Regression estimates a straight line equation from data. EXCEL & SPSS and other software have algorithms for estimating regression lines from data.

Sometimes the data “fits” a straight line rather well, other times not. ‘a’ is the estimate of Health if Educ were 0. ‘b’ is the estimate of how much Health goes up if Educ goes up by one unit. The coefficients (a,b) are tested for how well the line “fits” by examining the size of the coefficient against the extent of error of the data around the regression line.

Multiple regression adds additional variables to the estimate,  
\[ H = a + b \text{Educ} + c \text{Age} \]
allowing the effect of 2 variables (or more) on the ‘dependent’ variable. This multiple dimensional picture can’t be drawn. When other independent variables (like age) are added, the interpretation of their estimated coefficients (eg b) is how much H goes up if Educ goes up one unit, holding Age constant. ‘c’ is interpreted the same way as ‘b’.