

Secret Weapon in the Battle Against Cavities?

Dental caries continues to be a protuberant disease in children. According to Nutrition Reviews, research studies have revealed that dental caries in children can be reduced by up to 50% by increasing intake of Vitamin D. Recently existing studies on dental caries reduction have been re-examined and show promise for the control of early childhood caries. These results indicate that Vitamin D could be a secret weapon in the battle against cavities in childhood and beyond. It was understood that certain dietary deficiencies could lead to diseases such as rickets and scurvy. The recognition that Vitamin D could help with common childhood ailments evolved to the connection with dental caries. Relating to oral health, at least 20 studies were done after the discovery of Vitamin D.

Vitamin D deficiency is a somber but often concealed condition that can now be identified by a simple dental X-ray; the researchers McMaster, Lori D'Ortenzio, and Megan Brickley anthropologists have claimed that human teeth hold a key to diagnose Vitamin D deficiency, which can be extremely valued for treating such conditions in affected people.

To avoid wasting precious specimens, the researchers went looking for a way to isolate teeth for further study. By using X-rays to study the readily observable shapes of the "pulp horns," the dark shadow at the center of the image of a tooth, they found a reliable, recognizable pattern that could prove helpful not only to their studies of archeological teeth but also to living people who may not realize they are suffering from Vitamin D deficiency.

The pulp shape in a healthy person's tooth resembles an arch topped by two cat ears, while the pulp shape of a person who has had a severe deficiency of Vitamin D is asymmetrical and constricted and typically looks like the profile of a hard-backed chair.

Since the consequences of Vitamin D deficiency can be severe, especially in terms of bone health, knowing who has had a deficiency can help identify people who may have ongoing issues in time to prevent worse damage, the researchers say. If regular dental X-rays show a problem, such evidence could be particularly valuable in the case of children whose bones are still growing, the researchers say, and spotting a problem early could head off future problems with Vitamin D-related bone deficiency.

However, the risks associated with the use of X-rays are a form of electromagnetic radiation, just like light waves and radio waves. Because X-rays have higher energy than light waves, they can pass through the body. Just like other forms of high-energy radiation, X-rays can cause damage to cells in the body, which in turn can increase the risk of developing malignancy. This increase in risk associated



with each dental X-ray procedure is extremely low but does slowly increase with the increasing number of X-rays tests. Even though it is an age of digital radiology, still the pros and cons have to be considered if one goes for X-rays to diagnose the Vitamin D deficiency. In today's world of advancement, one has to debate whether to consider hematological tests or to continue with X-rays.

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