

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	120	4.74	25.30	0.000 ***	
Sex	5	6.71	0.75	0.459	
Treatment	-15	6.00	-2.50	0.015 *	
Sex*Treatment	-10	8.49	-1.18	0.247	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 16.43 on 60 degrees of freedom

Multiple R-squared: 0.2832,

Adjusted R-squared: 0.2473

F-statistic: 7.901 on 3 and 60 DF, p-value: 0.0002

Analysis of Variance Table

Response: BloodSugar

Source	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Regression	3	6400	2133	7.901	0.0002 ***
Residuals	60	16200	270		

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$$SE(\hat{\beta}_i) = \text{standard error}(\hat{\beta}_i) = \sqrt{\text{Var}(\hat{\beta}_i)}$$

$$t_{obs} = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)}$$

P_{obs} (bilateral test)

$H: \beta_i = 0$

$A: \beta_i \neq 0$

$$R^2 = 1 - \frac{SSE}{SST}$$

$\hat{\sigma} = \sqrt{\text{Mean Square Error}}$ error degrees of freedom

below

numerator degrees of freedom

denominator degrees of freedom

P_{obs} for F-test

model →
error →

$H: \beta_1 = \beta_2 = \beta_3 = 0$
 $A: \text{at least one } \beta_i \neq 0$

degrees of freedom

sum of squares due to the source

mean square (= SS / df)