2019

Puberty: Is Your Gingiva Having Mood Swings?

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**Introduction**

As an adolescent, many changes are occurring throughout the body during puberty. Most people are aware of the physical changes, but are they aware of all the chemical changes happening? Puberty plays a role in not only the reproductive system, but in the oral cavity as well. Puberty changes the way one’s gingival health appears, and how it presents the oral health as being more prone to having increased gingival index scores, increase gingival inflammation, increase bleeding on probing, and growth of tissues.

**Conclusion**

When adolescents are transitioning into adulthood, there are multiple changes that body goes through. During the literature review, many changes happen during puberty significantly affecting the oral cavity were discovered. These changes have both positive and negative effects. Variations in hormone levels and diet greatly influence the health of the oral cavity and can be a deciding factor on development or severity of oral disease.

**Abstract**

There is strong evidence supporting fluctuation in the levels of immune cells during pubertal growth. Interleukin-6 (IL-6), interleukin-1 beta (IL-1β), and tumor necrosis factor alpha (TNF-α) are a few immune cells important to the oral cavity. These immune cells are affected by sex steroid hormones which in turn affects periodontal tissues, saliva, oral mucosa, wound healing, periodontal disease progression, and bone turnover. Puberty increases sex steroid hormone levels and menstruation and males transitioning through puberty. During the puberty stage adolescents are more prone to have increased gingival crevicular fluid (GCF), gingival index, and bleeding on probing while research has shown no significant findings on plaque indices or probing depths. Changes occurring during the menstrual cycle tend to influence the periodontium and induce inflammatory conditions as well. While the periodontal and inflammatory cytokines play a major role in the effects during puberty, changes in diet during this phase can increase the risk of developing caries as well.

**References**


