

Clinical Trials

Introduction

Clinical trials are a means of developing new treatments and medications for diseases and conditions. There are strict rules for clinical trials, which are monitored by the National Institutes of Health and the U.S Food and Drug Administration. Clinical trials are also called clinical studies, research protocols or medical research and often compare one drug against another to see which is more effective, or the medicine or procedure in a specific demographic group or for a specific disease.

About Clinical Trials

Why Participate in a Clinical Trial?

Participants in clinical trials can play a more active role in their health care, gain access to new research treatments before they are widely available and help others by contributing to medical research.

Where Do the Ideas for Trials Come from?

Ideas for clinical trials usually come from researchers. After researchers test new therapies or procedures in the laboratory and/or in animal studies, the treatments with the most promising test results are moved into clinical trials. During a trial, more and more information is gained about a new treatment, its risks and how well it may or may not work.

Who Sponsors Clinical Trials?

Clinical trials are sponsored or funded by a variety of organizations or individuals such as physicians, medical institutions, foundations, voluntary medical-related groups and pharmaceutical companies, in addition to federal agencies such as the National Institutes of Health, the Department of Defense and the Department of Veteran's Affairs. Trials can take place in a variety of locations, such as hospitals, universities, doctors' offices or community clinics.

What is a Protocol?

A protocol is a study plan on which all clinical trials are based. The plan is carefully designed to safeguard the health of the participants as well as answer specific research questions. A protocol describes what types of people can participate in the trial; the schedule of tests, procedures, medications and dosages; and the length of the study.

While in clinical trial, participants following a protocol are seen regularly by the research staff to monitor their health and to determine the safety and effectiveness of their treatment.

What is a Placebo?

A placebo is an inactive pill, liquid, or powder that has no treatment value. In clinical trials, experimental treatments are often compared with placebos to assess the treatment's effectiveness. In some studies, the participants in the *control group* will receive a placebo instead of an active drug or treatment.

What is a Control or Control Group?

A control is the standard by which experimental observations are evaluated. In many clinical trials, one group of patients will be given an experimental drug or treatment, while the control group is given either a standard treatment for the illness or a placebo.

What are the Different Types of Clinical Trials?

Treatment trials test new treatments, new combinations of drugs, or new approaches to surgery or radiation therapy.

Prevention trials look for better ways to prevent disease in people who have never had the disease or to prevent a disease from returning. These approaches may include medicine, vitamins, vaccines, minerals or lifestyle changes.

Screening trials test the best way to detect certain diseases or health conditions.

Quality of Life trials (or Supportive Care trials) explore ways to improve comfort and the equality of life for individuals with a chronic illness.

Classification of Clinical Trials

There are three types of clinical trials – phase I, phase II and phase III – each one is designed to learn something different about a new medical treatment.

Phase I Trials

A phase I trial is the first test of a new treatment, and it uses the fewest number of patients (20-30 patients is typical). A phase I trial for a new drug is designed to determine the safety of the new drug, how to best administer it and the correct dosage (i.e., one that will minimize undesirable side effects). Because investigators are very interested in how the drug behaves in the body, patients in a phase I trial undergo frequent monitoring of their vital signs. Although drugs being tested in a phase I trial have shown promise in the laboratory, there is no guarantee that the drug will have any positive effects on a patient.

Patients participating in a phase I drug trial help advance basic medical knowledge; they may or may not reap any personal benefits.

Phase II Trials

After a phase I clinical trial has determined the safe dose of a drug, it can enter a phase II trial, which begins the process of determining the drug's effectiveness in treating a specific type of disease. Because a phase II trial involves more patients than a phase I trial, physicians also have a chance to observe any less common side effects associated with the drug. In a phase II trial, which can involve 100 patients or more, physicians carefully monitor patients for a drug effect. For example, in a clinical trial testing a drug to increase the number of platelets in the blood, patients would have frequent blood samples taken, but they might also undergo several physical exams and other tests. The high level of patient monitoring in a phase II trial can be very time-consuming, so patients should take this into account when considering a phase II trial.

If a drug in a phase II trial brings about a positive change in at least one-fifth of the patients, then it can be tested in a phase III trial. However, if the new drug has shown very positive effects in patients, the FDA also has the option of approving the drug for general use at this point.

Phase III Trials

A phase III trial involves the largest number of patients, typically several hundred, even thousands of patients. Phase III trials are randomized, which means that some of the patients in the trial are randomly chosen to receive the experimental treatment, while the others receive a standard treatment. The outcomes of the patients receiving the new treatment (the treatment group) are compared with the outcomes of the patients receiving the standard treatment (the control group). In some phase III trials (*single-blind* studies), patients do not know which control group they are in. In a *double-blind* study, the physicians also do not know which patients are in the treatment group and which are in the control group. Blinded studies are used to prevent biased study results. If a new drug successfully passes a phase III trial, the FDA will approve the drug for marketing to the general public.

Patient Questions Before Joining a Clinical Trial

Suggested questions that the patient should ask before joining a clinical trial are as follows:

- What is the purpose of the study and who is sponsoring it?
- Who has reviewed and approved the study?
- How are study results and safety of the participants being checked?
- How long will the study last and what will the responsibilities of the participant be?
- What are the possible short- and long-term benefits of the study?

- What are the possible short- and long-term risks, such as side effects?
- What other options do people with the medical conditions being studied have?
- How do the possible risks and benefits of this trial compare with those options?
- What kind of therapies, procedures and/or tests will there be during the trial?
- How do tests in the study compare with those the participants would have outside of the trial?
- Will the participants be able to take their regular medications while in the clinical trial?
- Where will the participants have regular medical care and who will be in charge of it?
- How could being in this study affect the participants' daily lives?
- Can the participants talk to other people in the study?
- Once the trial is completed, can the participants continue to use the drug cost-free if it should be approved and if it improves the participant's condition?

Informed Consent Statement

Informed consent is the process of learning the important facts about a clinical trial before deciding whether or not to participate. It is also a continuing process throughout the study to provide information for participants. To help someone decide whether or not to participate, the doctors and nurses involved in the trial explain the details of the study. Then the research team provides an Informed Consent Statement that includes details of the study, such as the purpose, duration, required procedures and key contacts. Risks and potential benefits are explained in the Informed Consent Statement. The participant then decides whether or not to sign the Informed Consent Statement. The Informed Consent Statement is not a contract, and the participant may withdraw from the trial at any time.

Cost of Clinical Trials

When considering a clinical trial, participants should be sure they understand who is responsible for covering the costs of the treatment. Because some self-funded plans consider clinical trials to be investigational or experimental, they will not pay for any of the treatment costs associated with them. Other plans are very liberal, and make no distinctions between standard medical treatments and treatments received through a clinical trial. Usually the plan supervisor will determine what the plan will cover by making distinctions among the different types of treatments patients receive in a clinical trial.

For example, some self-funded plans will pay for *usual* care costs, the kinds of treatment patients would receive regardless of whether they were in a standard treatment program or in a clinical trial. These *usual care* items typically include X-rays, doctor visits, hospital stays and lab tests. A self-funded plan may pay these costs, but not cover *extra care costs* associated with a clinical trial, such as any additional lab tests or medical

exams. Some plans make other distinctions, such as paying only for clinical trials when no standard treatment is available for a medical condition, or if the clinical trial is *cost-neutral*, that is, costs the same as existing standard treatment.