PSPA

CLINICAL TRIALS

Developing a new medicine or drug is a lengthy process involving multiple stages and taking many years. Laboratory studies and early testing in cell and animal models need to take place to provide assurance that the new drug might be effective and safe for people to take. These are only tested in people in the final stages of testing, known as a clinical trial.

Before a clinical trial begins, the drug will be tested in cell models with disease modifications and in animal models.

Clinical trials are experiments. Many drugs that have shown promise during the early phases of testing are shown to be ineffective or occasionally even detrimental once they reach clinical trials, so participation in a clinical trial should not be seen as a means of accessing better treatment. However, all clinical trials are extremely helpful in providing researchers with information and the fact that they are taking place is always positive.

Why are clinical trials necessary?

Clinical trials are research studies that help decide whether potential treatments are safe and effective. It is essential to establish whether any side effects are more threatening than the disease itself and to prove beyond reasonable doubt that the drug is beneficial. The only reliable way of doing this is by monitoring the effects of a drug in a group of patients and comparing the progress of those patients with a similar group not taking the drug (the placebo group). The evidence from a successful clinical trial can then be used to get the drug licensed and approved for sale.

What steps are involved in a clinical trial?

Most trials follow 4 phases:

Phase I: this preliminary phase looks at the safety of the drug in a small amount of people. These few people (5-20) are normally healthy volunteers who will be closely monitored for any side effects or adverse events of which, there are different levels.

Phase II: this phase of the testing will look at the best dose, how to deliver it (e.g. orally or through an injection) and safety in the patient population. Although this is tested in people with the condition the numbers are too small to inform any research as results will not be statistically significant, but will help decide if a phase III is needed.

Phase III: this phase of the clinical trial will examine patients to see if the drug is beneficial. This will involve hundreds of patients and controls. This is the phase that would determine whether a drug is approved for use.

Phase IV: this stage occurs after the drug has been approved for sale. With the drug in general use, further data can be gathered on its effects in a large number of people over an extended period of time.

How are clinical trials designed?

In order to ensure that the new treatment undergoes rigorous and fair testing, clinical trials are nearly always placebo controlled studies. This means that a proportion of the participants are given an inert substance (placebo) that looks the same as the trial treatment but has no biological effect. Participants are assigned at random by a computer to the treatment or placebo groups and for the duration of the trial neither the researchers nor the patients know who is taking the real drug.

Trial blinding:

Single blinding – the patient doesn't know if they are taking the drug or the placebo.

Double blinding – neither the patient nor the researcher/doctor knows if they are taking the drug or the placebo

Double blinded trials are standard practice for clinical trial design. These processes of blinding ensure that any beneficial effects seen are entirely down to the trial drug and not due to the power of positive thinking, the extra attention from medical staff that comes with participating in a trial or unintentional bias when patients are reporting how they feel or researchers are examining them.

All trials must legally be performed in keeping with the Declaration of Helsinki, national laws and national and local ethical guidelines. All clinical trial staff must be trained in Good Clinical Practice (GCP) which embodies the principles of the Declaration of Helsinki. At the heart of all clinical trials is the principle of Fully Informed Consent.

Before the trial commences, the trial team will define what the 'outcome measures' are. These are measurements or assessments that will be used to measure if the drug is safe and effective. For example, in PSP they may use the PSP-Rating Scale which can measure progression through scales that assess different aspects of life such as mobility, ability to carry out day to day tasks and difficulty eating. The trial team may also use something to measure cognition, such as the Montreal Cognitive Assessment (MoCA). This tests memory, language and orientation to time and place.

At the end of a trial, both the drug group and placebo group may be able to continue taking the drug (knowingly) in what is called an open-label extension. This normally occurs while other people are still completing their trial period and while results are being analysed.

Who can take part?

All clinical trials have strict guidelines about who can take part. Criteria for inclusion or exclusion from the trial usually includes factors such as age, stage of disease, time since symptom onset and other medical conditions. These criteria are essential to ensure that the trial produces reliable results and to help maintain participant safety. Many clinical trials require participants who are at a reasonably early stage of disease as this gives the treatment the best possible chance of working.

Trials are usually run from a handful of centres around the country with each centre generally only recruiting a small number of participants, particularly for more complex trials. Taking part in a trial often involves frequent visits to a trial centre over several months, so you will need to think about whether this is practical for you when you are considering taking part. Centres will usually recruit from their local area where possible.

Many willing trial participants may find that they do not meet the criteria to take part or live too far from a trial centre. Although this is disappointing, it is important to remember that trials are experiments, not treatments, and the fact that they are happening is still a positive step.

If I am eligible, how do I decide if I want to take part?

The researchers running the trial will explain the process to you and will provide written information sheets describing the trial's purpose, duration and procedures and explaining any potential risks. You will be able to ask questions and you can change your mind about taking part at any time.

Some of the potential benefits of taking part in clinical trials include:

- Being able to do something positive and contribute to research
- Additional expert medical attention
- The possibility that the trial treatment is successful.

Some of the risks and drawbacks include:

- Unpleasant or serious side effects from the trial treatment or the possibility that it could actually be detrimental
- Having to commit significant time and effort to trial centre appointments
- The possibility that you may not even be given the trial treatment because you are in the placebo group.

You might like to consider whether the trial is right for you and your carer in terms of the time and energy it will demand and if you can commit to attending every trial appointment. You might also like to consider how you feel about the possibility of being on the placebo rather than the trial drug, or the risk that you might have to drop out of the trial if side effects are too unpleasant or dangerous.

If you would like any more information on taking part in a trial or other ways in which you can participate in research, contact our Research Coordinator on 01327 322418 or research@pspassociation.org.uk

Useful contacts

PSPA Research Coordinator
Tel: 01327 322418
research@pspassociation.org.uk
www.pspassociation.org.uk

Acknowledgements

Our thanks to the MND Association for allowing us to adapt its literature.

Professor Nigel Leigh

Members of the PSPA PRIM Group

Margaret Powell House
415A Midsummer Boulevard
Milton Keynes
MK9 3BN

01327 322410
info@pspassociation.org.uk
www.pspassociation.org.uk

Helpline 0300 0110 122
helpline@pspassociation.org.uk