

the exponential variable  $x$  changes:

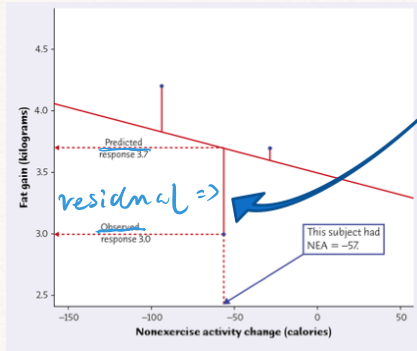
$$y = a + bx$$

| slope

| intercept

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| slope  
intercept



Least-squares regression line of  $y$  on  $x$  is the line that makes the sum of the squares of the vertical distance of the data points from the line as small as possible.

$$h = \sum (y_0 - y_p)^2$$

For least-squares regression line,  $h_{\min}$

The least-regression line always pass through  $(\bar{x}, \bar{y})$

$r^2$  indicates the relation is strong or weak.

the mean of the residual is always 0.

Influential observation: removing it from calculation may lead to a big difference.

Influential points are outliers, but not all outliers are influential.

Be aware of / extrapolation: 'x out of range'

} lurking variables: causation: