Hints on presenting results of statistical tests
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1. Remember your audience - you assume an intelligent and reasonably educated reader. This means you need to tell your reader

      - what statistical tests you performed

      - what variables you entered for each test.

      - what the results of each test were,

but you *don't* need to tell the reader

      - how to do the test

      - what the test accomplishes

      - critical values that he could have looked up in a table himself.

So "reasonably educated" in this sense means "already familiar with common statistical tests."

2. Remember that the fewer unnecessary words you use, the clearer and more powerful your writing will be. [I'm not sure why I originally put this in a handout about statistics - I guess I get more long-winded paragraphs on statistical tests than other subjects.] It's *always* good to edit for brevity.

3. Note that the word "significant" has special meaning in science - a "significant" difference is one that has been shown by statistical methods to be unlikely to result from chance. Use it that way (and don't use "significant" when you mean "important" or "notable.").

Examples:

Poor:

>Methods
>…We did a t-test to compare total lengths of two species of snakes,
>*Coluber constrictor* and *Nerodia fasciata*. We took the two columns
>of total lengths from our spreadsheet and selected those columns in the
>"t-test (two sample assuming equal variances)" analysis function of
>Microsoft Excel. The t-test results were compared to determine if the
>lengths of the two species were significantly different.

(Don't tell the reader how to do a t-test. Don't explain to the reader what a t-test is.)

Improved:

>Methods
>…We did a t-test to compare total lengths of two species of snakes,
>*Coluber constrictor* and *Nerodia fasciata*.

Poor:

>Results
>We did a t-test to compare total lengths of two species of snakes,
>*Coluber constrictor* and *Nerodia fasciata*. The t-test results were
>compared to determine if the lengths of the two species were
>significantly different. The T-stat value (10.73) was larger than the T-
>critical value (2.101) and the P-value (.000026) was much smaller than
>our chosen alpha value (0.05), so we determined that the results were
>statistically significant and we rejected the null hypothesis.

Talk about wasted words! I get labs that look like that every week. Compare
the above results section with the one below.

Improved:

>Results
>Black racers, *Coluber constrictor* , were significantly longer than
>banded water snakes *Nerodia fasciata* (t = 10.73, d.f. = 103, P =
>0.000026)

Note that the second version (in 24 words) has all the important statistical information
from the first version (75 words), *and more* (the degrees of freedom for the test). Which
is clearer?