

# The Association of Periodontitis and Smoking with Chronic Obstructive Pulmonary Disease (COPD) in Japanese Adults

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論 文 名	The Association of Periodontitis and Smoking with Chronic Obstructive Pulmonary Disease (COPD) in Japanese Adults (日本人における歯周病、喫煙、慢性閉塞性肺疾患の関係)			
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### 論 文 審 査 の 結 果 の 要 旨

An association between periodontitis and chronic obstructive pulmonary disease (COPD) has been reported, and both diseases are related to smoking. The aim of this study is to investigate the association between periodontitis, smoking, and COPD in Japanese adults. A cross-sectional study was conducted of 2034 individuals: 1475 males with a mean age of  $55.2 \pm 9.0$  years and 559 females with a mean age of  $57.2 \pm 8.6$  years, who were surveyed between 2003 and 2006. Periodontal status was evaluated using the community periodontal index, with periodontitis defined as having at least one sextant with a pocket depth  $\geq 4$  mm. Lung function was measured by spirometry and COPD was defined as the ratio of forced expiratory volume after 1 second/forced vital capacity  $< 0.70$ . Logistic regression analysis was performed to evaluate the association of periodontitis and smoking with COPD. The association of COPD with smoking in males with periodontitis was stronger (odds ratio 2.48; 95% confidence interval: 1.39-4.43) than in males without periodontitis (odds ratio 1.64; 95% confidence interval: 0.91-2.94), after adjusting for age, number of present teeth, BMI, alcohol intake, occupation, hypertension and diabetes. However, this trend was not seen in females. In conclusion, a significant association between smoking and COPD was found in males with periodontitis, but was weaker in those without periodontitis. These findings suggest that periodontitis modifies the association between smoking and COPD in males. This research contains novel findings, and therefore, the paper deserves a doctor of philosophy degree conferment.