toxic industrial waste product to water supplies will end for good.

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WALL STREET JOURNAL ON FLUORIDE
On Monday, 21 December 1998, the Wall Street Journal ran an article entitled “Some Young Children Get Too Much Fluoride” by reporter Tara Parker-Pope. The article stated that a recent national study found that 22% of U.S. children have some form of fluorosis, and that bleaching the teeth can not fix it. It is often necessary to use expensive veneers to cover the teeth. The U.S. Centers for Disease Control (CDC) has conducted a study that will soon be published. CDC’s Division of Oral Health fluoride team leader stated that there is probably excess exposure, with fluoridated toothpaste being
the major culprit. The CDC is calling for new labeling rules requiring manufacturers to list a product’s fluoride content. The article went on to point out that last year, the Food and Drug Administration required toothpaste companies to put an additional warning on toothpaste labels telling parents to seek professional advice or contact a poison control center if a child swallowed too much toothpaste. A spokesman for Procter & Gamble was quoted as saying: “Toothpaste with fluoride is considered an over-the-counter drug.”

The CDC is quoted as saying: “Excess fluoride causes problems that are cosmetic, with no other adverse health consequences.” The CDC did not cite any documentation proving that ingested fluoride accumulates ONLY in tooth structure, to the exclusion of all other cells in the body. The position of the CDC is patently ludicrous, especially since it comes from a supposed guardian of the public health. It is well documented that fluoride does accumulate in other cells of the body, especially the bone. It is further well documented that excessive fluoride in the body causes adverse health effects that can be very severe. If this is truly the public position of the CDC, it is so negligent that it definitely calls for a Congressional investigation!

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“FIRST, DO NO HARM.”

This is the title of a full page advertisement in the New York Times on Tuesday, 4 May 1999. The ad was placed by a group called “Health Care Without Harm”, and was signed by 100 physicians. The credentials of these physicians are quite impressive and included Professors, department heads, and even Deans of medical schools and institutions.

The ad stated: “FIRST, DO NO HARM is a basic principle of the practice of medicine. So it is ironic and deeply troubling that the medical profession and the institutions in which we work put present and future generations at risk through the use and disposal of certain medical devices. We are writing as a group of concerned physicians to inform our professional colleagues and the general public that the health care industry contributes significantly to the spread of environmental poisons. We are specifically concerned about products made with polyvinyl chloride (PVC) and mercury, two substances that are widely used in the health care industry.”

Thermometers and blood pressure cuffs were noted as the two most common devices containing mercury. Apparently, the group is as yet not aware of the amount of mercury in amalgam dental fillings and its contribution to environmental mercury contamination. However, they soon will be.

The overall campaign, called “The Campaign For Environmentally Responsible Health Care”, is a collaborative effort of physicians, nurses, hospitals, patients, public health and environmental justice advocates, scientists, religious institutions, and labor unions. The ad encourages contact from interested individuals, by contacting: Health Care Without Harm, P.O. Box 6806, Falls Church, VA. 22040. T: 703-237-2249; email: NOHARM@ATP.ORG; WWW.NOHARM.ORG.

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Defining the Standard of Care in Dentistry

In its November 1996 issue (vol. 12, issue 6, page 3), BIO-PROBE critiqued the manner in which legislatures, dental boards, courts, etc. defined the standard of care for dentists. BIO-PROBE complained that the law defining the standard of care for dentists squelched innovation; in short, those practicing above the standard of care were as susceptible to dental board charges as those practicing below it. Any departure from the norm — including worthy and needed departures — presented legal risks for the dental practitioner.

