PRO-AMALGAM PUBLIC STATEMENTS: A MEDICO-LEGAL TIME BOMB!

The 16 December 1990 "60 Minutes" program on mercury amalgam dental fillings has generated widespread public interest. Increased media exposure of the amalgam controversy, together with the new research being published and the Class Action suit filed against the American Dental Association in September, has forced the pro-amalgam dental establishment to publicly defend itself. Many public statements, and charges, are being made. This issue of the BPNL is devoted to answering those statements and charges being publicly made by the pro-amalgam dental establishment.

Quoting directly from the Dental Practice Act in one state: "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." This Act also defines advertisement and advertising as "any statements, oral or written, disseminated to or before the public or any portion thereof--".

Similar language is found in the Federal Trade Commission (FTC) Act of the United States and the ADA "Principles of Ethics and Code of Professional Conduct."

Public statements claiming the harmlessness of mercury amalgam dental fillings, particularly from individuals claiming to represent the dental profession in general, do have a profound influence on the public health. The current and forthcoming scientific documentation on the subject makes it distinctly probable that pro-mercury dentists may soon be called before State Dental Boards to justify their public statements. It is therefore advisable to examine the validity of their statements.

SCIENTIFIC "EVIDENCE" OF AMALGAM SAFETY

Due to the time limitations of the 60 Minutes program, one aspect of the controversy was not thoroughly addressed. At one point in the program Morley Safer asked the A.D.A. representative, Dr. Heber Simmons, Jr., the following question: "Do you have any scientific evidence that it is safe?" Dr. Simmons replied: "Absolutely. There are numerous studies that have been done." Responsibility to the public health borne by Dr. Simmons, and other pro-amalgam spokesmen, makes it essential to examine the validity of this statement.

THE POSITION OF THE AMERICAN DENTAL ASSOCIATION

In an article entitled "When Your Patients Ask About Mercury in Amalgam" in the April, 1990 edition of the Journal of the American Dental Association (Vol. 120:395-8), the ADA stated: "The strongest and most convincing support we have for the safety of dental amalgam is the fact that each year more than 100 million amalgam fillings are placed in the United States. And since amalgam has been used for more than 150 years,
literally billions of amalgam fillings have been successfully used to restore decayed teeth." Mass media attention to the amalgam controversy, along with the recently filed class action suit, has forced the ADA to attempt to bolster this totally anecdotal position.

On 11 October 1990, the ADA provided a press release entitled "ADA Reaffirms Safety and Effectiveness of Dental Amalgam", citing "several factors" in reasserting its position. These "factors" were references to implied "studies".

Only two of these "studies" had anything at all to do with the possible health effects of mercury amalgam fillings in patients. These were two epidemiological studies from Sweden, one on 1000 patients and the other on 1200 patients.

THE TWO SWEDISH EPIDEMIOLOGY REPORTS
"Number of Amalgam Tooth Fillings in Relation to Subjectively Experienced Symptoms in a Study of Swedish Women."
Ahlqvist, M; Bengtsson, C; Furu, B; Hollender, L; Lapidus, L.

In this report, 1024 women (ages 38-72) from Gothenburg, Sweden answered a questionnaire of 30 specific questions concerning different symptoms and complaints they had during the previous three months. The answers were related to the number of tooth surfaces restored with amalgam.

The number of amalgam fillings for each individual was estimated from panoramic x-rays. The women were divided into two groups, one group with four (4) or fewer surfaces of amalgam and the other group with twenty (20) or more surfaces of amalgam. Their was no control group of subjects who had no exposure to mercury from amalgam dental fillings.

The authors further stated that "about 80% of the teeth of the participants in this study were restored", suggesting that many teeth that previously contained amalgams may have already been pulled. For example, some women with only four amalgams may have only had six or ten remaining teeth, as indicated by the fact that 80% of the subject teeth were filled. Mercury exposure from amalgam bearing teeth that had been pulled was not considered. Further, it is most likely that crowned teeth previously contained large amalgams or possessed amalgam cores underneath. The report contained no data on the individual status of subjects other than the division into two groups.

The authors found no positive correlations between the symptoms and the number of surfaces of amalgam. In fact, a few of the symptoms showed inverse correlations to the amalgams.

"Medical Diagnoses and Symptoms Related to Amalgam Fillings."
Lavstedt, S; Sundberg, H.

