

MERCURY IN SALIVA TEST

The test measures the body exposure to mercury from Amalgam

The majority of human exposures to mercury occur by ingesting contaminated food or water, by breathing contaminated air and/or by the release of mercury through the amalgam of tooth-fillings. A continuous low level release of mercury through the dental amalgam creates a chronic, accumulating exposure, which has been documented to be a significant health risk. The amount of mercury being released varies depending upon the number and age of the amalgam fillings.

THE TEST

The test measures the mercury that is released from amalgam tooth-fillings. Since mechanical pressure, chewing, or hot and acid drinks increase the release of mercury from the amalgam, this test requires 2 samples; one while resting (without food or drink) and one while chewing. Considering that the average humans' chewing time equals one hour per day, both chewing and resting measurements are used to calculate the daily exposure to mercury.

Daily exposure to mercury from amalgam is measured based on both values and calculated by the following formula. (The results are given in PPB ug/l; the reference range is 0-2.7 PPB ug/l.)

$$S1 \times V1 \times 12 \times 23 \text{ hours} + S2 \times V2 \times 12 \times 1 \text{ hour}$$

S1 = mercury in 1 ml sample collected during rest

S2 = mercury in 1 ml sample collected during chewing

V1 = total volume in the resting sample

V2 = total volume in the chewing sample

Drinking, eating or brushing teeth is not allowed for two hours prior to collection of the saliva samples. This prevents results from being influenced by mercury that is ingested through food and/or water, that is released due to mechanical pressure (chewing, brushing teeth), or released through the action of hot or acid drinks on the amalgam.

REMARK

Dental treatments can temporarily increase the release of mercury from the amalgam leaving a measurable residue. Consequently, it is not advisable to do this test within 2 months of major dental treatments.

TEST INDICATIONS

A: Identifying a possible cause of elevated mercury from testing

B: Chronic illnesses with a suspicion of mercury exposure as a precipitating or aggravating factor, like:

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|----------------|---------------------|-----------------------|
| - Anemia | - Gastro-intestinal | - Memory impairment |
| - Anorexia | disturbances | - Moodiness |
| - Depression | - Headache | - Parkinson's disease |
| - Dermatitis | - Hypertension | - Periodontal disease |
| - Diarrhea | - Immune depression | - Weakness |
| - Excitability | - Insomnia | |
| - Fatigue | - Irritability | |

COMPLEMENTARY TESTS

Nutrients and, most significant of these, the trace element **Selenium**, can aid the body in the detoxification of mercury. Measurement of the concentration of **Elements (in blood and/or hair)** and **Anti-oxidants** i.e., lipoic acid is recommended with mercury exposure.

In order to measure total body exposure to mercury, it is the advisable to have a **DMPS challenge test**.

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