

Instructions for carrying out statistical procedures and tests using SPSS

These instructions are closely linked to the author's book:

Essential Statistics for the Pharmaceutical Sciences
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For all references to chapters or tables, see the above book.

**Using SPSS to perform a
paired t-test**

Using SPSS to perform a paired t-test

Example: Table 12.1 Effects of an alleged weight reducing drug on subjects' weights

Set up two numeric columns labelled as 'Placebo' and 'Active' and enter the subjects' weights into the two columns. It is vital that each row contains weighings for the same patient.

Follow the menus

Analyze / Compare Means / Paired-Samples T Test ...

Click on 'Placebo' and then on 'Active', so they are both highlighted and then transfer the pair into the 'Paired Variables' box.

The principal output is then:

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Placebo - Active	3.6167	4.7837	.8734	1.8304	5.4029	4.141	29	.000

The mean weight change is shown as 3.6167kg (Which is in fact a weight loss). The 95% confidence limits (Highlighted) for the mean weight change are 1.8304 and 5.4029kg. As this range excludes zero, there is significant evidence that the drug does cause a weight change.

The P value is the very last figure (Apparently 0.000, but which should be reported as <0.001). This confirms the significance of the results.