This is a report on 1204 individuals who were studied in 1970 and grouped according to the number of filled tooth surfaces. The mean number of surfaces of amalgam in the five groups of subjects were 6.4, 21.1, 32.6, 39.2, and 37.9. There was no control group of subjects who had never had exposure to mercury from amalgam dental fillings. There was a sixth group of 90 subjects with no remaining teeth. The questionnaire contained 14 questions on health status and 4 clinical tests were used (hemoglobin, systolic BP, diastolic BP, pulse pressure).

No data is provided on the number of missing teeth in individual subjects, previous amalgams in these teeth, or the presence of other metals in individual subjects. The authors stated that amalgam fillings around crowns were not counted in the study.

The authors found no significant positive correlations between the symptoms or tests and the number of surfaces of amalgam. The subjects with no remaining teeth did have significantly fewer symptoms of the stomach and intestine.

BIO-PROBE COMMENT: The reliance upon these two flawed "studies" as the foundation for the position that mercury amalgam dental fillings are totally harmless to patients is an insult to the dental
profession, the public and a disgrace to any individual who cites them as valid. Neither report contains one single subject who has never been exposed to mercury from dental amalgam as a comparison "control". At the very least, the mercury amalgam fillings in some of the subjects should have been removed and the subjects evaluated for any possible changes in health status. Further, no consideration was given in either study to the presence of other metals or to previous exposure from dental amalgam in teeth that had been extracted. It is also interesting to note how results showing significant correlations between amalgam fillings and symptoms were reduced to non-significant through selection of confounding factors and statistical protocols.

OTHER "FACTORS" CITED BY THE ADA

None of the other studies cited by the ADA in its October press release dealt with the effects of mercury amalgam fillings in patients. They all referred to the argument frequently used by the defenders of amalgam - the health status of dentists. After all, if dental amalgam is indeed a health risk, then its effects would certainly be seen in dentists, who handle the material every working day. This argument is riddled with inaccuracies:

1. Dentists rarely, if ever, handle dental amalgam. The preparation of dental amalgam is done by dental assistants, not dentists. The ADA has conveniently failed to mention a number of published studies demonstrating adverse health effects in dental assistants. Some of these are even discussed in the USEPA’s document on mercury, which is readily available to the ADA.

2. Even dental assistants are warned about the use of amalgam. The American Dental Association, and other authorities, have issued strict guidelines for the use of dental amalgam. These guidelines are designed to minimize exposure to mercury both before and after the amalgam is mixed and used. Amongst other safety recommendations, dental personnel are warned not to touch amalgam with their hands, to store unused mixed amalgam in tightly sealed containers under glycerin or fixer solution, and to dispose of the scrap amalgam according to OSHA rules. In effect, mixed dental amalgam has been declared a toxic hazard.

3. No scientific studies have ever been conducted to compare the intake of mercury from dental amalgam fillings to the exposure encountered by workers in dental offices. The opinion that dental workers receive more exposure is pure speculation.

The mercury from amalgam in the office is dispersed in a vast volume of air and workers are exposed no more than 40 hours per week. On the other hand, patients who have had amalgam fillings implanted in their body, are exposed to mercury vapor 168 hours per week. The level of such exposure is increased during stimulation by gum chewing, eating, brushing, heat, or the presence of other metals, such as gold, placed in the mouth.

4. The ADA, in its press release, stated: "Dentists, in fact, are healthier than the general public." There have never been any published studies, other than those conducted and published by the ADA itself, that justify this position. Since the ADA publications are supposedly "peer reviewed", it would be helpful to examine the quality of these "studies".

ADA "STUDIES" ON THE HEALTH OF DENTAL PERSONNEL

The ADA has published several "Morbidity and Mortality" studies of dentists in its journal. Most of these were conducted by the ADA itself and reported health comparisons of dentists in general to the public in general.

Neither the dentists nor the public were divided into subjects with and without mercury amalgam dental fillings in their teeth. Is it reasonable to assume that both groups have a comparable number of mercury amalgam fillings? Dentists are, or should be, much better educated and motivated in the prevention of cavities. In addition, dentists do not have to pay for gold fillings. Actually, it is likely that dentists have proportionately fewer mercury amalgam fillings than the public average.

Moreover, these studies did not separate dentists who use mercury from those who do not. Considerable numbers of dental specialists do not place or remove mercury amalgam fillings. Actually, these morbidity and mortality reports, so frequently cited by the ADA, have nothing whatsoever to do with the potential health effects of mercury amalgam fillings in patients.
Another statement made in the ADA press release was: "Research conducted on approximately 1000 dentists by the ADA Division of Scientific Affairs showed no correlation between measures of kidney function and urinary mercury concentrations." At this point, one must seriously question the qualifications, as well as the motivation, of the ADA officials and the "peer reviewers".

