



The International Academy of Oral Medicine & Toxicology

## **IAOMT Physicians Speak Out: the Dental – Medical Partnership**

Traditional “dental medicine” has always concerned itself with dentistry for people with diseases – how to provide dental support for people with diabetes, for example, or the consequences of cancer treatment. The “Health Model” brand of dental medicine that the IAOMT advocates has more to do with health promotion, the relationship of dental health and the rest of the body, and, all too often, dealing with the systemic consequences of previous dental treatment.

One of the things IAOMT members seem to be particularly aware of is the necessity of combining the efforts of dentistry and medicine for the best health improvement for our patients. The Academy is a meeting ground where this dialogue takes place – both between dentists and physicians, and among physicians themselves, as we sort out the many complicated ways that dental health affects total health. In a world in which health care is sliced and diced into narrow specialties, we seek collaboration and interdisciplinary solutions.

The physician members of IAOMT are a valuable brain trust, and the Academy’s link to the world of creative medical thinking. They are M.D.’s, D.O.’s, as well as D.C.’s, N.D.’s, and other doctoral level practitioners. Their experience gives us a great deal of depth. Eight physician members participated in this interview, which reveals a diversity of background and approach. They are:

- Thomas A. Dorman, M.D., Federal Way, Washington
- Stuart Freedenfeld, M.D., Stockton, New Jersey
- Sam Queen, D.Sc., Colorado Springs, Colorado
- David Schenk, D.O., Clearwater Beach, Florida
- Brian Wilson, D.C., Englewood, Colorado
- John Wilson, M.D., Asheville, North Carolina
- Robert Battle, MD., Houston, Texas
- Ted Rozema, MD, Landrum, South Carolina

**What drew you to ally yourself with a group that is made up primarily of dentists? Why is working closely with dentists part of your vision for your own practice?**

Dr. John Wilson: I joined IAOMT because of the strong curiosity that I had about the physical effects, both negative and positive from dentistry. IAOMT's pioneering perspective in identifying the hazards of dental amalgams, as well as their strong political stance on this issue made IAOMT an appealing organization and one that I wanted to participate in and support with my attendance and membership.

Dr. Freedendfeld: I have been involved with mercury toxicity problems for many years and have come to realize that dental amalgam has been the main source of total body mercury in 99% of the hundreds of mercury toxic patients in my practice. Because of this fact I find that a biologically trained dentist is a vital link in the process that includes removing the source of toxicity. This must be done in a safe and effective manner in order to protect the patient's welfare. Furthermore confounding problems in the periodontal and surrounding bony areas often need to be addressed appropriately for patients to regain health.

Dr. Dorman: I came to realize that the taken-for-granted attitude implanted in me from my famous medical school that dental issues are separate from medical issues was wrong. Many illnesses effect the mouth as well as the rest of the body. Contrariwise, many illnesses in the mouth have remote implications. As an internist, it would be irresponsible not to look at the whole scene.

Dr. Brian Wilson: I originally heard about IAOMT from a colleague of mine when we were working on education for the chiropractic internists on oral morbidity and toxicology. Numerous cases later in which toxic teeth showed a remarkable effect on patient's health, I was pleased to find out that a physician membership was available.

Dr. Rozema: The mouth is the portal to our continuing existence on this planet. The teeth are essential to oral processing of our foodstuffs. The dental profession plays an integral part in maintaining the health of all of us. The implications of mercury toxicity from amalgam placement became a focus of my patient's care after seeing the benefits of amalgam removal.

**Do your dental colleagues help you in any direct way in your practice of medicine?**

Dr. Dorman: I interact with a number of "biological dentists" in Washington state with varying degrees of shared perspective, but, yes, the dentists who

service my patients by referral often take care of mercury toxicity through removing the mercury-containing amalgams effectively and safely. They cooperate with directing the patients for appropriate detoxification, which is usually conducted in my office, and often deal with cavitations of the jawbones with great benefit to some of the patients.

Dr. Schenk: I feel that I have a good working relationship with some of the IAOMT dentists in my area and we discuss both dental and medical problems with each other.

Dr. Battle: My clinic has a biological dentist on staff, Dr. Bill Glaros. He does the dentistry and I do the medical management. We often use some rather alternative methods – homeopathic drainage, neural therapy, metal chelation, allergy therapy, and nutritional support as indicated. This to me is the only way to give the patient comprehensive care. I think every dentist should seek out a physician familiar with these issues, and vice versa if at all possible.

