

Botox

In a study, 15 patients suffering from back pain were assigned to receive the drug botulinum (Botox) and 9 of those patients reported a substantial decrease in back pain (Foster et al, 2001).

- a) Would you conclude that Botox is an effective treatment for back pain? Why or why not?

An alternative design might be to randomly assign 15 subjects to come to a clinic and receive Botox treatment and have 15 subjects receive no treatment.

We then compare pain reduction between the two groups.

- b) What are two ways that this is an improvement over the original design.
- c) What's a flaw in this design that would still prevent researchers from concluding that Botox helps back pain, even if the treatment group experiences much more pain reduction than the non-treatment group? (what's the confounding variable?)
- d) How could you eliminate the confounding variable and create a better study?