Published scientific research dating back to the early 1960's, has clearly established that measurements of mercury in the urine (or blood) do not correlate to the body burden or toxic effects of mercury. This is especially true for chronic exposure to inhaled mercury vapor, which passes very rapidly from the blood into body tissues. Even the American Dental Association has publicly acknowledged this (JADA. 109:469-71. Sep 1984 & JADA. 115:873. Dec 1987). Although, given the shameful performance of the dental establishment on this issue, total neglect of the scientific literature is not surprising, ADA employees should at least be required to read their own journal.

Another statement in the ADA press release was: "A study of pregnancy outcomes for female dental assistants and the wives of dentists found no difference in the rate of spontaneous abortions or congenital abnormalities between those women who had low and high exposure to mercury, based on the number of amalgam placements performed by the assistants or the husbands."

This is a very biased, flawed "study." It is a two page report entitled "Occupational Exposure to Mercury in Dentistry and Pregnancy Outcome" (JADA. 111:779-80. Nov 1985) by J.B. Brodsky and associates. Actually it is a spin off from a previous study investigating the effects of urinary anesthetic gas exposure in dental offices by E.N. Cohen, et al. (JADA. 101(1):21-31. 1980)

For the 1980 study, a questionnaire was sent to a large number of dental personnel. In the Brodsky report, responses from female dentists were eliminated, even though 83% of them had responded. The remaining responders were divided into two groups, based on one question in the 1980 questionnaire: "Approximately how many amalgams do you place in a typical week? None - less than 40 - 40 or more." Brodsky et al combined the controls (those who placed no amalgams) with the "low mercury exposure group" (less than 40 amalgams per week placed) and compared them to the "high mercury exposure group." There was no data provided on the average number of amalgams placed per week by the two groups; the two groups could very well have averaged 37 and 40 per week respectively, hardly a valid comparison.

The occurrence of spontaneous abortions and congenital abnormalities in the subjects was determined by the responses from the questionnaire shown on page 24 of the 1980 report. All of the congenital abnormalities listed are physical abnormalities detectable at birth even though Brodsky et al knew, or should have known, that congenital abnormalities caused by pre-natal exposure to mercury are primarily on the central nervous system and are not detectable until later in life.

In summary, this report, and the others cited by the American Dental Association on dental personnel have nothing to do with the health effects of mercury amalgam fillings on dental patients and are of such poor quality as to cast serious doubt on the rationale for their use and the qualifications of the "peer reviewers" responsible for their publication in the Journal of the American Dental Association.

PEER REVIEWED RESEARCH

This brings us to the question of the validity of peer review. Many pro-amalgam spokesmen publicly claim that the recently published research casting doubt on the safety of mercury amalgam dental fillings is worthless because it hasn't been "peer reviewed". What they are saying is that it is worthless because it wasn't peer reviewed by THEM (in the manner of quality exemplified by the studies in the JADA described above).

The new research HAS been peer reviewed, by expert medical scientists. The FASEB Journal represents 30,000 medical science researchers and has several Nobel laureate scientists on its review board, and the American Journal of Physiology is also above reproach.

Dentists are now saying that they know more about medical scientific research than do medical scientists and physiologists. This attitude is arrogant, contradictory, and inciteful. Dentists have lost their licenses for "practicing medicine without a license" and are told that they are not qualified to consider the systemic
effects of poisons they implant into patients. Yet, the dental establishment publicly proclamats that they are more qualified to judge these systemic effects than are physicians and medical scientists!

THE VALUE OF ANIMAL RESEARCH

Other arguments used by the pro-amalgam establishment are that the published animal research doesn’t apply to humans, or that the animals selected are too different from humans.

These arguments expose the desperation of the ADA in defense of its totally unsupportable position that amalgam is safe. Even the public understands and accepts the importance of medical research on animals. The public knows that highly poisonous materials proposed for medical use on humans must first be tested in animals. There only concern is that these animals be treated as humanely as is possible.

As to the selection of animals used in the new research published on the harmful effects of dental amalgam fillings, the models chosen were sheep and monkeys. The American Dental Association, and other elements of the dental establishment, have utilized mice and rats many times for studies investigating everything other than mercury amalgam fillings. Are they seriously suggesting that mice and rats are more similar to humans physiologically than are sheep and monkeys?

