

Chapter 15

Describing Relationships:
Regression, Prediction, and Causation

Regression Line

regression line – a straight line that describes how a response variable y changes as an explanatory variable x changes

- regression line summarizes a linear relationship between two variables
- one variable helps explain or predict the other

Supposed Fertility Enhancer

The data to the right concerns the relationship between the prevalence of a supposed fertility enhancer and the population of Oldenburg Germany in thousands of people between 1930 and 1936.

<u>X</u>	<u>People</u>
140	55.5
148	55.5
175	64.9
195	67.5
245	69.0
250	72.0
250	75.5

The original data can be found in:
Ornithologische Monatsberichte, **44**, No.2, Jahrgang, 1936, Berlin, and **48**, No.1, Jahrgang, 1940, Berlin, and *Statistisches Jahrbuch Deutscher Gemeinden*, 27-33, Jahrgang, 1932-1938, Gustav Fischer, Jena.