

Lesson Overview

Earlier you learned how to fit data to a model using linear regression. Standard linear regression models assume that the response variable is normally distributed given the parameter values. In many real-world situations, this assumption is inappropriate, and a general linear model may be unreliable. Now, you learn to use generalized linear regression to fit statistical models to the data where the response is not necessarily normally distributed.

In this lesson, you start by learning the basics of generalized linear models and link functions. You learn to use PROC GENMOD to fit a Poisson regression model for count data. Then you learn what overdispersion is and how to use the negative binomial distribution to correct it. You also learn to use PROC GENMOD to fit a Poisson regression model for rate data. Finally, you learn to identify the gamma distribution and use PROC GLIMMIX to fit a gamma regression model.