HOW MUCH MERCURY DO PATIENTS RECEIVE FROM AMALGAM FILLINGS?

This question has been hotly debated in the dental literature. Papers have been published by a number of authors. Dental authors defending the safety of amalgam (such as Mackert, Olsson, Berglund, and others) calculate the intake to be in the vicinity of 1.5 micrograms per day. Other authors (including Vimy, Lorscheider, Nylander, Clarkson, and Friberg) have concluded that the daily intake is approximately 10 micrograms per day.

Calculation of the daily intake of mercury from amalgam fillings is no easy matter. The authors noted above have utilized very complex mathematical formulas to account for personal habits and physiological considerations. Moreover, these estimates consider only the inhaled mercury vapor from dental amalgam fillings. The mercury absorbed through the tissues of the oral and nasal cavities and the gastrointestinal system is not included in the calculations. The next question provides proper perspective on this debate between dentists and toxicology experts.

ARE THESE INTAKE LEVELS CLINICALLY SIGNIFICANT?

Amalgam defenders now acknowledge that patients are chronically exposed to mercury from dental amalgam fillings, but maintain that these exposures are "clinically insignificant."

Once again, establishment dentistry has taken a position directly contrary to the medical scientific community. Expert medical toxicologists, such as those of the USEPA and the World Health Organization, have formally determined that no amount of exposure to mercury vapor can be considered totally harmless. In other words, there is no toxic threshold for mercury vapor. This means that even the intake estimate determined by establishment dentists (about 1.5 mcg/day) is harmful.

All of the standards established for occupational or general exposures are based only on the appearance of clinically observable signs and symptoms, primarily of neurological damage. The published scientific literature has clearly established that subclinical mercury damage occurs long before signs and symptoms appear. The known fact that individuals have varying sensitivity to the effects of mercury must also be considered. Certain people and population subgroups, such as children and pregnant women, will be at increased risk and deserve special consideration.

COMPARISON TO MERCURY INTAKE FROM FISH

Establishment dentists frequently state that patients receive far more mercury from one tuna fish sandwich than they could possibly get from their mercury fillings. This position borders on negligent misrepresentation. It is based on one article (obviously not peer-reviewed) printed in the ADA news and based on measurements of mercury levels in the blood, even though the ADA has publicly acknowledged that mercury levels in the blood are not valid indicators. This is particularly true when the exposure is to the mercury vapor form.
Based on published research, the USEPA has formally determined that the average adult in the United States receives 10 micrograms of mercury per day from the diet, including fish and seafood. Toxicology experts have concluded that patients with mercury amalgam dental fillings receive an average of about 10 micrograms of mercury per day.

In addition, the National Academy of Sciences has determined that methylmercury derived from fish is not as dangerous as methylmercury derived from other sources, such as fungicides. Their position is based on studies demonstrating that fish with high levels of methylmercury also contain even higher levels of selenium, which has been proven to be protective against the harmful effects of mercury.

DOES DENTAL AMALGAM MERCURY CAUSE MS OR OTHER DISEASES?

At this time, there have been no formal studies published (or even conducted) that firmly connect mercury from dental amalgam fillings to any titled disease state. The research recently completed at the Universities of Calgary and Georgia do demonstrate damage to the kidneys and intestines.

Mercury causes one disease only - mercury poisoning, acute or chronic. At this time, there are no valid diagnostic laboratory tests for mercury poisoning. Diagnosis is based on a history of exposure to mercury along with the appearance of certain signs and symptoms.

The diagnosis of Multiple Sclerosis, as well as many other disease states of unknown cause, is based on the existence of certain signs and symptoms and the differential elimination of all other possibilities.

The Encyclopedia of Occupational Health and Safety states that the neurological damage caused by chronic exposure to inorganic mercury can mimic either Multiple Sclerosis or Parkinson’s Disease.

The scientific literature is clear; mercury can damage any tissue or system in the human body, including many that encompass serious and widespread medical conditions of unknown cause. These include, but are not limited to, those of the nervous system, immune system, cardiovascular system, and endocrine system. As the medical scientific community becomes increasingly aware of chronic exposure to mercury from dental amalgam fillings, any connection to these disease states of unknown cause will become clearer.

THE RAPID RECOVERY OF SOME PATIENTS

This phenomenon has been portrayed in media reports, and is used as an argument against the anti-amalgam movement. It is inferred that these events smack of "snake-oil" charlatanism, thereby suggesting that mercury amalgam dental fillings are harmless.

