

# SMOKING CESSATION PATTERNS IN ADULT MALES FOLLOWED FOR 35 YEARS

Arthur J. Garvey, Ph.D., Taru Kinnunen, Ph.D., Zandra N. Quiles, Ph.D., Harvard School of Dental Medicine;  
Pantel S. Vokonas, M.D., Normative Aging Study, VA Medical Center, Boston, Massachusetts

## Abstract

The prevalence of cigarette smoking has decreased over the past 35 years. Most prevalence estimates, however, are based on cross-sectional surveys that are vulnerable to misclassification errors. We used prospective data collected on a cohort of adult males to provide information on smoking cessation patterns over the period 1963-1998.

Subjects were from the Normative Aging Study, whose 2,280 members represent a middle-class sample residing in the greater-Boston area. We calculated quit rates for each year from 1963-1998, and we also sub-divided the sample by age group, education status, and amount smoked, and calculated quit rates for these subgroups.

The majority (80%) quit smoking. Yearly rates of cessation rose substantially in the period 1965-1969, and remained high for the next 30 years. The most striking sub-group differences were between light (15 cigarettes per day or less) and heavy smokers (greater than 15 cigarettes per day), with light smokers significantly more likely to quit. Older smokers had significantly higher cessation rates compared to middle-aged and younger smokers. The most highly-educated smokers were marginally more likely to quit than the least educated.

Results suggest that the majority of male smokers will quit smoking over a protracted period of time. Though heavily-dependent smokers were less likely to quit than lighter smokers, even the majority of heavily-dependent smokers quit over time. Our results as a whole are very encouraging, and suggest that 4 out of 5 adult male smokers will eventually quit smoking.

Conducted at the Harvard School of Dental Medicine; supported by grant DA10073 from the National Institute on Drug Abuse.

## Objectives

- Study smoking cessation patterns over a period of 35 years (from 1962-1996) in healthy male smokers.
- Examine effects of age, education, and amount smoked on cessation patterns.

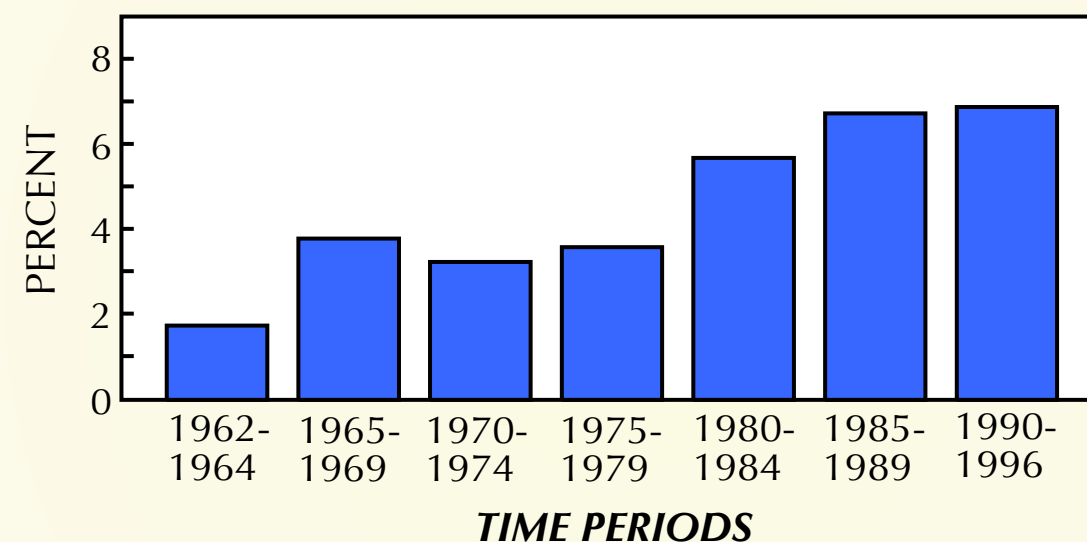
## Research Participants

- Participants were from the Normative Aging Study, a longitudinal and interdisciplinary study of the aging process in men.
- The 2,280 male participants enrolled during the years 1961-70 (Median = 1966). Mean age at entry was 42 years (SD = 9), range = 21 - 84.
- Subjects are a middle-class sample of community-dwelling Boston males - Educational levels: 39% high school graduates, 35% some college, 26% college graduates.
- 898 cigarette smokers at entry were considered for the present study.

