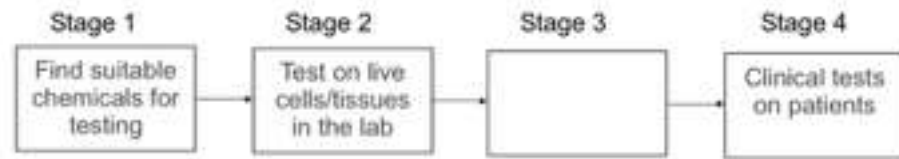


0	1
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The diagram shows the stages in the development of drugs to be used for medicines.



Stage 3 has been left blank.

0	1	.	1
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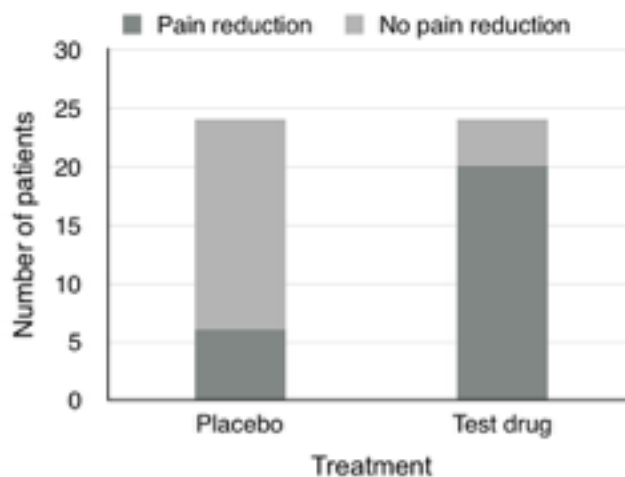
How is the drug tested in stage 3 before clinical trials on patients begin?

healthy human volunteers or animals

[1 mark]

The graph below show the results of a clinical trial for a drug being tested as pain killer after minor surgery.

- * The trial was done with 48 volunteer patients of various age, gender and weight who had recently had minor surgery.
- * 24 volunteers were given the test drug in the form of a pill.
- * 24 volunteers were given a placebo (a pill that is identical but does not contain the drug)
- * The patients were asked to report whether or not they experienced a reduction in pain, one hour after the treatment.



Based on the data shown in the graph, the researchers concluded that the test drug is effective at reducing pain after minor surgery.

0	1	.	2
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Evaluate the conclusion of the researchers.

You should include information from the graph in your evaluation.

conclusion valid because most (or 20) of those taking the drug reported pain

reduction [1]; compared to a few (or about 6) people taking the placebo [1]

but, conclusion not valid because some (4) people reported no pain reduction [1]

some people reported pain reduction with placebo [1]; not big enough sample sizes [1]; need to have the same gender/age/weight of volunteers [1]

[5 marks]

0	1	.	3
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The researchers used a double blind trial in the above investigation in order to test the drug. Describe what a double blind trial is.

some patients given placebo pill/saline injection - with no drug [1]; doctors or researchers don't know which patients have the test drug [1]; patient's don't know if they have the drug or not [1];

[3 marks]