Dr. John Wilson: I work very closely with a biological dentist, too. We have a fascinating series of patients for whom the physicians in my clinic identified toxicities of dental origin and areas of bone pathology in the jaws. We sent these patients to the dentist we work with for dental materials revision and surgical management of the bone pathology, after which they returned to us for medical management and to document changes in their physical condition. It's a direct partnership, where the medical condition could not have been treated successfully without the dental input.

Dr. Freedenfeld: That's been my experience, too. It turns out that dental health is important in all aspects of general health, especially neurologic, cardiovascular and immune systems.

Dr. Queen: Not only do dental conditions affect the rest of the body, but examination of the mouth is one of the best health screening methods. It offers a portal for actually visualizing the subclinical metabolic defects that are present in every disease. For example, in a patient with periodontal disease, you know that the same metabolic problems that contribute to the disease are active in the rest of that person's physiology.

**As you've begun to mention, one of the problems we are most concerned with is mercury toxicity. What are your criteria for this diagnosis, among the many conditions that can lead to similar sets of symptoms?**

Dr. Queen: I don't like to use the term "diagnose." I believe it's safer to use terms such as "consistent with," "a high probability of," or "at risk for" mercury toxicity. We look at a comprehensive blood chemistry for the toxic footprints of mercury as it marches through the body. For example, mercury typically lowers cortisol, raises IgM, increases MCV, lowers G-6-PD, and raises beta-2-microglobulin in the serum and finally in the urine (which is OSHA's standard for when to remove a worker from the workplace due to mercury exposure). The toxic footprints, a history of exposure, and risk factors of toxicity provide a basis on which to address mercury toxicity.

Dr. Dorman: I agree with Dr. Queen that the diagnosis of mercury toxicity is always tentative and clinical. Nonetheless, the laboratory is a great help. We use two hour urine collections as a challenge test after DMPS administration. By putting all the information together, we draw tentative, probable conclusions as to whether or not mercury toxicity plays a role in the patient's ill health. This assumption, tentative diagnosis, or guesswork leads to a positive result as judged by the clinical outcome in between half and two thirds of the people who subject themselves to amalgam removal.

Dr. Freedendfeld: The toxic footprints you talk about, Sam, also involve certain characteristic symptoms that raise one's level of suspicion. In this framework of a high index of suspicion I have found that the most reliable evaluation is using DMPS and a 6-hour urine collection. I consider both the lab result and the response reported by the patient after administration of DMPS.

Dr. Brian Wilson: My best standard is a 6 hour urine challenge for heavy metals after a loading dose of DMSA and calcium disodium EDTA that is adjusted to the body volume.

Dr. Rozema: It's another instance where the practice of medicine is not an exact science. We were all taught to observe our patients and to trust our judgments. If there is a suspicion of mercury involvement in a patient – that patient deserves to be studied for that metals presence as it cannot cause problems if it is not in the body. To that end we, also, do the simple DMPS challenge test with or without Ca EDTA, after a hair mineral analysis to get a handle on what the toxic metals may be in that patient.

Dr. Queen: There's another point that needs to be made. The provocative urine test for mercury is useful, but should not be done without first balancing body

chemistry and getting amalgam fillings out. That eliminates the potential risk of pulling more mercury into the body via the chelating agent, as the drug is expressed in the saliva and the patient swallows. And it keeps the patient from reacting to the drug.

Dr. Schenk: The problem with that, Sam, is that the challenge test is part of the workup to establish the presence of a body burden of mercury in the first place, which backs up our recommendation to the patient to get the amalgams removed. You can't put the treatment ahead of the diagnosis.

**Everyone mentions the challenge, or stimulated, urine test for mercury, although your specific techniques vary. What about other methods of detecting mercury, plain urine, packed red cells, serum, or hair?**

Dr. John Wilson: I use all of the above in trying to determine if an individual has a significant body burden of Hg. If any one single test can be relied upon, it is a positive DMPS challenge test. With this we are able to definitely determine how much Hg the individual released into the urine when challenged. It is not a marker of how much Hg the individual has. I like to use the analogy that doing urine challenge tests is like a blind man standing under an apple tree, shaking the tree and speculating how many apples remain in the tree. If he were shaking the tree in the fall, his speculation would probably be reasonable as he would conclude that the decreased number of falling apples with subsequent shakes would belie that there was a progressively smaller number of remaining apples on the tree. However, if he were shaking the apple tree in another season when apples were either not present or ready to fall that same conclusion would not be accurate.

Hg has an incredible capacity for hiding and choosing its time and place to be released. Currently there is no "dipstick" which one can use to definitively conclude how much Hg is hiding. I prefer to utilize all of the "tools" you mention to get an idea if detox should conclude or continue.