The law of most states requires dentists to provide care and treatment in conformance with the following (or a similar) standard:

In performing professional services for a patient, a dentist has the duty to have that degree of learning and skill ordinarily possessed by reputable dentists, practicing in the same or a similar locality and under similar circumstances. California Jury Instruction 6.00.1

But what if you possess more knowledge than your colleagues, and in the exercise of your independent judgment, are induced to conform your patient care and treatment to account for that additional knowledge? Won’t the dental boards understand that the extra treatment, lack of treatment, or different treatment provided to your patients is the product of a learned mind? Unlikely. More than ever, dentists are expected to adhere to generally accepted treatments and testing and leave their independent judgment in a sealed closet. The exercise of independent judgment is paid lip service, but as a practical matter, is utterly discouraged. If you need examples, try the May 1996 (Vol. 127) JADA article authored by the general counsel for the American Dental Association, Peter Sfikas, entitled, "Can a Dentist Ethically Remove Serviceable Amalgam Restorations?" In his article, Mr. Sfikas gently reminded the dental profession of its "ethical" duties concerning dental amalgam. On the one hand, dentists were encouraged to exercise their independent judgment in the
treatment of their patients. "The dentist has a professional obligation to exercise his or her independent judgment about the dental treatment that is best for the patient." Id. at 686. On the other hand, Mr. Sfikas forbade the removal of serviceable amalgam fillings for the purpose of removing a toxic material. Mr. Sfikas recognized that "some dentists [may have] a good-faith disagreement with the established scientific position on this issue." However, he advised that "given the lack of credible scientific documentation for this position, this belief does not justify a recommendation from a doctor to a patient."

Hold on, Mr. Sfikas! What if my "good-faith disagreement" (otherwise known as independent judgment) leads me to conclude that dental amalgam is toxic and poses a risk of harm to my dental patients? What if I reach the conclusion that there are literally scores of published scientific articles demonstrating potential health risks associated with dental amalgam? What if I weigh that body of science against the relative dearth of controlled scientific studies demonstrating an absence of harm? What if I conclude that the so-called "established position" is not scientific at all? What if I conclude that the ADA's views should be disregarded because it is more concerned about the profit margin of its membership than the public health? What if, in the exercise of my independent judgment, I reach the conclusion that dental amalgam is an unsuitable and dangerous restorative material? Mr. Sfikas tacitly reminds the profession how to resolve this conflict by listing the names of several dentists whose licenses had been revoked following unapproved exercises of independent judgment. Independent judgment? It had better not be independent of the ADA!

So if the existing standard for measuring appropriate treatment and testing leaves the exceptionally knowledgeable practitioner hopelessly strapped to the myopic and misinformed practices of the majority, how can the standard be improved? One improvement might require unapproved treatments and tests to be specifically defined and banned through legislative or administrative regulation. In dentistry, specific prohibitions against forbidden conduct rarely exist. Statutes and rules typically prohibit conduct in broad and indefinite terms. For example, statutes and rules in Florida prohibit the advertisement of goods and/or services in a manner which "appeals to the public fears" or is "fraudulent, false, deceptive, or misleading in form or content." In the context of scientific advances, dentists are left to divine the difference between true and false information. Adherence to professional paradigms is the simplest means of avoiding professional board charges. Alas, professional paradigms are not always based on scientifically demonstrated truths and periodically evolve as scientific knowledge develops. Thus, in order to avoid dental board charges, the clinician must constantly monitor the general acceptance of tests, methods, and techniques by the rest of the profession. Specifically defining and banning invalid tests and treatments would eliminate the guesswork. This is hardly a radical concept. In criminal law, undesirable conduct must be specifically defined and prohibited before it becomes "illegal." Indeed, where statutes prohibiting "illegal" conduct are too vague, they may be struck down as unconstitutional. (See, e.g., Allen v. State, 1998 OK CR 42. (Statute may be found unconstitutionally vague when "men of common intelligence must necessarily guess at its meaning and differ as to its application."). Hence, what are the general regulatory plans governing the members of the profession, the overwhelming weight of authority has rejected any analogy which would require such a board to conduct its proceedings for the revocation of a license in accordance with theories developed in the field of criminal law....") Perhaps restoring these rights to defendants in license revocation proceedings would at least provide well-defined notice to the profession's innovators concerning the nature of prohibited conduct.

More solutions? Try "good faith" adherence to the published scientific literature. In the context of scientific opinion, a dentist who, in good faith, conforms his professional conduct and patient care to the findings of the published scientific literature should be insulated from dental board persecution, regardless of extant differing opinions held by professional colleagues.

