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**Title:** Genetic factors on quitting habits and smoking characteristics: A twin study

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**Body:** Introduction: It is well known that quitting has a genetic background; however, no detailed information is available in this field. Our aim was to investigate different quitting and smoking characteristics of monozygotic (MZ) and dizygotic (DZ) twins in order to investigate the genetic contribution. Methods: Smoking 72 twin pairs (65 Hungarian and 7 American, 44 MZ and 28 DZ; mean age 44±17 years±standard deviation/SD/) filled in a questionnaire concerning smoking and quitting habits. The prevalence of concordant answers was calculated from the answers of 9 MZ and 3 DZ twin pairs whose both members quit smoking. Significantly higher rate of concordant answers in MZ twins compared to DZ twins suggested a genetic influence. Results: No significant difference was observed in the concordant answers concerning quitting attempts and duration of quitting period in MZ versus DZ twins (63% vs. 70%; 2.9±4.0 versus 1.9±1.5 years, p>0.05). Similarly, no significant difference was found in concordant answers regarding the history of quitting, mean difference in first cigarette smoking after wake-up, self-reported tobacco dependence, and certain smoking characteristics (what part of the cigarette is smoked, depth of imbibing the smoke, frequency of taking sniffs; and the frequency of thoughts concerning quitting smoking, harmful effects of smoking on other persons or him/herself, harmful operation of tobacco factories, cost of smoking) in MZ versus DZ twin pairs (p>0.05 for all characteristics). Conclusions: In conclusion, this small twin study indicates no genetic influence on certain quitting habits, thoughts and smoking characteristics. A larger study sample is warranted.