Dr. Queen: Packed red cell mercury is useful ONLY in diagnosing acute poisoning. It tells nothing about the chronic accumulation of mercury in the various target tissues (rich in cysteine residues).

Dr. Battle: The urine recovery after challenge is the best objective indicator of mercury in the body tissue; specifically the mesenchyme or interstitial space. It is never found in blood or hair reliably.

Dr. Freedenfeld: Right, the challenge urine test is the gold standard. I don't find serum or packed red cells useful for chronic toxicity from dental amalgams.

Serum is only useful in cases of acute poisoning, as mercury remains in the serum for only three to six weeks. Unchallenged or baseline urine tests do not adequately separate individuals with high or low body burden of mercury from chronic exposure. By the way, that's what's wrong with those reports of mercury exposure in dentists published in JADA and related sources. They only used blood or plain urine tests, so their numbers always look good.

The hair may show high, low, or "normal" levels in people with similar mercury burdens, so it is very difficult to interpret. Elemental mercury usually doesn't get excreted into the hair, though organic mercury does. So typically mercury from fish will show up in the hair. This could theoretically help distinguish sources of mercury, but some elemental mercury gets methylated by gut bacteria as it passes through the enterohepatic circulation. Some people may have a very high mercury burden and still not excrete into the hair. This may be an indicator of impaired excretion capacity. This is what has been demonstrated in autistic children who have been exposed to thimerosal in vaccines, and have significantly lower hair mercury than similarly exposed non-autistic children.

Dr. Rozema: Mercury so loves sulfhydryl groups inside cells that there is a very small amount in the blood to be determined and that does not seem to correlate with the total body burden. The challenge urine test seems to strip out more than that in the blood stream, although the compounds do not go intracellular. The explanation that makes the most sense to me is that mercury is being stripped somehow from the kidney deposits as the chelating agent is being excreted from the body (primarily for DMPS).

I would love to see the data derived from someone with moderate levels of mercury in the body (as confirmed with provocation tests) and have the other compartments analyzed at the same time to see if one of these other compartments could give accurate information. I don't think it has been accurately analyzed.

As for hair, we have found clinically – if there is even a small amount of mercury showing up in the hair - a provocation test invariably tests positive.

### **Does anyone rely on electrodermal testing or muscle testing?**

Dr. Rozema: It is my understanding that these two methodologies are very operator dependant and could lead to spurious results. Some people say that in the hands of a skillful operator, the results can be quite accurate. It needs to be compared to challenge urine testing for mercury.

Dr. Freedenfeld: I have respected colleagues who rely on electrodermal or muscle testing. In the right hands it can have impressive accuracy.

Dr. Queen: Both may be legitimate, but they aren't accepted by anyone who respects science. We just haven't seen the kind of research that would document consistent correlations between the information gathered by these methods and other, more established methods.

Dr. Battle: I think EAV in the right person's hand can be another good indicator but it isn't accepted by courts or medical boards. Whatever information you gather that way has to be backed up with more widely recognized tests.

**How do you treat mercury toxicity? Some people have remarked that pharmaceutical chelation can be harsh. When do you use chelation, and when do you use other methods, such as nutritional support for natural excretory function?**

Dr. Freedenfeld: I use a complex symphony of supplements to restore energy metabolism, nutritional adequacy, mobilization of toxic metals and repletion of essential minerals. At the same time I use supplements to protect the liver and immune system from toxic effects of the mobilization process. I use organically matrixed antioxidants. I use support for cellular release of toxins, lymphatic and vascular portage, liver processing, bile flow and intestinal binding to prevent reabsorption. All of this is used before, during and after the amalgam removal process. Once all amalgams are out the patient is started on weekly DMPS until the urine output levels are low. We then stop and if/when symptoms recur in 3-6 months we retest and resume DMPS sometimes followed by a 3 day DMSA treatment. Using this program I have had a very high success rate and a very, very low rate of problems.

Dr. Brian Wilson: I generally insist on referral for a series of Myer's cocktails, most preferably with a corn-free injectable vitamin C. This is most preferable for persons who are to have amalgam removal. Nutritional programs are customized for the patient as blood and urine tests indicate. Typically, we will use combination homeopathic detoxification compounds, and an oral liquid ascorbate that can safely load the system with peroxide generating levels of vitamin C. Oral chelation in its latest generation does seem to work rather well with usually minimal reaction.

Dr. Schenk: I have a method of treatment that uses a combination of chelation and nutritional support, but the important thing to realize is that there is no one cookie-cutter method that applies to all patients. It is essential to keep testing throughout the period of treatment to monitor the patient's progress, and alter

the therapy if necessary. Testing is not only for mercury levels, but other metals, amino acids, and several other metabolic factors.