An illustration might be helpful. A clinician who reviews the following publications might reasonably conclude that dental amalgam presents a public health risk and constitutes an unsuitable restorative material:


This documentation isn't credible, you say? Methodological flaws? The publications lack scientific standing? The investigators lack proper credentials? None of these criticisms appear to apply. How about the great weight of opposing scientific authority? It simply doesn't exist. In 1995, authors Lorscheider et al., challenged the dental profession to support its claims of amalgam safety with "hard scientific data, including animal, cellular and molecular evidence." Lorscheider, et al., supra, at 507. The authors' own investigation of the scientific literature failed to uncover such proof. If a dentist reaches a conclusion comparable to these well-credentialed authors, should a dental board revoke his/her license for failing to adhere to a traditional (albeit undocumented and unscientific) paradigm? Preservation of the dentist's duty (right?) to exercise independent judgment requires that he/she be excused from professional sanction upon demonstrating good faith adherence to the conclusions of the published scientific literature. A standard that compels conformity with unscientific paradigms proliferates the hypocrisy advocated by Mr. Sfikas.

By James M. Love, J.D. [Gassaway & Love, LLC; 111 West 5th Street, Suite 640, Tulsa, Oklahoma 74103. Tel 918.592.6800; Fax 918.592.1800; E-Mail jlove@gassaway-love.com]

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**BIO-PROBE ISSUES A CHALLENGE!**

The latest bureaucratic "Consensus Committee" to support the continued use of mercury dental fillings comes from Australia. The "Working Party" of the Office of the National Health and Medical Research Council (NHMRC) released their report "Dental Amalgam and Mercury in Dentistry" in February of 1999.

While "advising" that the exposure to amalgam mercury should be reduced in special populations (children, women in pregnancy, and persons with existing kidney disease), the committee stated (1.6.1., page 9): "Dental amalgam is still of benefit in the restoration of teeth in certain locations in the mouth because of its physical properties and technical requirements in terms of technique. Cost and longevity of dental amalgam restorations in these locations were consequent advantages."; and (1., page 10): "While low levels of mercury are released and absorbed from dental amalgams, there is no convincing evidence of adverse health effects at these levels with the exception of rare cases of contact hypersensitivity."

Sound familiar? The last statement is essentially identical to the conclusions from several other consensus committee reports. The Working Party document of 86 pages devotes considerable attention to what it calls "Risk Assessment" (pages 38 to 54). However, the section would be more appropriately entitled "Criticisms of Current Risk Assessments For Mercury", since their conclusions do NOT include any formulation of a standard for acceptable mercury exposure or intake! Rather, the committee addresses the three existing formal risk assessments on mercury that were conducted by government agencies: US-EPA (1996), the US Agency For Toxic Substances and Disease Registry (ATSDR, 1994), and the Richardson and Allan assessment done for Health Canada (1996), and states (4.4, page 40): "A range of occupational mercury exposure studies has been examined by these groups, who concluded that no study published has revealed a NOAEL; in other words, a threshold for mercury effects has not been noted. This may be due not so much to a real lack of a threshold but to a deficiency in the study design in exposure-response analysis." [Note: All three of these formal risk assessments on mercury established exposure standards at levels well below the estimates of patient exposure to amalgam derived mercury. This is not to say that all patients are being harmed (although that possibility still exists), but rather that the amalgam mercury exposure of dental patients is not patently harmless.]

The Working Party goes on to criticize these formal risk assessments and suggests that they should have utilized a much earlier occupational study of chloralkali workers by
Smith et al in 1970. Hopefully through nothing more than plain ignorance, the Working Party fails to consider the documented research demonstrating that when mercury vapors are mixed with chlorine gas, as it is in the chloralkali industry, the relatively insoluble mercurochloride is formed. This results in a vastly altered toxicity pattern with gastrointestinal effects superceding neurologic effects, and with much higher tolerable levels of mercury vapor exposure before the appearance of clinically observable adverse effects. [Viola, PL; Cassano; GB. "The Effect of Chlorine on Mercury Vapor Intoxication: Autoradiographic Study." Med Lavoro, 58(1):437-44, 1968.]

