

## Scenario

In simple linear regression, you model the relationship of two variables with a one-dimensional line. What if you want to model the relationship between the response variable and more than one predictor variable? For example, what if you want to know the effect of age and weight on oxygen consumption, or you want to analyze how the sale price of homes is influenced by square feet and lot size, or by its age and the number of bathrooms? You can use multiple linear regression to consider many predictors.

In this section, we'll explore the mathematical model for multiple regression, highlight its advantages and disadvantages over simple linear regression, and discuss common pitfalls. Then we'll use PROC REG to perform multiple regression.

---

### *Statistics 1: Introduction to ANOVA, Regression, and Logistic Regression*

Copyright © 2019 SAS Institute Inc., Cary, NC, USA. All rights reserved.

[Close](#)