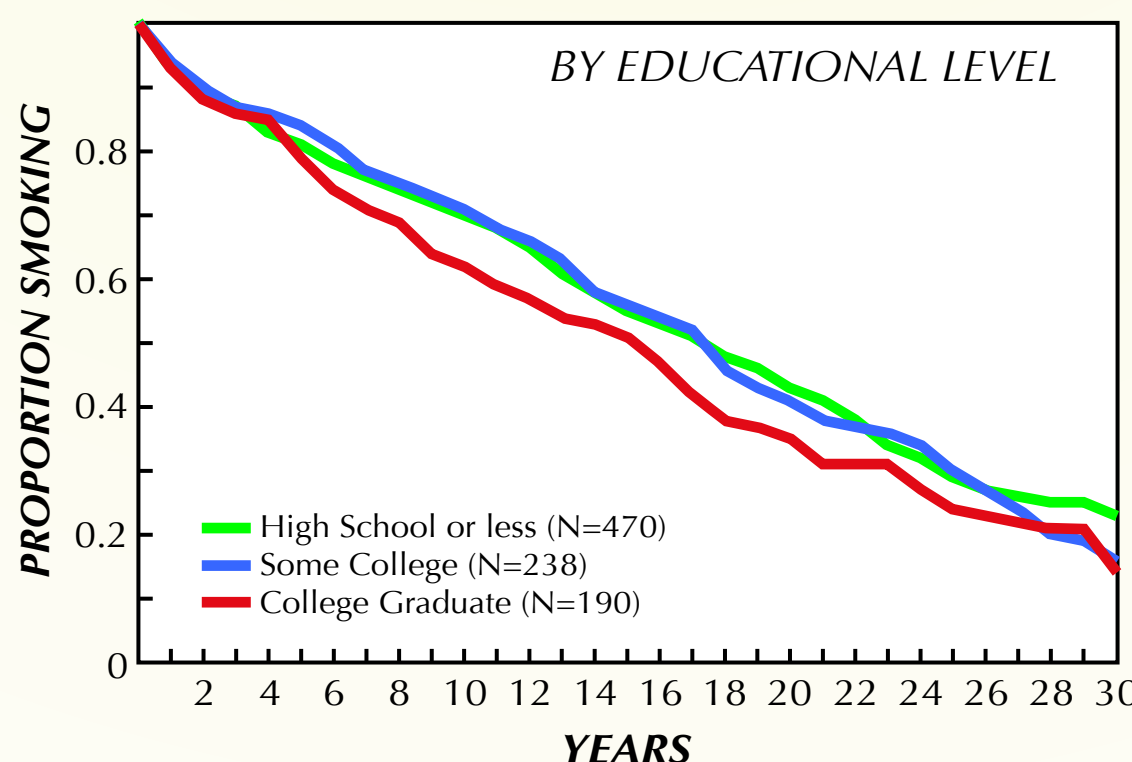
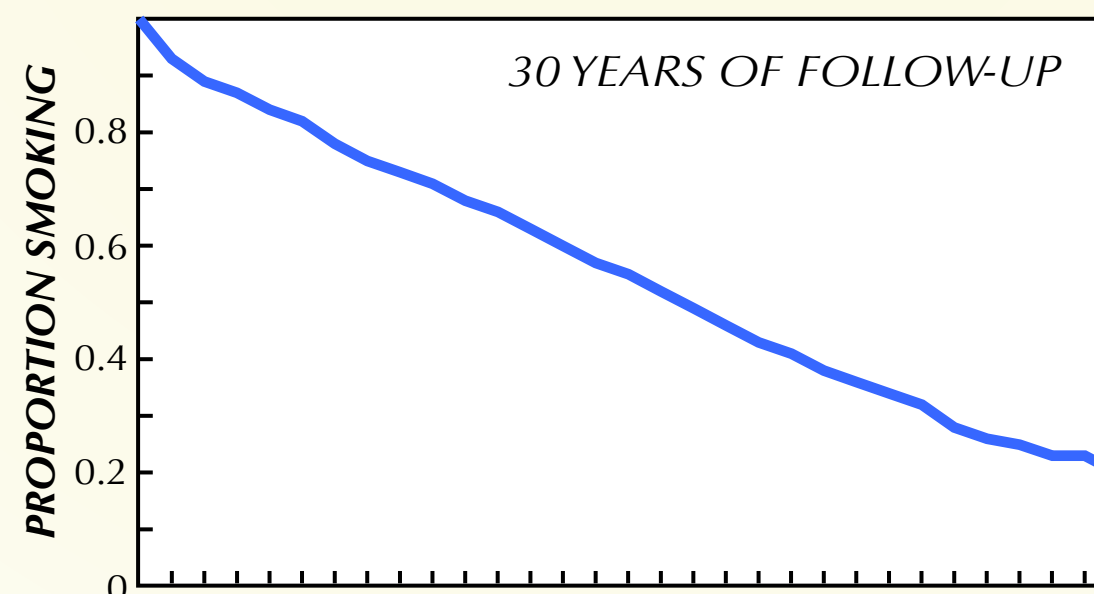
## Methods