Astoundingly, the working party made the statement (3.9.2., page 35): "The attribution of a range of diseases or symptoms of unknown etiology to the effects of mercury from dental amalgam showed a number of misconceptions about the relative nature of safety and risk, dose-dependence of toxicity, evaluation of clinical experience and interpretation of diagnostic information." This was made in reference to submissions to the committee, many of which were voluminous in valid scientific documentation and some of which came from well respected Ph.D. scientists, including a risk assessment specialist.

Who were the members of this committee that were so quick to criticize others and, more importantly, what were their qualifications? This information is found on page 12 of the document. The committee consisted of a consumer representative, a technical secretary, a Professor from a school of dentistry, an immunologist, a representative of the Environmental Health Branch, and a university Professor of Epidemiology and Preventive Medicine. Where is the risk assessment specialist? Only the latter member could be deemed anywhere near that, and certainly not of the caliber of the risk assessment specialists for Health Canada, US-EPA, and US-ATSDR [the branch of the US Public Health Service responsible for developing Toxicological Profiles and establishing standards for the US government]!

Is this a case of "the mouse that tried to roar?" In medical science, and most particular matters with a potentially large impact on public health, regulatory decisions are (or should be) based on documentation, not opinions! If risk assessments have been conducted on a known toxic agent with considerable public exposure, they MUST be utilized in determining regulatory policy! Contradiction of these formal risk assessments by nothing more than opinion constitutes a CLEAR dereliction of duty! If the NHMRC committee disagrees with the three formal risk assessments relating to amalgam mercury exposure, they have an OBLIGATION TO CONDUCT THEIR OWN RISK ASSESSMENT! *Bio-Probe* hereby challenges the NHMRC to regulate public exposure to mercury based on the three existing formal risk assessments, or conduct their own formal risk assessment on general population exposure to mercury, including that derived from mercury amalgam dental fillings! The citizens of Australia deserve no less from their public officials.

Although it shouldn't be necessary, we will remind NHMRC that there are documented principles for establishing risk standards for general population exposure. The US-ATSDR rules for risk assessment are found in the US Federal Register [FR Vol. 61(125):33511-15, 27 June 1996]. For interpolation of occupational data to general population standards, the ATSDR first requires application of the formula [pg. 33514]: \( \text{Adjusted dose} = \text{Intermittent dose} \times (6 \text{ hours/24 hours}) \times (5 \text{ days/7 days}) \). Thus, the oft quoted WHO occupational exposure standard of 25 micrograms/M3 of air immediately becomes 4.46 micrograms/M3 of air for the general population.

Next, the ATSDR addresses "Intrahuman Variation", stating [pg. 33514]: "An UF [Uncertainty Factor] of 10 is generally used to account for intrahuman variation. However, a UF of 3 or 1 may be applied when a large epidemiologic study or a study of the sensitive population was used." As occupational studies are not large enough nor conducted on sensitive populations (children, pregnant females, etc.), the UF of 10 is required. Finally, the ATSDR addresses "LOAEL to NOAEL Extrapolation", stating [pg. 33514]: "MRLs are derived from NOAELS. In the absence of a NOAEL, the lowest LOAEL that causes less serious adverse health effects is used, and a UF of 10 is generally applied. When the less serious LOAEL approaches the threshold level, that is, only minimal effects are observed representing an early indication of toxicity, the effect level is considered to be a minimal LOAEL, and a UF of 3 may be used." [Note: LOAEL is "Lowest Observed Adverse Effect Level" and NOAEL is "No Observed Adverse Effect Level", the latter representing a Toxic Threshold at or below which there is no adverse effect.] The Working Party itself admitted that scientists have never been able to find a NOAEL (Toxic Threshold) for mercury [see above], and neurologic damage can hardly be considered a minimal effect. So, in doing their Risk Assessment for mercury, the Working Party should utilize a UF of 10 for conversion to the NOAEL.
There are other considerations involved in the document, but these are the main ones. So, NHMRC, in doing your risk assessment, you must first adjust the dose used (pick your own) to general population exposure, then use UFs of either 100 or 30. If you want to really fudge, use the UF of 3 for conversion to a NOAEL, times 10 for intrahuman variation, for a UF total of 30. You will STILL find that patient exposure to amalgam mercury falls within the risk range, as did US-EPA, US-ATSDR, and Health Canada.

