

Mercury and Dental Amalgams

Amalgam restorations have been used in dental practice since the mid-19th century. Millions of people are carrying amalgam restoration around the world. It is still a basic restorative material in dental practice. It is a versatile material for intra-oral use, easy to handle & cheap.

Mercury has toxic properties & no longer advisable to use in the human mouth. Average daily intake of mercury from amalgam restoration is estimated to be 1.2 – 1.3mgm.

Intra-oral measurements of mercury vapor shows higher readings in adults with amalgam restoration than in those without. In human blood mercury levels have been correlated with the number and surface area of amalgam & significantly lower in people without amalgam restoration.

Urinary mercury was found in dentists more in those with greater exposures like old dentists, generalist rather than specialists. It is related to the number of amalgam placed, form of amalgam preparation & type of heating & cooling system in the office.

Outcome of mercury toxicity

- Neurological changes.....weak evidence
- Multiple sclerosis..... weak evidence.

Studies & research has found that there is little effect on the patients but more on the dentists. Mercury from amalgams constituted only some 6 – 12% of daily intake for adults with amalgam restoration.

When amalgam is used all precaution should be taken to minimize exposure to mercury vapor for both patients and office staff.

Guidelines for storing & disposing of amalgam scrap, and for handling mercury spills needs to be followed rigidly.