



# BIO-PROBE NEWSLETTER

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MERCURY HYPERSENSITIVITY/ALLERGY OR TOXICITY?  
PART II

In part I of our series we presented data indicating the migration of mercury, in ionized and vapor form, from amalgam fillings into the dentin, and surrounding oral tissues and into the lungs and gastrointestinal tract. We also cited studies showing the degree of sensitivity or allergy to mercury far exceeded the ADA position of less than 1%.

There was one study cited in part I that I wish to mention again because of one conclusion. Nakayama et al. (1983) felt that mercury exanthem was a SYSTEMIC contact dermatitis that can occur repeatedly in sensitized individuals through the inhalation of mercury vapor.

Dorland's Illustrated Medical Dictionary defines the terminology used in the foregoing statement: Systemic = "pertaining to or affecting the body as a whole"; Contact dermatitis = "1. An acute allergic inflammation of the skin caused by contact with various substances of a chemical, animal, or vegetable nature to which delayed hypersensitivity has been acquired; when severe it is called dermatitis venerea. 2. Primary-irritant (non-allergic) dermatitis." Delayed hypersensitivity is defined as "a slowly developing increase in cell-mediated immune response to a specific antigen; it is involved in the graft rejection phenomenon, autoimmune disease, and contact dermatitis, as well as in antimicrobial immunity."; Delayed Allergy is defined as "an allergic response which appears hours or days after application or absorption of an allergen; it includes contact dermatitis and bacterial allergy."

If I understand the statement of Nakayama et al and the definitions outlined above we now have a medical condition manifested as a contact dermatitis WHERE THERE HAS BEEN NO OVERT CONTACT. We are talking about a systemic, whole body reaction in a person previously sensitized to mercury, where there is only a skin manifestation of this sensitization in the form of a diffuse symmetrical erythema with occasional red papules, that is precipitated by inhaling mercury vapor. So regardless of whether the individual originally became sensitized from environmental sources, mercury in the food chain, use of mercury containing pharmaceuticals, or from dental amalgam, it now appears that the allergic reaction could be triggered by inhaling mercury vapor escaping from amalgam fillings during installation, removal, and/or function.

Unfortunately, Dr. Nakayama did not indicate whether vital signs were recorded during their research. So, although we have a finding of systemic contact dermatitis, we do not know if there were also other systemic changes in blood pressure, pulse rate, and temperature concurrent with the skin manifestations.

My reason for stressing the implications of Dr. Nakayama's findings relate to another article recently published in the October 1984 issue of the California Dental Association Journal. The article by Robert L. Cooley, DMD, MS; and John M. Young, DDS, MSc. reflected

their presentation to the Workshop on the Biocompatibility of Metals in Dentistry, July 11-13, 1984. The article titled "Detection and diagnosis of bioincompatibility of mercury" makes the following special point: "A new concept of hypersensitivity, or nontraditional approach, has been proposed by the anti-mercury group (proponents of amalgam removal). This new concept (or redefinition) is also called hypersensitivity, but is said to be different from an allergic response. This definition of hypersensitivity has been expanded to include changes in blood pressure, pulse rate, body temperature, and peripheral white blood cell count."

"According to this nontraditional view, changes in these parameters indicate hypersensitivity. It should be noted that this nontraditional approach also incorporates the traditional view of hypersensitivity, in which contact stomatitis or contact dermatitis indicates hypersensitivity."

Dr's. Cooley and Young have produced an excellent review of a great many of the factors involved in the very complex problem of determining patient hypersensitivity to mercury/amalgam. However, I for one would have much preferred to have them forego the labels of "a new concept of hypersensitivity; a non traditional approach; and a redefinition" and instead, researched the protocol in a positive light.

For example, Dr. Arthur F. Coca, one of the pioneering immunologists, developed the pulse test to assist in identifying foods an individual may be allergic to. An increase of 18 or more beats per minute, 40 minutes after eating a particular food, is a fairly reliable indicator that you are sensitive to the food that was eaten. He developed the pulse test because of the inaccuracies in skin tests. I feel certain that is the same reason Dr. Hal Huggins included pulse variations when he was developing the "new concept" protocol.

In the above context, I would also like to quote from a chapter written by Dr. William H. Philpott in: A Physician's Handbook on Orthomolecular Medicine (1977). "With increasing insistence, allergists are telling us they have much to offer the practice of medicine in general and the central nervous system reactions in particular. They also tell us the field of allergy is larger than the immunologists have cut out for it. There are many maladaptive, allergic-like reactions not manifesting antibody formation and, therefore, not fitting the immunologists' definition of allergy. Clinical ecology is a more inclusive term and would include all maladaptive reactions occurring on exposure to a substance, whether this be (a)allergic with antibody formation, (b) idiosyncratic-toxic in which small amounts of toxins not affecting the majority produce toxic reactions in these susceptible persons and (c) deficiency-type reactions which include nutritional deficiencies and metabolic errors."

In Chapter 24 of the same book Dr. Philpott goes on to state: "It has long been recognized that reagins do occur in the central nervous system, however their frequency and importance have not been considered great. There are several reasons for this state of affairs