The point is, you have a legal obligation to protect the public health in Australia. Either accept the existing determinations or do your own. To deny the existing documentation on the basis of unsubstantiated opinions is a disservice to all Australians. The same can be said for the other "Consensus Committees" that declared the harmlessness of patient exposure to amalgam mercury - the 1991 US-FDA Panel, the 1991 US-NIH/NIDR Technology Assessment Conference, the 1993 US-NIH/CCEHRP Committee, and the FDI/WHO Committee. None of you fulfilled your responsibility to the public health! Either accept the existing three formal risk assessments on mercury, conduct your own study, or quit influencing the public health with your unsubstantiated opinions!

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IAOMT WEB SITES

A great deal of information is now available electronically on two IAOMT web sites. These sources are valuable to both professionals and the public. The North American IAOMT Chapter web site is: “www.iaomt.org”, while that of the Australian IAOMT Chapter is “www.asomat.com”. Visit these sites and, especially, recommend them to others.

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SCIENCE

Comparison of the Developmental Effects of Two Mercury Compounds on Glial Cells and Neurons in Aggregate Cultures of Rat Telencephalon.

Monnet-Tschudi, F; Zurich, MG; Honegger, P.


ABSTRACT: A three dimensional cell culture system was used as a model to study the influence of low levels of mercury in the developing brain. Aggregating cell cultures of fetal rat telencephalon were treated for 10 days either during an early developmental period (i.e., between days 5 and 15 in vitro) or during a phase of advanced maturation (i.e., between days 25 and 35) with mercury. An inorganic (HgCl2) and an organic mercury compound (monomethyl mercury chloride, MeHgCl) were examined. By monitoring changes in cell type-specific enzymes activities, the concentration dependent toxicity of the compounds was determined.

In immature cultures, a general cytotoxicity was observed at 10(-6) M for both mercury compounds. In these cultures, HgCl2 appeared somewhat more toxic than MeHgCl. However, no appreciable demethylation of MeHgCl could be detected, indicating similar toxic potencies for both mercury compounds. In highly differentiated cultures, by contrast, MeHgCl exhibited a higher toxic potency than HgCl2. In addition, at 10(-6) M, MeHgCl showed pronounced neuron-specific toxicity.

Below the cytotoxic concentrations, distinct glia-specific reactions could be observed with both mercury compounds. An increase in the immunoreactivity for glial fibrillary acidic protein, typical for gliosis, could be observed at concentrations between 10(-9) M and 10(-7) M in immature cultures, and between 10(-8) M and 10(-7) M in highly differentiated cultures. A conspicuous increase in the number and clustering of GBI-B4 lectin binding cells, indicating a microglial response, was found at concentrations between 10(-10) M and 10(-7) M. These development dependent and cell type specific effects may reflect the pathogenic potential of long term exposure to subclinical doses of mercury.

BIO-PROBE COMMENT: This is yet another study demonstrating that inorganic mercury is as neurotoxic as methyl mercury, especially during early development (i.e., fetal and early childhood exposures)! Further, the adverse effects found in this study occurred at EXTREMELY low concentrations of mercury.

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Effects of Mercury on the Isolated Heart Muscle Are Prevented by DTT and Cysteine.

Vassallo, DV; Moreira, CM; Oliveira, EM; Bertollo, DM; Veloso, TC.


ABSTRACT: The protective effects of dithiothreitol (DTT, 50 mM) and cysteine (CYS, 100 mM) against toxic effects of HgCl2 (1, 2.5, 5, and 10 mM) were studied in isolated, isometrically contracting rat papillary muscles.

