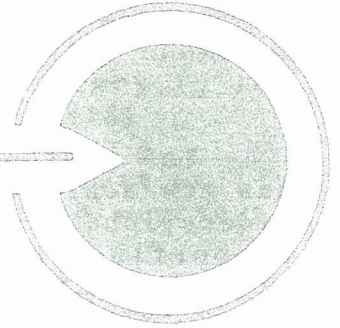


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SPECIAL ISSUE

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<<<< THE MYTH'S AND THE FACT'S >>>>

BY

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REBUTTALS TO:

1. **THE HARVARD MEDICAL SCHOOL HEALTH LETTER. VOL XI, NO.1, NOV. 1985.**
Mercury in Dental Fillings: Is There a Problem? R.S. Baratz.
2. **CONSUMER REPORTS. 51 (3), MARCH 1986.**
The Mercury Scare: If a dentist wants to remove your fillings because they contain mercury, watch your wallet.
3. **TEXAS DENTAL JOURNAL, JULY 1986.**
Safety of Amalgam: Toxicity and Allergy. Amalgam Survives Systemic Toxicity Challenge. Sellers R. et al.
4. **AMERICAN DENTAL ASSOCIATION PATIENT PAMPHLET W 186, 1985.**
Dental Amalgam: Filling Dental Health Care Needs.

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REBUTTAL

The controversy over the use of dental mercury amalgam fillings has now achieved such international attention that medico-legal considerations dictate the requirement for valid scientific documentation supporting the respective positions. The antagonists in this issue will ultimately be held responsible for their public statements.

Two articles, an A.D.A. pamphlet and a recent research study are being utilized by the pro-amalgam advocates in defense of their position that the mercury amalgam fillings are harmless to patients and that there is no reason to discontinue their use. These four documents have considerable potential for influencing the health of untold numbers of patients. It is, therefore, absolutely imperative that the scientific validity of these documents be examined and evaluated. These four widely disseminated and quoted documents are:

1. "Mercury in Dental Fillings: Is There a Problem?" Dr. Robert S. Baratz. The Harvard Medical School Health Letter. Vol XI. No.1. November 1985.
2. "The Mercury Scare: If a dentist wants to remove your fillings because they contain mercury, watch your wallet." Consumer Reports. March 1986.
3. "Dental Amalgam:Filling Dental Health Care Needs." American Dental Association Patient Pamphlet #W186. 1985.
4. "Safety of Amalgam: Toxicity and Allergy. Amalgam Survives Systemic Toxicity Challenge." Sellers, Rodney, Jr., D.D.S., et al. Texas Dental Journal. July 1986.

In order to evaluate the scientific validity of these documents an attempt to distinguish between opinions and scientifically supportable facts must be made by delineating that which has been scientifically documented.

THE ANTI-AMALGAM POSITION

Insofar as the anti-amalgam position is concerned, the following factors have been scientifically validated:

1. Dental mercury amalgam fillings do contain elements that are toxic to human tissue.(1,2) Although silver, copper and tin may also be toxic, the major concern has been directed to mercury, which is universally acknowledged to be an extremely poisonous element.(3) The research of Sharma and Obersteiner in 1981 found mercury to be more poisonous than lead, cadmium, and even arsenic.(4) Mercury vapor, because of its extremely high rate and rapidity of absorption by inhalation, is considered to be far more toxic than metallic mercury itself.(5,6)

2. Mercury vapor is released from dental amalgam fillings, particularly when they are subjected to functional stimulation such as chewing, toothbrushing, and hot fluids.(7-11) The release of mercury in ion form has also been well demonstrated in vitro and in vivo.(12)

3. The slow half-time excretion rate of mercury guarantees that multiple daily exposures, albeit in small doses, will result in a gradual accumulation of mercury in body tissues.(13,14)

4. The minimum amount of mercury that will not cause significant human tissue damage is unknown.(15-16) The current established toxic thresholds (TLV,MAC,OEL,PEL,etc.) for mercury are all merely estimates of mercury exposures that will cause clinically observable signs and symptoms of neurological damage in adult workers in a 40-hour per week industrial environment and have no applicability to subclinical pathology (17-20).

5. The measurement of mercury levels in the urine or blood does **not** correlate to the body burden or toxic effects of mercury.(22-26) This fact negates the validity of studies and statements that attempt to justify the harmlessness of dental amalgam fillings based on measurements of mercury in urine or blood.

The opponents of dental amalgam maintain that this documented scientific evidence is more than sufficient to warrant discontinuation of use of the material. They have called for a moratorium on further use of dental amalgam fillings until valid, in-depth studies are presented.

THE PRO-AMALGAM POSITION

The dental amalgam filling has been the backbone of dentistry for more than one hundred years, although its use in humans has been extremely controversial since the very beginning. Indeed, the American Dental Association, which is the foundation of contemporary dentistry, was founded by dentists favourable to the use of dental mercury amalgam as an alternative to the existant dental heirarchy, which considered use of the material not only potentially hazardous, but subject to charges of malpractice.

Initially, proponents of dental amalgam aknowledged the toxicity of mercury, but maintained that the mercury was firmly 'locked' into the filling, thereby rendering its toxic properties harmless.(27,27a) Faced with an overwhelmingly proliferating body of scientific evidence to the contrary, amalgam proponents were obliged to alter their position.(22-24)

The new pro-amalgam position is to acknowledge the release of mercury from the set amalgam filling, but claim that the amount released is insufficient to cause pathologic damage to the patients.(22,24,27) This position presupposes possession of two distinct bodies of documented scientific information: