/\* Poisson regression example, Table 9.1 \*/

data coronary;

input deaths pyears agecat smoke agesq smkage;

cards;

32 52407 1 1 1 1

104 43248 2 1 4 2

206 28612 3 1 9 3

186 12663 4 1 16 4

102 5317 5 1 25 5

2 18790 1 0 1 0

12 10673 2 0 4 0

28 5710 3 0 9 0

28 2585 4 0 16 0

31 1462 5 0 25 0

;

data coronary;

set coronary;

lpyears = log(pyears); /\* Set up offset \*/

run;

proc print data=coronary;

run;

/\* Poisson regression \*/

proc genmod data=coronary;

model deaths = agecat agesq smoke smkage /

dist=poisson offset=lpyears;

estimate 'pattern 1 vs 2' intercept 0 agecat 1 agesq 5 smoke 1 smkage 3/ e exp;

run;

/\* Quasi-Poisson regression \*/

proc genmod data=coronary;

model deaths = agecat agesq smoke smkage /

dist=poi link=log offset=lpyears pscale;

run;

/\* Negative binomial regression \*/

proc genmod data=coronary;

model deaths = agecat agesq smoke smkage /

dist=negbin link=log offset=lpyears;

run;