Force reduction promoted by Hg2+ was prevented by both DTT and CYS. Also, after both treatments, no significant changes in dF/dt were observed. A progressive reduction in
the time to peak tension was observed when increased concentrations of HgCl2 were used after CYS and DTT treatment. This was an indication that the enhancement of calcium release from the sarcoplasmic reticulum produced by mercury was not affected by DTT and CYS. Tetanic contractions were also studied. After treatment with DTT or CYS tetanic tension did not change. No significant reduction of tetanic tension was observed during treatment with 1 µM Hg2+ but its reduction was observed after 5 µM Hg2+. Myosin ATPase activity was also affected by Hg2+, being completely blocked by 1 µM Hg2+ and reduced by 50% with 0.15 µM Hg2+. Full activity was restored by using 500 nM DTT.

These findings suggest that several but not all toxic effects of Hg2+ on the mechanical activity of the heart muscle are prevented by protectors of SH groups such as DTT and CYS. The enhancement of the Ca2+ release from the sarcoplasmic reticulum by Hg2+ during activation was not affected by prior treatment with DTT and CYS, suggesting that interactions with SH groups may not be important for the activation of the Ca2+ channel of the sarcoplasmic reticulum.

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Speciation of Mercury Excreted in Feces From Individuals With Amalgam Fillings.
Engqvist, A; Colmsjo, A; Skare, I.
ABSTRACT: Investigators established methods for the analysis of total mercury (Hg-total), oxidized mercury and mercury bound to sulfhydryl groups (Hg-S), mercury vapor (Hg0), and mercury from amalgam particles (APs) in fecal samples. Two individuals consumed mercury as a mercury-cysteine complex, mercury vapor, and mercury from amalgam particles, and the cumulative excretion of mercury in feces was followed.

Investigators found that 80% of the mercury from amalgam particles and mercury bound to sulfhydryl groups was excreted, but only 40% of the mercury vapor was excreted. Speciation of mercury excreted in feces from 6 individuals with a moderate loading of amalgam fillings showed that most of the mercury originating from the fillings consisted of oxidized mercury, which was probably bound to sulfhydryl containing compounds. The proportion of amalgam particles in fecal samples from these individuals was low, and it did not exceed 26% of the total amount of mercury excreted.

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Presence of Micronuclei in Lymphocytes of Mercury Exposed Workers.
Queiroz, ML; Bincoletto, C; Quadros, MR; De Capitani, EM.
ABSTRACT: We have investigated the presence of micronuclei in mercury exposed workers. The study group consisted of 15 workers from a mercury producing plant, mean age 39.5 years and a mean exposed period of 12 years. At the time of testing and for the six previous months, the exposed population had urinary mercury levels below the currently accepted limit of 50 ug/g creatinine.

A significant increase in the percentage of micronuclei was observed in the mercury exposed individuals when compared to the non exposed group. We have not found any correlation between the percentage of micronuclei and age, length of exposure or urinary mercury concentrations. Our results suggest a genotoxic effect of mercury, which is observed in workers exposed chronically to levels considered biologically safe for the exposed population.

BIO-PROBE COMMENT: This is yet further evidence of adverse health effect to chronic low level mercury exposure, before the appearance of clinically observable damage. Further, it is further evidence of the lack of reliability of standard urine mercury measurements.

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Air Pressures Developed Beyond the Apex From Drying Root Canals With Pressurized Air.
Eleazer, PD; Eleazer, KR.
ABSTRACT: Air introduced into tissues during invasive procedures can be harmful. Endodontic treatment is not frequently associated with this phenomenon, but serious results can occur if air forced into tissues impinges on critical anatomical structures and/or carries infection into deeper areas.

Extracted teeth were connected to a pressure gauge during and after canal instrumentation and pressures measured. Also, a fresh porcine jaw was instrumented in the presence of a radiopaque tracer during air drying. Significant pressure were detected beyond the apex of the roots, especially with root apical diameters of file sizes larger than 20.

