

```
GET TRANSLATE
FILE='F:\bodyfat2.XLS'
/TYPE=XLS /MAP /FIELDNAMES .
```

Data written to the working file.
15 variables and 252 cases written.

Variable: density	Type: Number	Format: F18.2
Variable: bodyfat	Type: Number	Format: F18.2
Variable: age	Type: Number	Format: F18.2
Variable: weight	Type: Number	Format: F18.2
Variable: height	Type: Number	Format: F18.2
Variable: neck	Type: Number	Format: F18.2
Variable: chest	Type: Number	Format: F18.2
Variable: abdomen	Type: Number	Format: F18.2
Variable: hip	Type: Number	Format: F18.2
Variable: thigh	Type: Number	Format: F18.2
Variable: knee	Type: Number	Format: F18.2
Variable: ankle	Type: Number	Format: F18.2
Variable: biceps	Type: Number	Format: F18.2
Variable: forearm	Type: Number	Format: F18.2
Variable: wrist	Type: Number	Format: F18.2

DATASET NAME DataSet3 WINDOW=FRONT.

REGRESSION

```
/DESCRIPTIVES MEAN STDDEV CORR SIG N
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT bodyfat
/METHOD=ENTER age weight height neck chest abdomen hip thigh knee ankle biceps forearm wrist
/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID)
/CASEWISE PLOT(ZRESID) OUTLIERS(3).
```

Regression

Notes

Output Created		11-JUL-2014 16:23:58
Comments		
Input	Active Dataset	DataSet3
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	252
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		<pre> REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT bodyfat /METHOD=ENTER age weight height neck chest abdomen hip thigh knee ankle biceps forearm wrist /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID) /CASEWISE PLOT (ZRESID) OUTLIERS(3). </pre>
Resources	Processor Time	00:00:00.44
	Elapsed Time	00:00:00.37
	Memory Required	12672 bytes
	Additional Memory Required for Residual Plots	448 bytes

[DataSet3]

Descriptive Statistics

	Mean	Std. Deviation	N
bodyfat	19.1508	8.36874	252
age	44.8849	12.60204	252
weight	178.9244	29.38916	252
height	70.3075	2.60958	252
neck	37.9921	2.43091	252
chest	100.8242	8.43048	252
abdomen	92.5560	10.78308	252
hip	99.9048	7.16406	252
thigh	59.4060	5.24995	252
knee	38.5905	2.41180	252
ankle	23.1024	1.69489	252
biceps	32.2734	3.02127	252
forearm	28.6639	2.02069	252
wrist	18.2298	.93358	252

Correlations

		bodyfat	age	weight	height	neck	chest
Pearson Correlation	bodyfat	1.000	.291	.612	-.025	.491	.703
	age	.291	1.000	-.013	-.245	.114	.176
	weight	.612	-.013	1.000	.487	.831	.894
	height	-.025	-.245	.487	1.000	.321	.227
	neck	.491	.114	.831	.321	1.000	.785
	chest	.703	.176	.894	.227	.785	1.000
	abdomen	.813	.230	.888	.190	.754	.916
	hip	.625	-.050	.941	.372	.735	.829
	thigh	.560	-.200	.869	.339	.696	.730
	knee	.509	.018	.853	.501	.672	.719
	ankle	.266	-.105	.614	.393	.478	.483
	biceps	.493	-.041	.800	.319	.731	.728
	forearm	.361	-.085	.630	.322	.624	.580
	wrist	.347	.214	.730	.398	.745	.660
Sig. (1-tailed)	bodyfat	.	.000	.000	.345	.000	.000
	age	.000	.	.420	.000	.036	.002
	weight	.000	.420	.	.000	.000	.000
	height	.345	.000	.000	.	.000	.000
	neck	.000	.036	.000	.000	.	.000
	chest	.000	.002	.000	.000	.000	.
	abdomen	.000	.000	.000	.001	.000	.000
	hip	.000	.213	.000	.000	.000	.000

Correlations

		abdomen	hip	thigh	knee	ankle	biceps
Pearson Correlation	bodyfat	.813	.625	.560	.509	.266	.493
	age	.230	-.050	-.200	.018	-.105	-.041
	weight	.888	.941	.869	.853	.614	.800
	height	.190	.372	.339	.501	.393	.319
	neck	.754	.735	.696	.672	.478	.731
	chest	.916	.829	.730	.719	.483	.728
	abdomen	1.000	.874	.767	.737	.453	.685
	hip	.874	1.000	.896	.823	.558	.739
	thigh	.767	.896	1.000	.799	.540	.761
	knee	.737	.823	.799	1.000	.612	.679
	ankle	.453	.558	.540	.612	1.000	.485
	biceps	.685	.739	.761	.679	.485	1.000
	forearm	.503	.545	.567	.556	.419	.678
	wrist	.620	.630	.559	.665	.566	.632
Sig. (1-tailed)	bodyfat	.000	.000	.000	.000	.000	.000
	age	.000	.213	.001	.391	.048	.258
	weight	.000	.000	.000	.000	.000	.000
	height	.001	.000	.000	.000	.000	.000
	neck	.000	.000	.000	.000	.000	.000
	chest	.000	.000	.000	.000	.000	.000
	abdomen	.	.000	.000	.000	.000	.000
	hip	.000	.	.000	.000	.000	.000

