

ASSIGNMENT 21

Health Promotion

A study was conducted among 234 people who had expressed a desire to stop smoking but who had not yet stopped. On the day they quit smoking, their carbon-monoxide level (CO) was measured and the time was noted from the time they smoked their last cigarette to the time of the CO measurement. The CO level provides an "objective" indicator of the number of cigarettes smoked per day during the time immediately prior to the quit attempt. However, it is known to also be influenced by the time since the last cigarette was smoked. Thus, this time is provided as well as a "corrected CO level," which is adjusted for the time since last smoked. Information is also provided on the age and sex of the subjects as well as the subject's self-report of the number of cigarettes per day. The subjects were followed up for one year for the purpose of determining the number of days they remained abstinent. The number of days abstinent ranges from 0 days for those who quit for less than 1 day to 365 days for those who were abstinent for the full year. Assume that all persons were followed for the entire year.

The data have the following form:

Variable	Columns	Code
ID number	1-3	
Age	4-5	
Gender	6	1=male/2=female
Cigarettes/day	7-8	
Carbon monoxide (CO) (X 10)	9-11	
Minutes elapsed since last cigarette	12-15	
Log CO Adj * (X 1000)	16-19	
Days abstinent	20-22	Those abstinent less than 1 day were given a value of zero.

This variable represents adjusted carbon monoxide (CO) values. CO values were adjusted for minutes elapsed since last cigarette smoked using the formula $\text{Log } 10 \text{ CO (Adjusted)} = \text{Log } 10 \text{ CO} - (-0.000638) \times (\text{Min} - 80)$, where Min is the number of minutes elapsed since the last cigarette smoked.

Construct a model to assess which factors influence the number of days that persons remained abstinent.