

Predictors and Reasons for Relapse in Smoking Cessation with Nicotine and Placebo Patches

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Background. The reasons for relapse to smoking are not fully understood but several factors are of importance. Addiction to nicotine seems to play a prominent role but there are several other contributing factors.

Methods. To determine predictors of outcome in smoking cessation, we performed univariate and multivariate analyses in a large smoking cessation trial comprising 289 subjects. Weight gain and withdrawal symptoms were analyzed separately as predictors. To determine self-perceived reasons for relapse we created a questionnaire, which was answered by 132 relapsers.

Results. Previous attempts to quit smoking and a low saliva cotinine concentration were significantly associated with abstinence in the nicotine-treated group. A trend toward higher abstinence rates was found among males and among subjects with a low nicotine dependency score. Logistic regression analysis showed higher success rates in subjects with the largest weight gain during the first weeks of quitting in contrast to higher relapse rates in subjects who had the greatest weight gain after 3 months. A high score on withdrawal symptoms was not predictive of relapse. Subjects with "slips" had a markedly increased relapse rate. Craving for cigarettes was the most often self-reported (48%) reason for relapse.

Conclusions. The relation between weight gain, withdrawal scoring, and outcome seems rather complex. Craving for cigarettes was the most reported reason for relapse. © 1993 Academic Press, Inc.

INTRODUCTION

The average 1-year sustained abstinence rate in most smoking cessation trials is between 10 and 20%. The highest percentages are reached when behavioral therapy is used in combination with nicotine substitution (1, 2). Thus approx 80% fail to succeed in quitting smoking, even though most claim to be motivated to quit at the start.

The reasons for relapse are not fully understood but several factors are of importance. Addiction to nicotine is one of the most prominent factors (3). Earlier studies have determined different predictors of outcome in smoking cessation (4-8). Although discrepancies exist between the different studies, there has been constancy in reporting a higher incidence of relapse in subjects of lower socio-economic status and with a high daily cigarette consumption, high nicotine dependency score, and high alcohol intake. Higher success rates have been reported among subjects who live with a nonsmoking spouse, who have tried to quit previously, who have heart diseases, and who believe they will succeed in quitting.

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