

CONNECT

PRESENT

CONSTRUCT

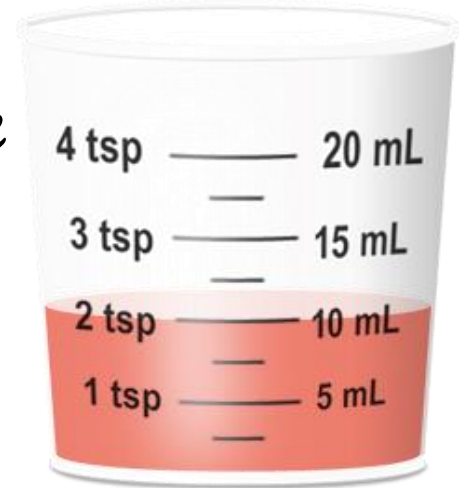
APPLY

REVIEW

Drug Trials

New medical drugs have to be tested and trialled before being used to check that they are safe and effective

Drugs are tested for toxicity – to see whether they are poisonous or not. Some drugs may produce side effects



Drugs are tested for efficacy – this means whether or not they work and produce the intended result.

They are tested to help determine the correct dose.





Preclinical Testing

This is done in a laboratory using cells, tissues and live animals.

Drugs are tested on animals, the best animals to use are chimpanzees. They have an anatomy very similar to humans.

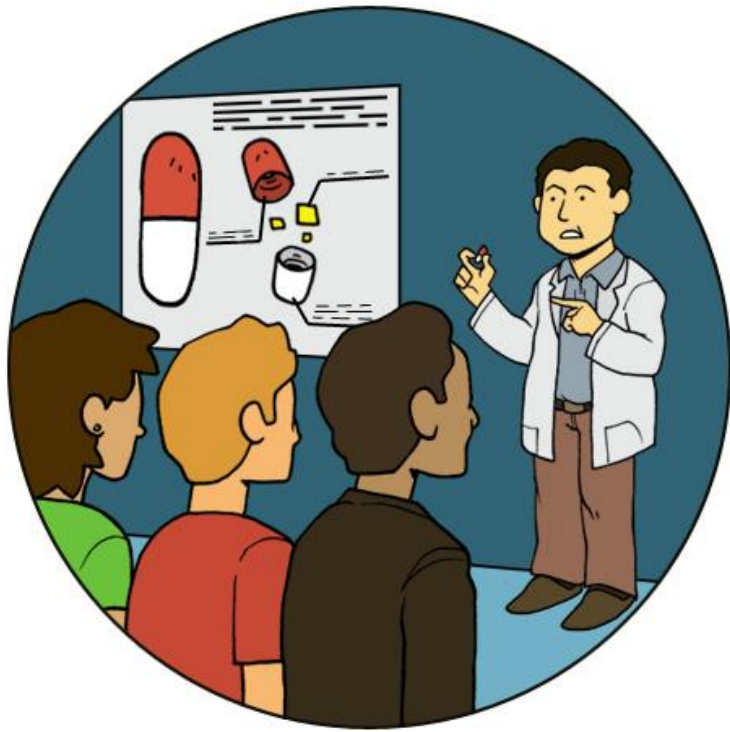
Drugs can be tested on rats because they are easy to obtain and easy to look after.

Testing on animals is controversial because they are live and people do not want to see them suffering. This is seen as a better alternative to testing on humans although we do test on human cells.

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Clinical Trials



Clinical trials use healthy volunteers and patients.

Very low doses of the drug are given at the start of the trial.

If the drug is safe, further clinical trials are carried out to determine the optimum dose of the drug.

Some clinical trials offer payment, which can vary from hundreds to thousands of pounds depending on what is involved and expected from you. Some trials don't offer payment and just cover your travel expenses.



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Double Blind Trials

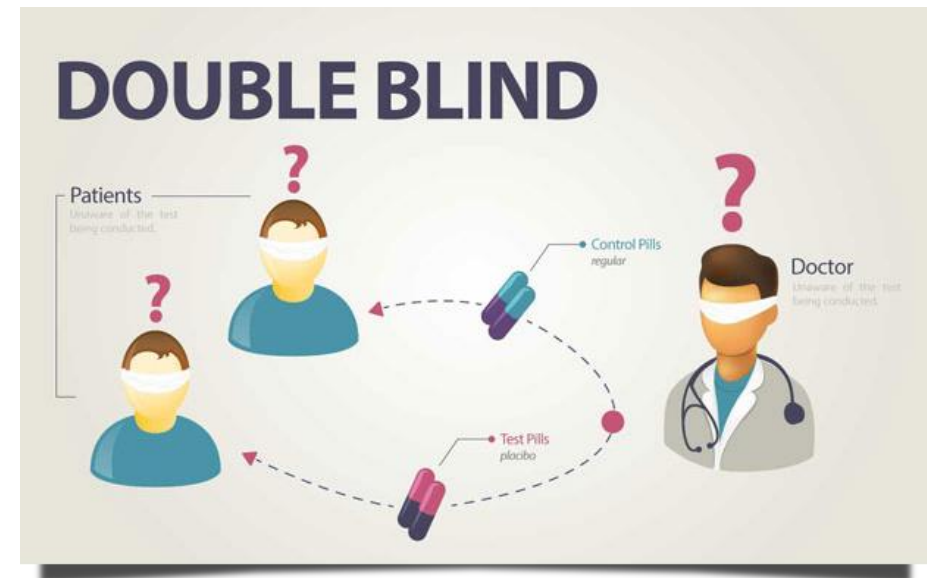


A placebo is a pill made of sugar, this is used in place of the actual drug.

Patients are given the real drug and observed.

A control group is the given the placebo and observed.

In a double blind trial neither the patients or the Doctor know who is given the actual drug or who is given the placebo. This prevents observer bias.



Drug Development



Drugs can be extracted from plants and microorganisms

Digitalis is a heart drug that originates from foxgloves. The painkiller aspirin is extracted from the bark of the willow tree.



Penicillin is an antibiotic that is extracted from the penicillium mould. This was discovered by Alexander Flemming.

Most new drugs are synthesised by chemists in the pharmaceutical industry.



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