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By DTI

ATHENS, USA: Although the potential adverse health effects of mercury have been the subject of debate for a long time, the extent to which dental fillings affect mercury levels in the body was still unclear. New research has now found that people with multiple dental fillings exhibited significantly elevated levels of mercury in their blood compared with people who did not have dental surface restorations.

The study, which analysed data from nearly 15,000 individuals, is the first to demonstrate a link between dental fillings and mercury exposure in a nationally representative population. The researchers found that patients with more than eight fillings had about 150 per cent more mercury in their blood than those with none.

They further analysed exposure by specific types of mercury and found a significant increase in methylmercury, the most toxic form of mercury, associated with dental fillings, suggesting that the human gut microbiota, a collection of microorganisms living in the intestines, may transform different types of mercury.

Mercury exposure from dental fillings is not a new concern, but previous studies were inconsistent and limited, according to Dr Xiaozhong Yu, co-author and Assistant Professor of Environmental Health Science at the University of Georgia’s College of Public Health.

“This study is trying to provide the most accurate levels of exposure, which will form the scientific basis to make future risk assessment,” Yu said.

In response to the study, the American Dental Association (ADA) issued a press statement at the end of September that clarified that the association’s position on dental amalgam remains unchanged. “The mercury levels cited in the study did not exceed a level that according to the National Academy of Sciences would be known to cause adverse health effects. Thus no conclusions about the safety of dental amalgam should be drawn from this study. In addition, the study used data that included two different types of dental materials: composite, which does not contain mercury and dental amalgam, made from a combination of metals including silver, copper, tin and mercury. It is important to note that since the study does not differentiate between the two filling materials, the study’s findings may be prone to over-interpretation,” the ADA stated.

The ADA and the US Food and Drug Administration consider dental amalgam fillings safe for adults. However, they advise against its use in pregnant women and children under the age of 6.

The study, titled ‘Associations of blood mercury, inorganic mercury, methyl mercury and bisphenol A with dental surface restorations in the US population, NHANES 2003–2004 and 2010–2012,’ will be published in the December issue of the Ecotoxicology and Environmental Safety journal. It was conducted by researchers at the University of Georgia and the University of Washington.