The logic, or rather lack thereof, of some people is amusing. How readily they ignore other well established lessons, such as those of individual tolerance or susceptibility to other poisons. Some people can get high on one drink of an alcoholic beverage, others can consume large quantities with little noticeable effect. People differ widely in their responses to toxins. Much of this is due to the individual function of immune systems.

Let us be clear on one point, however. Rapid, miraculous recoveries after removal of mercury amalgam fillings are not the norm. They do happen; but a slow, drawn-out recovery period is more common. Moreover, some patients have no noticeable positive results. We must be careful to not make promises or encourage unreasonable expectations.

"MEDIA REPORTS ALARM THE PUBLIC"

According to law and professional ethics, the health professional must maintain a knowledge of current scientific documentation in the area of his expertise and treat patients accordingly. The dental profession has been categorically remiss in this obligation regarding mercury amalgam dental fillings.

It is the responsibility of the media to provide information to the public; to do otherwise is a violation of the public trust. The dental profession should be cooperating fully with the media in the revelation of the scientific information, not denigrating it (as the ADA so shamefully did to "60 Minutes" in the ADA News on 19 November 1990). Their reactions are incredulous given the fact that "60 Minutes" offered the ADA the opportunity to present whomever and whatever they wished in defense of their position. The function of the ADA is to serve its membership and the public health, not its own self interest.
The truth can be hidden only so long; sooner or later it will be known, by one means or another. History is replete with shameful cover-ups that have been eventually revealed. Untold numbers of people have suffered as a result of cover-ups. The perpetrators eventually pay the price. The sooner the truth is faced, he better off everyone is.

"THE ISSUE SHOULD BE SETTLED WITHIN THE PROFESSION, NOT IN THE MEDIA"

We have tried that route, for many years. The translation of that argument is: "We have already decided that mercury amalgam dental fillings are harmless to patients and dentists who disagree with us will lose their licenses!"

Since the early 1980’s we, and many others, have spent untold hours of effort providing information to all levels of the dental profession, to say nothing of the expenses incurred. We have tried with the ADA and its components to the local level, all of the dental schools and all of the governmental dental agencies.

Their answer has been mudslinging and suspension of our dental licenses. No more, thank you! Enough is enough. They have set the standards for this battle. We have no sympathy or compassion left for them; too many people have already suffered from their actions.

"ANTI-MERCURY DENTISTS ARE UNSCRUPULOUS"

This is another mudslinging tactic designed to obfuscate the truth. To be sure, there will be some dentists who will take advantage of this issue to stimulate poor practices. There are also dentists who have abused and capitalized on the areas of cosmetic dentistry, periodontal therapy and temporomandibular joint dysfunction, to name a few. These actions are really an indictment of the morality of the dental profession, and most specifically its leadership, not of the anti-mercury movement.

Caveat emptor, let the buyer beware, should be the cautionary watchword. Mercury-free dentists have devoted years of effort and expense to learn the dangers of mercury, and how best to protect their patients and themselves. They have done this at great risk and sacrifice. Many have been well trained and educated through membership in the International Academy of Oral Medicine and Toxicology (IAOMT) or subscription to the Bio-Probe Newsletter and attendance at technical and scientific seminars.

Newcomers to the issue, some of whom may be interested primarily in stimulating their own income, will not be familiar with the rigid techniques necessary to protect themselves and their patients from mercury exposure. Patients would be well advised to thoroughly investigate the qualifications and experience of dentists on this issue.

WHO ARE THE TRUE "UNETHICAL" DENTISTS?

In 1987, the American Dental Association altered its "Principles of Ethics and Code of Professional Conduct" to make opposition to mercury amalgam dental fillings a violation. At the same time, the ADA publicly informed state Dental Boards that it would provide expert witnesses to any Board wishing to attack the licenses of anti-mercury dentists.

Meanwhile, that same document states in Section 4: "Dentists have the obligation of making the results and benefits of their investigative efforts available to all when they are useful in safeguarding or promoting the health of the public."

By now, every dentist should know that patients are chronically exposed to mercury from dental amalgam fillings; this much is indisputable fact and formally acknowledged by both sides. Failure to inform their patients of this is a violation of the ADA Code, and may also be a violation of state Dental Practice Acts and the Federal Trade Commission Act.

Is the pro-mercury dental establishment correct when claiming that dentists who caution their patients of the potential dangers of mercury amalgam dental fillings are unethical? Or will it be found that dentists who deliberately withhold this information from patients are unethical? More to the point, is it ethical for dentists to implant this highly toxic material into patients in direct contradiction to valid scientific documentation while claiming "over 150 years of use" as their only justification. State Boards of Dentistry and Departments of Professional Regulation may soon be facing these questions.