Correlations

		forearm	wrist
Pearson Correlation	bodyfat	.361	.347
	age	-.085	.214
	weight	.630	.730
	height	.322	.398
	neck	.624	.745
	chest	.580	.660
	abdomen	.503	.620
	hip	.545	.630
	thigh	.567	.559
	knee	.556	.665
	ankle	.419	.566
	biceps	.678	.632
	forearm	1.000	.586
	wrist	.586	1.000
Sig. (1-tailed)	bodyfat	.000	.000
	age	.089	.000
	weight	.000	.000
	height	.000	.000
	neck	.000	.000
	chest	.000	.000
	abdomen	.000	.000
	hip	.000	.000

Correlations

		bodyfat	age	weight	height	neck	chest
N	thigh	.000	.001	.000	.000	.000	.000
	knee	.000	.391	.000	.000	.000	.000
	ankle	.000	.048	.000	.000	.000	.000
	biceps	.000	.258	.000	.000	.000	.000
	forearm	.000	.089	.000	.000	.000	.000
	wrist	.000	.000	.000	.000	.000	.000
	bodyfat	252	252	252	252	252	252
	age	252	252	252	252	252	252
	weight	252	252	252	252	252	252
	height	252	252	252	252	252	252
	neck	252	252	252	252	252	252
	chest	252	252	252	252	252	252
	abdomen	252	252	252	252	252	252
	hip	252	252	252	252	252	252
	thigh	252	252	252	252	252	252
	knee	252	252	252	252	252	252
	ankle	252	252	252	252	252	252
	biceps	252	252	252	252	252	252
	forearm	252	252	252	252	252	252
	wrist	252	252	252	252	252	252

Correlations

		abdomen	hip	thigh	knee	ankle	biceps
N	thigh	.000	.000	.	.000	.000	.000
	knee	.000	.000	.000	.	.000	.000
	ankle	.000	.000	.000	.000	.	.000
	biceps	.000	.000	.000	.000	.000	.
	forearm	.000	.000	.000	.000	.000	.000
	wrist	.000	.000	.000	.000	.000	.000
	bodyfat	252	252	252	252	252	252
	age	252	252	252	252	252	252
	weight	252	252	252	252	252	252
	height	252	252	252	252	252	252
	neck	252	252	252	252	252	252
	chest	252	252	252	252	252	252
	abdomen	252	252	252	252	252	252
	hip	252	252	252	252	252	252
	thigh	252	252	252	252	252	252
	knee	252	252	252	252	252	252
	ankle	252	252	252	252	252	252
	biceps	252	252	252	252	252	252
	forearm	252	252	252	252	252	252
	wrist	252	252	252	252	252	252

Correlations

		forearm	wrist
N	thigh	.000	.000
	knee	.000	.000
	ankle	.000	.000
	biceps	.000	.000
	forearm	.	.000
	wrist	.000	.
	bodyfat	252	252
	age	252	252
	weight	252	252
	height	252	252
	neck	252	252
	chest	252	252
	abdomen	252	252
	hip	252	252
	thigh	252	252
	knee	252	252
	ankle	252	252
	biceps	252	252
	forearm	252	252
	wrist	252	252

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	wrist, age, height, ankle, forearm, abdomen, biceps, knee, neck, thigh, chest, hip, weight ^b	.	Enter

a. Dependent Variable: bodyfat

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.865 ^a	.749	.735	4.30949	.749	54.504	13

Model Summary^b

Model	Change Statistics	
	df2	Sig. F Change
1	238	.000

a. Predictors: (Constant), wrist, age, height, ankle, forearm, abdomen, biceps, knee, neck, thigh, chest, hip, weight

b. Dependent Variable: bodyfat

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13158.926	13	1012.225	54.504	.000 ^b
	Residual	4420.064	238	18.572		
	Total	17578.990	251			

a. Dependent Variable: bodyfat

b. Predictors: (Constant), wrist, age, height, ankle, forearm, abdomen, biceps, knee, neck, thigh, chest, hip, weight

