EFFECT Statement in PROC GLMSELECT

To add higher-order terms to your model, such as a variable raised to a power, you can use the EFFECT statement in PROC GLMSELECT. (You can also use the EFFECT statement in several other procedures.) A higher-order variable that the EFFECT statement creates is called a constructed effect. In your PROC step, you include an EFFECT statement for each effect that you want to construct. For example, if your PROC GLMSELECT step has two EFFECT statements, as shown here, two effects are constructed.

Let's take a closer look at the syntax of the EFFECT statement. In the EFFECT statement, you specify the effect-name followed by the effect-type. For a full list of effect-types that you can specify in the EFFECT statement, see the SAS documentation. Following the effect-type, in parentheses, you specify the var-list, which is a list of the variables that are used in constructing the effect. At the end of the EFFECT statement, you can customize the analysis by specifying a slash and options for the effect.

Let's look at the examples. The first EFFECT statement creates a polynomial effect (that is, a variable that is raised to a power) named **Qstress**, which is based on the **Stress** predictor in the input data set. The degree of the polynomial is 2. When you specify **Qstress** in the MODEL statement, SAS includes both **Stress** and **Stress^2** as possible predictors in the model. The second EFFECT statement creates a spline effect named **T_Exposure** that is based on the **Exposure** predictor. You learn more about splines later in this lesson.
