

## Relationship of toothbrushing to metabolic syndrome in middle-aged adults

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(中高年者における歯磨きとメタボリックシンドロームの関連)

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### 論 文 内 容 の 要 旨

**Aim:** To examine the effect of toothbrushing on the development of metabolic syndrome (MetS), including assessment of periodontal status, in middle-aged adults.

**Methods:** This 5-year follow-up retrospective study was performed in 3,722 participants (2,897 males and 825 females) aged 35–64 years who underwent both medical check-ups and dental examinations. Metabolic components included obesity, elevated triglycerides, blood pressure, fasting glucose and reduced high-density lipoprotein. Toothbrushing frequency was assessed using a questionnaire. Periodontal disease was defined as having at least one site with a pocket depth of  $\geq 4$  mm. Logistic regression analysis was performed to evaluate the relationship between toothbrushing frequency at the baseline examination and the development of MetS ( $\geq 3$  components).

**Results:** During follow-up, 11.1% of participants developed MetS. After adjusting for potential confounders including periodontal disease, participants with more frequent daily toothbrushing tended to have significantly lower odds of developing MetS ( $p$  for trend = .01). The risk of development of MetS was significantly lower in participants brushing teeth  $\geq 3$  times/day than in those brushing teeth  $\leq 1$  time/day (odds ratio = 0.64, 95% confidence interval = 0.45–0.92).

**Conclusions:** Frequent daily toothbrushing was associated with lower risk of development of MetS.