Title: The Effect of Cigarette Smoke on the Growth of Streptococcus Mutans and Streptococcus Sanguis; an in-vitro study.

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Abstract: The ratio between S. mutans and S. sanguis has a significant role in commencing or the inhibition of caries process. Up to our knowledge there is no data to show the effect of cigarette smoke on the growth of S. sanguis. Also there are no studies to show that to what ratio the smoke affects these two bacteria. The aim of this study was to answer the above questions. Streptococci mutans and sanguis were cultured in three main environments: atmospheric air, carbon dioxide, cigarette smoke. Digital photographs were prepared from formed colonies and the colonies diameters were measured in Adobe Photoshop software. Data were analyzed using Post Hoc and General Linear Model (GLM) statistical tests.

Cigarette smoke and carbon dioxide environments increased the growth of the studied bacteria significantly but S. mutans was more affected by these environments. Also it was found that S. mutans was more susceptible to cigarette smoke than S. sanguis. Whereas an in-vivo study is carried out similar to this study, probably we can account the cigarette smoke as a determinant factor in dental caries.

Streptococcus mutans . Streptococcus sanguis . Cigarette smoke

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