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Thimerosal Positives: The Role of SH Groups and Divalent Ions.

Santucci, B; Cannistaci, C; Critaudo, A; Camera, E; Piccardo, M.


ABSTRACT: For a better understanding of the mechanistic details of the interactions of organomercury compounds inside the skin, 32 subjects who previously had given positive patch test reactions to thimerosal (TH) and negative reactions to thiosalicylic acid, were divided into 2 groups. 16 subjects were repatch tested to ethylmercury chloride (EtHgCl) and to solutions containing EtHgCl mixed with L-cysteine and glutathione, respectively. The remaining 16 were repatch tested to EtHgCl and to solutions containing EtHgCl mixed with chlorides of Zn, Mg, and Mn, respectively.

The results showed that whilst L-cysteine, glutathione and ZnCl2 were able to abolish or to reduce the positive reactions to EtHgCl, chlorides of Mn were unable to do so. Patch tests revealed that in causing positive reactions to TH, EtHg probably interacted with thiol groups and with An ions, as in biological systems when causing toxic effects. The limited number of TH reactions in the general population, the constant presence of concomitant positive reactions to EtHgCl and MeHgCl, and the lack of cross reactivity with other organic or inorganic mercury compounds, lead us to speculate that reactions to TH are due to organomercury alkyl compounds, and that positive subjects have a constitutively reduced capability to metabolize organomercury compounds, rather than to reveal previous exposure.

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FORUM

IAOMT 1999 ANNUAL MEETING

DATE: Friday-Saturday, 8-9 October 1999.

SITE: Atlanta, Georgia.

HOTEL: Hotel W (formerly Sheraton Perimeter Center Hotel and Suites Atlanta), 111 Perimeter Center West, Atlanta, GA 30346. T: (770) 396-6800, (800) 683-6100; F: (770) 394-5514. Specify IAOMT room rate: $109.00/night; or suite: $119.00/night.

MEETING REGISTRATION: IAOMT, P.O. Box 608531, Orlando, FL 32860-8531. T: (407) 298-2450; F: (407) 298-3075. IAOMT members: $475.00 U.S.; Non-members: $575.00 U.S. [Includes spouse or one staff member, Friday and Saturday lunches for both, and Saturday evening Annual Awards Banquet for both. Additional auxiliary: $100.00 each [includes two lunches and banquet]. [Meals included only if registered by 10/05/1999]

MEETING HOST: Dr. Ronald Dressler.

WELCOME NO-HOST RECEPTION: Thursday, 7 October 1999, 7:30pm.

PROGRAM: Friday morning Clinical Theme: Cavitations: Stephen R. Evans, DDS and Karen J. Evans, EdD.

Friday Afternoon Speakers:

Dr. Agnes Koubi: “Clinical Determination of Dental Foci in the Medically Compromised Patient.”

Elaine Reedy, PhD: “Blood Chemistry Analysis.”

James E. Hardy, DMD: “Bio-Electromagnetism and Dental Metals.”

Saturday Speakers:

Gerald Hirsch, PhD: “Methionine - The Missing Antioxidant.”


Anne O. Summers, PhD: “Amalgam Mercury, Gut Bacteria & Antibiotic Resistance.”

J. Curt Pendergrass, PhD: “Gingival Crevicular Fluid Components and Analysis.”

Boyd E. Haley, PhD: “A Review of Mercury and Alzheimer’s Disease.”

Charles R. Cornett, PhD: “Interregional Brain Mercury Distribution and Alzheimer’s Disease.”

1999 ANNUAL AWARDS BANQUET: Saturday, 9 October, 7:00pm.

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Orofacial Pain and TMD

American Academy of Head, Neck & Facial Pain


SITE: Houston, Texas.


MEETING REGISTRATION: AAHNFP Central Office, 520 West Pipeline Road, Hurst, TX. 76053. T: 817-282-1501 or 800-322-8651; F: 817-282-8012. Members: $635; non-members: $735 ($50 additional if after 15 July).