- Smoking information was obtained at medical examinations conducted every 3-5 years, and from mailed smoking questionnaires.
- Continuing smokers were men who smoked throughout the period of follow-up.
- Quitters were those who quit for at least 2 years, and never resumed smoking.
- The quit rate for a given year was obtained by dividing the number of quitters in that year by the total number of subjects who began that year as smokers.
- Smokers who died, or were lost to follow-up, were followed until they died (or were lost), then eliminated subsequently from computations of yearly quit rates.

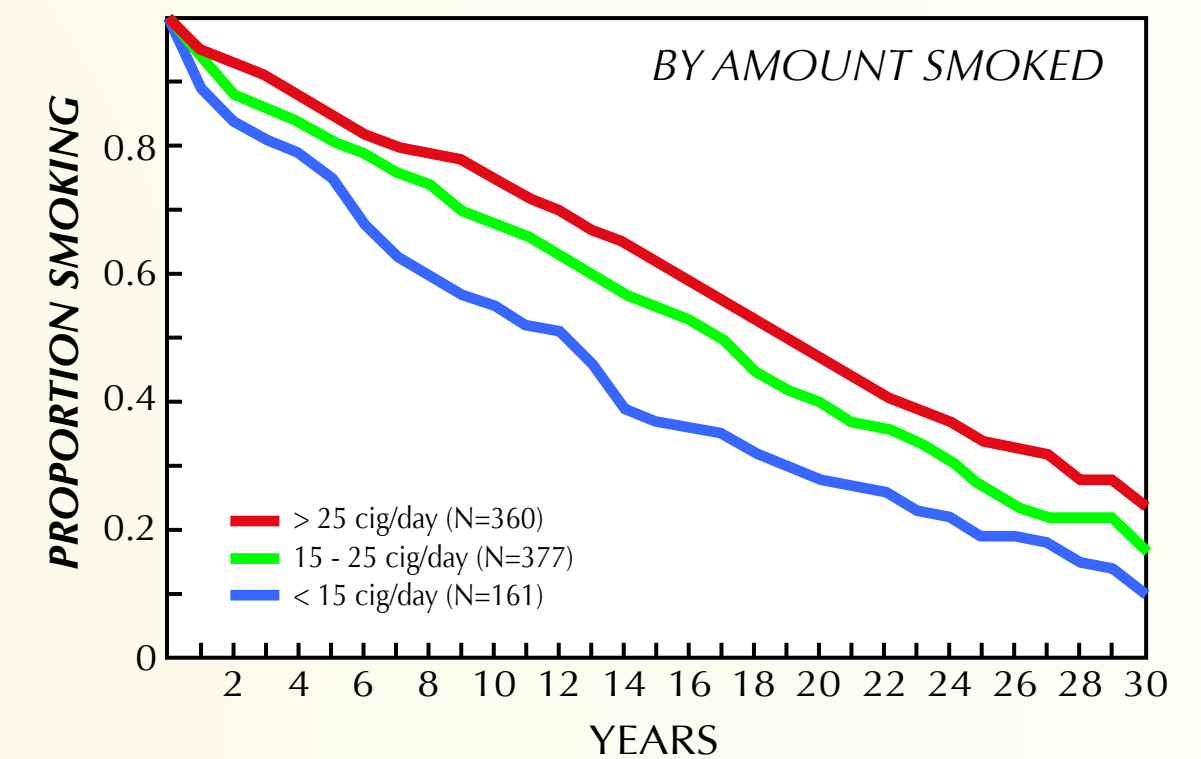
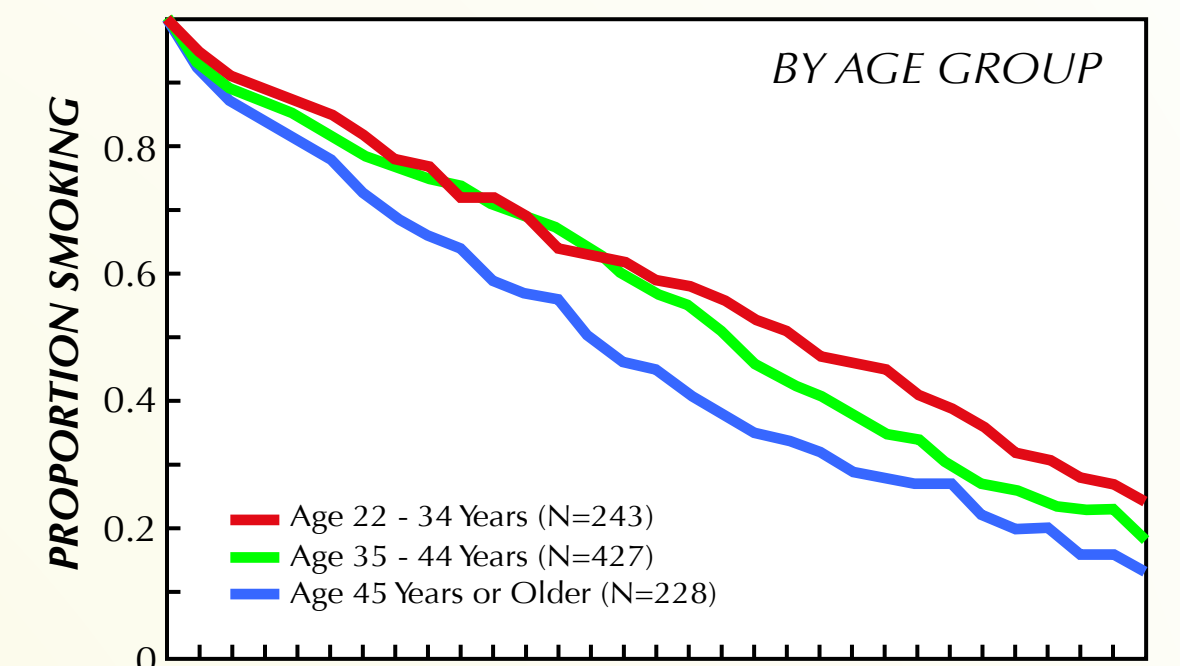
## QUIT RATES BY TIME PERIODS, 1962 - 1996



## CUMULATIVE PROPORTION SMOKING



## CUMULATIVE PROPORTION SMOKING



## Summary

- We found yearly rates of smoking cessation to increase from the 1960s to the mid-1990s.
- The great majority of male smokers (80%) quit smoking over a 35-year period of follow-up.
- Older smokers were more likely to quit than younger smokers, and those who smoked fewer cigarettes per day were also more likely to quit.
- More educated smokers were slightly more likely to quit than those less educated.
- However, even the majority of heavier consumers of cigarettes, the majority of younger smokers, and the majority of less-educated smokers quit over the 35-year follow-up period.

## Conclusions

- Younger smokers, and those who smoke more heavily, may need special interventions to accelerate their rates of cessation.
- We conclude, however, that the majority of adult male smokers will quit smoking as they progress from middle to older age.
- It is likely, therefore, that the majority of adult males smoking in the year 2002 will have quit by the year 2037.