

High School Biology

Drug development worksheet

Andrew thinks that he has developed a new drug which will be effective in treating the common cold.

He collects together ten people with colds, and tells them that he has a wonderful new drug. He promises them they will feel better in three days time if they take the drug.

He also collects ten people without colds and gives them the same drug, as he thinks that this will make it a fair test. Andrew asks each group to rate how well they feel on a scale of 1–10 (1 is dreadful and 10 is excellent), at the start and end of the experiment.

The results are shown below.

People with colds:

Trial subject	Feelings at start	Feelings at end	Difference
1	3	7	+4
2	2	6	+4
3	4	8	+4
4	5	10	+5
5	2	9	+7
6	2	8	+6
7	1	7	+6
8	2	5	+3
9	3	6	+3
10	5	9	+4
Total difference:			+46

People without colds:

Trial subject	Feelings at start	Feelings at end	Difference
1	9	7	-2
2	6	5	-1
3	8	7	-1
4	7	6	-1
5	5	8	+3
6	8	10	+2
7	7	9	+2
8	5	6	+1
9	7	9	+2
10	6	7	+1
Total difference:			+6

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- a) Andrew compared the total difference from the two groups, and concluded that his drug was effective. Do you agree?

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- b) Suggest some problems with Andrew's study.

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- c) How could you carry out a better trial of Andrew's drug?

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