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YOU MUST REDUCE ADDED EXPOSURE TO MERCURY VAPOR.

A special note of consideration to all mercury-free dentists who will be doing more and more amalgam replacement. Some dentists around the world have developed very effective auxiliary evacuation systems to reduce or eliminate exposure to themselves, staff members and very importantly to the patient. The basic item involved in these systems is a wet/dry shop vacuum cleaner. The shop vac is placed in another room with the exhaust from the unit piped to the outside atmosphere. Approximately 2 quarts of fixer or other mercury binding material is placed in the shop vac to trap mercury. The suction hose to the shop vac is then piped into the dental operating using flexible tubing. The least expensive and most effective use is to then have the flexible tubing held by the patient on their chest about 6 inches below their chin. Jerome mercury vapor readings during removal using such a system have revealed practically zero readings in the breathing zones of the dentist, assistant and the patient. Another method is to have the tubing installed directly overhead drawing the mercury vapor and particulate straight up. We believe the final result is limited only by your imagination.

We feel the most important consideration to the sick patient undergoing amalgam replacement is to minimize their additional exposure to mercury vapor. This is also very important for the dentist and assistant doing replacement on several different patients a day. The IAOMT and Bio-Probe protocols for proper removal of an amalgam filling are very effective up to a point. However, without some auxiliary system to handle the extra-oral aerosol generated from the intra-oral procedure the doctor and assisting staff will be exposed to unacceptable levels of mercury. In addition to any mechanical means utilized to reduce exposure, consideration should also be given to scheduling replacement in a specific operatory(s) and only during certain hours of the day.

FORUM

The International Academy of Oral Medicine and Toxicology will present a one day seminar on Toxins in Dentistry at the Flamingo Hilton on Saturday February 2, 1991 (In the last issue of Bio-Probe we mistakenly identified the hotel as the Las Vegas Hilton). The phone number for hotel reservations is (800) 732-2111. The Hilton has reserved rooms at $89.00 per night. There are also numerous bargain rates available at other hotels nearby. Presentations will be made by Murray J. Viny, D.D.S. (New research); H.L. "Sam" Queen (Lifestyle counseling); L. Fuller Royal, M.D. (Understanding Homeopathy, Acupuncture and Electrodiagnosis); Richard D. Fischer, D.D.S. (Dental Homeopathy); David Kennedy, D.D.S. (IAOMT protocols for amalgam removal and indirect composite inlays); Clinicians Panel and Legal Questions. Seminar registration fees: IAOMT members free; non-member doctors $75.00; Staff with doctor $125.00. Checks payable to IAOMT should be sent to David C. Kennedy, DDS, 2435 Third Ave., San Diego, CA 92101. Telephone 619-231-1624.

IAOMT member John Tortora, D.D.S. has provided us with a copy of a letter from Vident certifying to him that there are no radioactive constituents used in the manufacturing of Vita porcelain products, such as VMK-68N, Vitadur-N or In-Ceram core material.

The Foundation For Environmental Health Research and the American Academy of Biological Dentistry are co-sponsoring The First PsychImmuneNeuroToxicology (PINT) Training Seminar (Including Bio Toxic ReductionTM Technology) which will be held at the Imperial Palace Hotel and Casino, Las Vegas, Nevada on April 11-14, 1991. There will be introductory and advance workshops on Psychology, Immunology, Neurology and Toxicology in medicine and dentistry along with detoxification procedures offered for Continuing Education Credit. Advance registration fees: Professional $375.00, Para Medical Professionals $350.00, Non-Professional (HEAL, AAA, HEF, etc.) $300. Checks payable to F.E.H.R. should be sent to F.E.H.R., 3972 Jackdaw St., #1-01, San Diego, CA 92103. Presenters are: Zane R. Gard, M.D.; Doug Seba, Ph.D.; Bruce Halstead Ph.D., M.D.; Walter Jess Clifford, M.S.; Steven Paul, Ph.D.; Aristo Vojdani, Ph.D.; Russell Jaffe, M.D., Ph.D.; DaTong Chu, M.D.; Gary Verigin, D.D.S.; John Laseater, Ph.D; Gunnar Heuser, Ph.D., M.D.; Harvery Loomstein; Sister Mary Vincent Otto, M.S.; Ed Arana, D.D.S.; Carl B. Meyer, J.D.