Dr. Queen: I never recommend the use of a pharmaceutical chelating agent as an early part of someone's health plan. I work to balance their body chemistry first, especially handling inflammation to keep the individual from reacting adversely to mercury. In addition, I only recommend chelation after the person has had their amalgam fillings removed. We've also developed a system for getting mercury out of the body that's safer than chelation; although it's not as quick. The techniques we use are based on the client's blood chemistry results. The protocols may include detox baths, dietary measures, combinations of nutritional supplements, etc.

Dr. Dorman: I have two suggestions regarding the medical aspect of heavy metal detoxification. The initial treatment needs to be tentative. We have seen three patients who reacted unfavorably to orally administered DMPS out of approximately 150 subjects who have been treated. I usually use a fourteen day cycle, which includes three days on DMPS in the middle of the first week, and the second week being used to replete essential minerals. Recently, I have added the use of citrus pectin during the DMPS week in anticipation of additional extraction of the toxic metals through the GI tract, as there is early evidence that modified citrus pectin, at least of the pectosol variety, traps the toxic metals in the GI tract, preventing them from being reabsorbed into the enterohepatic circulation. We have demonstrated with repeated challenge urine testing that the levels of mercury as well as other heavy metals are reduced substantially. Many of these patients report clinical benefit, but the correlation still requires further statistical evaluation. We always add the naturopathic type of recommendations of nutritional support, but I am uncertain whether this is indeed beneficial.

Dr. Rozema: We use the DMPS challenge test to get a handle on the body burden of mercury. The treatment phase is to use DMSA orally as it is less costly to the patient – the DMSA is less toxic than DMPS and the clinical results are excellent.

### **No one mentioned intravenous vitamin C. Is that still part of the mix?**

Dr. Freedomfeld: We use IV vitamin C along with glutathione after each phase of dental amalgam removals. I think it helps to remove the mercury that is inadvertently released from the tooth and surrounding bone during the drilling process. Vitamin C also reduces the charge of the mercury molecule and thus decreases the toxicity. So  $Hg^{++} \rightarrow Hg^{+} \rightarrow$  elemental Hg.

Dr. John Wilson: IV vitamin C has been a mainstay of detoxification of mercury for years. It is a weak chelator, but when used in high doses frequently, it can pull a lot of mercury. I know numerous patients who have tremendous benefit from IV-C when detoxing mercury.

Dr. Rozema: IV-C does a lot of things but removing mercury is not one of them. It is known that vitamin C as well as Thiamine (B-1) can be helpful in assisting the removal of lead from the brain when using EDTA, but I know of no study that speaks to vitamin C and mercury.

Dr. John Wilson: Though there've been no published studies to my knowledge that support the mercury chelation ability of Vitamin C, clinical experience of many physicians has supported the use of Vitamin C in detoxifying mercury. The ene-diol structure of Vitamin C would likely make it a weak chelator of mercury. It's anti-oxidant properties and the ease of inexpensively maintaining high serum levels of this vitamin make it an easy addition to any mercury detoxification program

Dr. Queen: Well, I've got a tremendous bibliography on high dose vitamin C, and this material certainly has a place in the treatment of the mercury toxic person. As demonstrated in many references, a primary benefit is its ability to greatly reduce any possible inflammatory response that may occur during amalgam removal and following chelation. The evidence for it being useful in excreting mercury is limited, although there is substantial evidence that it greatly reduces the toxic reactions of mercury. As per toxicity of the vitamin C itself, toxicity is limited but can be severe. The literature describes the occurrence of five deaths in 50 years. Body chemistry can identify those people at risk, which I highly recommend. The bottom line: I wouldn't want to proceed with a detoxification program without IV-C, but would definitely not administer without first determining risk through a comprehensive chemistry profile.

### **How involved should the dentist be in the treatment of mercury toxicity?**

Dr. John Wilson: I am of the opinion that dentists should work with a physician trained in detox. Certainly basic nutritional methods could reasonably be utilized by dentists for basic "simple" detox for patients who are uncomplicated (I'm not sure I ever see any of those kind). Herbal agents like garlic, MSM, Porphyrzyme, etc., would certainly be safe for most anybody to take. I think that actual chemical chelation agents should be used by a physician trained in their safe and effective use.