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-21.353	22.186		-.962	.337
	age	.065	.032	.097	2.006	.046
	weight	-.096	.062	-.338	-1.558	.120
	height	-.044	.179	-.014	-.246	.806
	neck	-.475	.236	-.138	-2.018	.045
	chest	-.017	.103	-.017	-.166	.868
	abdomen	.955	.090	1.231	10.592	.000
	hip	-.189	.145	-.161	-1.302	.194
	thigh	.248	.146	.156	1.699	.091
	knee	.014	.248	.004	.056	.955
	ankle	.178	.223	.036	.799	.425
	biceps	.182	.172	.066	1.057	.292
	forearm	.456	.199	.110	2.287	.023
	wrist	-1.654	.533	-.185	-3.103	.002

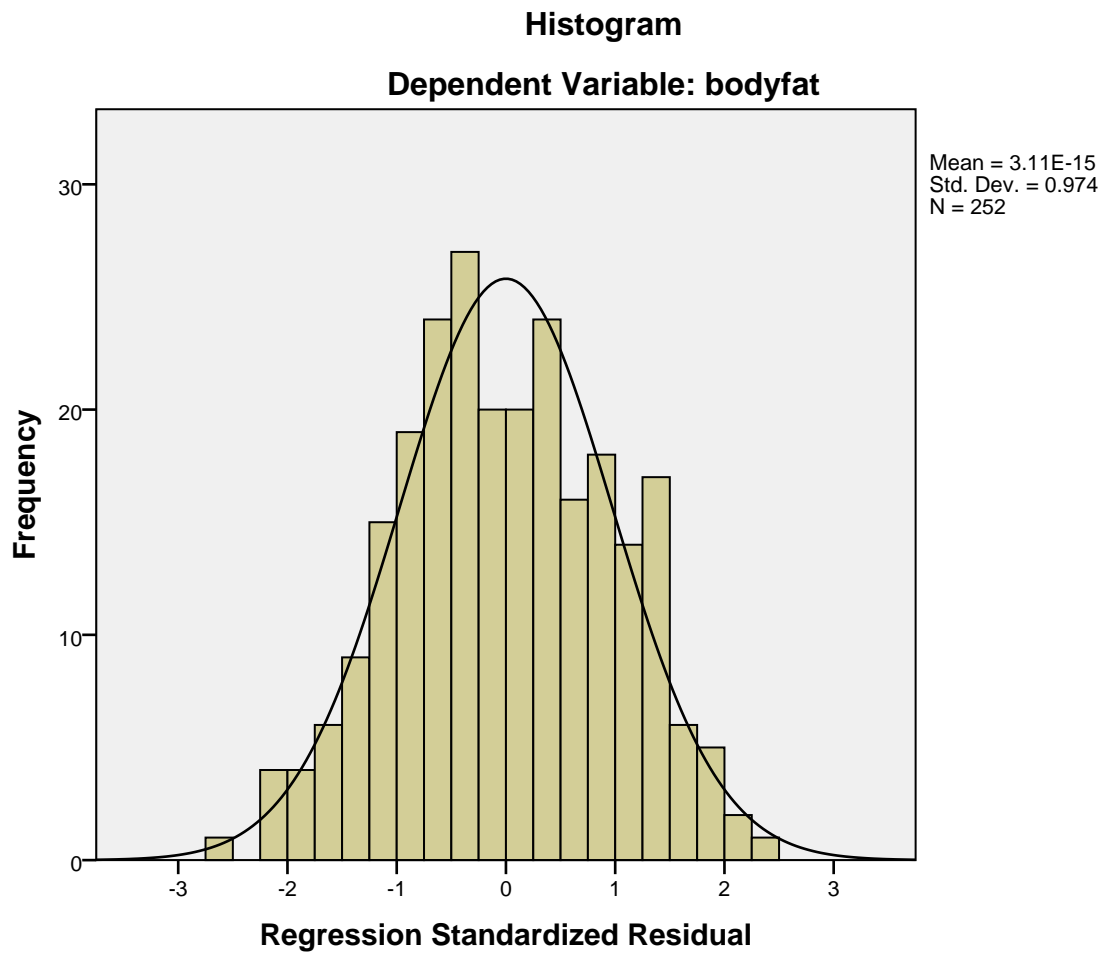
a. Dependent Variable: bodyfat

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	4.0771	43.9822	19.1508	7.24058	252
Residual	-11.19662	9.99788	.00000	4.19641	252
Std. Predicted Value	-2.082	3.429	.000	1.000	252
Std. Residual	-2.598	2.320	.000	.974	252

a. Dependent Variable: bodyfat

Charts



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: bodyfat

