



The Possible Relationship Between Modern Civilization and Oral Diseases

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In today's world, the rapid modernization of human life touches every aspect of our existence. From fashion and music to transportation, education, and communication, civilization has reached the depths of space and the core of the earth. Among these advancements, the diversity in food sources and cooking methods stands out. Even sports have evolved, with a focus on video gaming that keeps children and young adults sedentary for hours or even days, often consuming fast food with minimal physical activity. These changes have had a profound impact on human health, particularly oral health. This letter will explore the potential connections between modern civilization and certain oral diseases.

Impaction

Ancient mummies from Egyptian, Chinese, and other ancient civilizations rarely show signs of impacted teeth. This could be because their diets consisted of raw and coarse foods, requiring stronger mastication muscles. These powerful muscles contributed to the expansion of the jawbone, allowing enough space for all teeth, including third molars, to erupt properly. In contrast, today's diet of refined, well-cooked foods demands little from our mastication muscles, resulting in smaller, narrower jaws that often cannot accommodate the full set of teeth. This leads to a high prevalence of tooth impaction, either partial or complete.

Sleep Apnea

The rise of sleep apnea can also be linked to weaker mastication muscles, which contribute to narrower airway spaces. This condition is serious and can lead to a range of complications, from discomfort to car accidents and even death.

Dental caries

There has been a significant increase in the incidence of dental caries, commonly associated with the consumption of refined,

sticky, sugary foods. Managing this condition requires resources and skilled dental professionals to prevent progression to pulp exposure, endodontic treatment, and other complications that may result in tooth loss.

Erosion

The increased consumption of soft drinks, with their acidic pH, leads to chemical erosion of the hard tooth structure. Dental erosion is a common condition, and its prevalence seems to be trending higher in recent decades.

Periodontal diseases

Modern dietary habits and lifestyle changes also contribute to various periodontal diseases. The initiating factors of periodontal diseases are dental plaque biofilm and dental calculus which will be increases significantly with eating refined and sticky food. High-sugar, high saturated fat, low-polyols, low-fiber and low-polyunsaturated-fat intake causes an increased risk of periodontal diseases. This pattern of nutrients which is considered as an 'unhealthy' diet that causes cardiovascular diseases, diabetes and cancers. Conversely, low-sugar, high-fiber and high-omega-6-toomega-3 fatty acid ratio intake reduces the risk of periodontal diseases.

Swimming pool erosion

The acidic pH of swimming pool water can also cause dental erosion. Chlorine is the chemical most often used to keep swimming pools free of bacteria. When chlorine was added into water, it produced hypochlorous acid (HOCl) and hypochloride ion (OCl⁻). Therefore, extremely high levels of chlorine in the water caused decreasing of the pH level in swimming pool water.

There are some of famous systemic diseases linked to this type of life style including diabetes and obesity.

In summary, the modern lifestyle, characterized by refined diets, sedentary behavior, and the consumption of acidic beverages, poses significant risks to oral health. Understanding these connections is crucial for developing effective strategies to mitigate the negative impacts of civilization on our dental well-being.