Dr. Schenk: I agree – I believe that dentists should stick to the dentistry and leave medical treatment to the physicians. For the great majority of these patients treatment for mercury is only one aspect of their situation. They come to the medical clinic with conditions such as chronic fatigue, fibromyalgia, autism, or multiple sclerosis, and we discover mercury toxicity to be part of their clinical picture. You've got to be prepared to practice all of medicine to do a good job in these cases. How far can a dentist go in treating the whole body? Likewise, we need the specialized skills of dentists to clear the patient of dental sources of toxicity before we can proceed with the medical treatment.

Dentists need to realize that replacement of amalgam and other toxic dental materials is only the first step for the patient. In today's climate in regard to the issue of amalgams and mercury it would be my recommendation that a patient getting the amalgams removed for whatever reason have a proper workup by a physician. I feel that the patient should always be prepared medically and nutritionally prior to amalgam removal.

Dr. Rozema: I believe the dentist can be very helpful in dealing with mercury toxic patients, especially by being aware of specific nutritional methods of biological support. The most important thing a dentist can do, though, is to be capable of removing amalgams properly without increasing exposure at the time of removal.

Dr. Queen: On the other hand, as an educator, I've found that dentists are just as capable as physicians of being trained to analyze a patient's body chemistry and offering nutritional and detox advice. The line between dentistry and medicine may have to be drawn in different places for different practitioners, depending upon training and the availability of good medical support in a given locale.

### **We've spoken quite a bit about the mercury problem, but what other areas provide an opportunity for dentists and physicians to work together?**

Dr. John Wilson: The relationship between periodontitis and ischemic heart disease is so well documented in the medical literature that it hardly even needs to be mentioned. Aside from that, however, the relationship between anaerobic bacteria and cavitations (ischemic osteonecrosis of the bone marrow in the jaws) is increasingly becoming recognized as an occult cause of both peripheral and central nervous system dysfunction through inhibition of autonomic function, as well as the elaboration of enzyme-inhibiting toxins that can interfere with nerve function.

Dr. Queen: As I alluded to before, my research has shown that there are six subclinical metabolic defects that underlie chronic disease: (1) acid/base imbalance; (2) an anaerobic tendency; (3) an imbalance in bound vs. free calcium; (4) chronic inflammation; (5) connective tissue breakdown; and (6) oxidative stress. As it happens, the mouth is the only place in the body where all six can be visually observed. The dentist is in the best position to screen for total health problems, which can be followed up by the physician. Or, if the dentist is trained in body chemistry management and treats the patient's oral disease via the metabolism, salutary things just may happen in the rest of the patient's system.

**What would you like to communicate to your medical colleagues? How can they get involved and learn the things you know? How much resistance have you received from them in the past?**

Dr. Freedenfeld: I have consulted on patients over the years and when I have diagnosed a patient with mercury toxicity I hear the same query from their former doctors: "I have so many patients with multiple amalgams, how come I don't see more mercury toxicity?" Doctors need to recognize the possibility of a diagnosis so they can then consider pursuing an appropriate evaluation. They will then need to be educated as to the appropriate diagnostic tests and treatments.

Dr. Dorman: I'm much more pessimistic about influencing mainline medicine. I do not think they are interested in budging an inch from the disease – drug orientation that passes for health care. We must, though, be receptive and supportive of those physicians who come to us with an open mind and a willingness to learn from our experiences. I came to this more holistic view after being in practice for about twenty years, so there may still be hope for more inquisitive and creative doctors to pick up the banner.

Dr. Queen: Looking at body chemistry relative to a Health Model pays far more dividends in treatment outcomes than restricting your views to the disease model approach. We've seen great enthusiasm for our approach from health care professionals who are open to a scientifically based Health Model approach. Some health care professionals have felt intimidated because they view us as the competition. We hope to dissolve this barrier.

Dr. Brian Wilson: I tell my colleagues, simply, where you have the clinical puzzle, look to and consider the mouth as being the culprit. Greater cooperation between every school or specialty of health delivery needs better teamwork approaches if the health delivery system is to work efficiently. How can they get involved? At least I'm in a position to teach the Chiropractic Internists, and will

probably teach the section on oral health next year. When it is well-presented, the questions session goes overtime. Resistance?-I do not recall any major resistance.

Dr. Rozema: Don't keep your head in the sand. We did not learn everything there is to learn in our formal medical training period. We need to be open minded about how the body functions and not always regard it as a repository for pharmaceuticals. We need to keep our minds open and understand that the mouth is essential to the body's health.

**Thank you all for meeting with us today. This is a big subject with lots of opportunity for exploration and research, and for helping patients with challenging health problems. We look forward to expanding this horizon in the future.**

**Physicians interested in joining this discussion are invited to contact IAOMT at [info@IAOMT.org](mailto:info@IAOMT.org).**