Cystic Fibrosis Foundation

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About Clinical Trials

A guide for people with CF and their families

I AM THE KEY

INSIDE

Clinical trials that test potential drugs and therapies in people with cystic fibrosis are a major part of CF research. They take place at Cystic Fibrosis Foundation-accredited care centers all over the United States and enroll people with CF of all ages and levels of health.

Clinical trial volunteers are the key to finding new treatments and a cure for CF. There are now many opportunities to help develop new drugs for cystic fibrosis. Because cystic fibrosis is a rare disease, there is a smaller pool of people who can participate in research. It can be a challenge to enroll enough people with CF to complete a clinical trial quickly and determine if a potential therapy is safe and effective.

Choosing to volunteer in research is a personal decision that is best made when you are informed. This guide offers general information to help you begin a conversation with your CF care team about whether participating in a clinical trial is right for you or your child.

Why Participate in a Clinical Trial?

People with CF choose to participate in clinical trials for a number of different reasons. Some possible benefits include:

- Taking an active role in managing your own CF care.
- Gaining access to new treatments before they are more widely available.
- Getting expert CF care at CF Foundation-accredited health care centers.
- Helping advance our knowledge of CF.
- Receiving a treatment that works for you or your child.

"Every trial is unique. It's important to talk with the study team and your CF doctor to find the right study for you or your child."

— Scott Donaldson, M.D., Associate Director, Adult CF Program, University of North Carolina

Who Can Participate in a Clinical Trial?

All clinical trials have guidelines about who can join. Some enroll healthy people. Others enroll only people with specific diseases, such as CF. A CF clinical trial may have other guidelines in addition to requiring that the study volunteer has CF.

These guidelines are known as inclusion criteria and exclusion criteria and help ensure that the research results are reliable.

For example, the age that the person with CF must be to participate varies according to each trial and depends on a number of factors, with safety always first in mind.

Drugs work differently in young children than they do in adults. Before a drug can be tested in young children, it must be shown to be safe and effective in older people with CF.

Clinical Research Basics

Drug discovery begins in a laboratory setting. Once a potential drug is developed in the lab, it must be tested to see how it will work in people with a disease. Testing is accomplished through clinical trials, also called clinical studies.

There are two types of clinical trials that your research team may talk with you about:

- In an **observational clinical trial**, researchers observe participants and keep track of their health. Observational trials don't test potential drugs, but they are very important for developing new ideas about cystic fibrosis and the best way the disease might be treated.
- In an **interventional clinical trial**, researchers give participants either the particular study drug or a **placebo** — an inactive medication or sugar pill. They measure how well the study drug works and whether the treatment is safe and helpful.

Who Is Involved in Clinical Research?

The Sponsor

Clinical research is sponsored in part or entirely by any number of organizations or individuals. Medical institutions, universities, foundations, voluntary groups, pharmaceutical companies and federal agencies such as the **National Institutes of Health** (NIH) all sponsor research.

The sponsor develops the idea that leads to the testing of a potential drug. The sponsor's responsibilities include developing the study design, monitoring the progress of the study, reporting unwanted and unintended events to the U.S. Food and Drug Administration (FDA), analyzing the data and results and submitting a **new drug application** (NDA) to the FDA for approval.

Your CF Research Team

The **principal investigator** (PI) is the leader of the research team. The PI has the background and training in science and CF research to oversee the conduct of the trial. In CF clinical trials, the PI is usually the doctor at the care center. The PI sees the participants at study visits and monitors their safety and health throughout the study. This person also works with the research coordinator to make sure the study is done properly.

The **research coordinator** (RC) is the main point of contact during the clinical trial. The RC follows the protocol, or plan, for the study to ensure participants' safety during the trial, coordinates the day-to-day activities of the trial, recruits participants, and collects and manages data. The RC also keeps the PI and the participant's CF doctor and care team informed about the participant's health during the study.

The **research participant**, or research subject, is the person who volunteers for the clinical trial. The research participant is an active part of the team with rights that are protected and written in the informed consent. Every participant must read and sign an informed consent form before becoming enrolled in the study.

Some people find it helpful to think of volunteering in a clinical trial as a job. Their role and responsibilities within the research team include going to scheduled study visits, taking the medication and following other requirements outlined in the informed consent.

Informed Consent

The study volunteer is at the center of all clinical trials, and plays the most important role on the research team. It is your right to know everything about your or your child's role.

Informed consent is a process designed to make you an active member of the research team and provide you with the key facts about a clinical trial before you decide whether to participate.

You will receive an **Informed Consent Form** that explains all parts of the study — its purpose, what will happen, how long it will last and whom to contact if anything goes wrong. The research team will also explain the possible benefits and risks and the responsibilities of the study volunteer.

Informed consent is more than signing a form. It is a learning process that continues throughout the study. Informed consent makes certain that participants can ask questions and get answers before, during and after the trial.

If you decide that a particular study is not a good fit for you or your child, your decision will not affect the care you receive at your CF care center.

Once you have decided to volunteer for a clinical trial, you will need to follow the study schedule and procedures to the best of your ability. Depending on the study, children of a certain age must also sign the informed consent form themselves.

Informed consent is not a contract. You can stop participating in a trial at any time.

Your Safety Comes First

The highest priority of all clinical trials is to protect the health and safety of the study volunteer. The U.S. government has strict guidelines and safeguards to keep risks as low as possible and ensure that the risks are worth any potential benefits. There are additional layers of protection in every CF clinical trial that help determine if the risks are safe and appropriate for people who participate.

U.S. Food and Drug Administration

The U.S. Food and Drug Administration (FDA) is the federal agency that must approve all clinical trial protocols and make sure all procedures are being followed as the trial goes on. When the trial is completed, the FDA determines whether the new drug or therapy will be approved for use by other people with CF.

Institutional Review Board

The Institutional Review Board (IRB) is usually made up of doctors, other health care providers and the general public. They look at the trial's protocol to make sure that participants' rights are protected and the trial does not cause them unnecessary risk. IRBs can be within a hospital or university or work as independent groups.

Data Safety Monitoring Board

The Data Safety Monitoring Board (DSMB) is an independent committee of experts in CF care that checks information on ongoing trials, watching for possible problems or unwanted side effects. The CF Foundation is the only voluntary health organization to organize a DSMB whose members are experts in CF and completely independent and not involved in any way with the trial, the sponsor or its participants.

"The first thing people ask is: 'Will this be safe for me?' We discuss the potential risks and benefits of a given clinical trial in great detail."

— Joseph Pilewski, M.D., Co-Director, Adult CF Care Center, University of Pittsburgh

Key Steps in a Clinical Trial

PROTOCOL

A protocol is the detailed plan of the clinical trial. It specifies how the study is to be conducted, who can participate, what procedures will occur and when, the number of study visits and the length of the study.

Protocols are carefully put together to protect the health of participants and must be followed exactly as written to maintain safety and collect data that is meaningful. CF researchers and physicians review the protocol carefully before they decide to conduct the study at their care centers.

RECRUITMENT

This step involves making the public aware of the clinical trial. Members of your CF care team may reach out to you if they think a particular clinical trial could be right for you or your child. They can provide you with the information you need as you make your decision.

You can also learn more about clinical trials by visiting the websites listed on the back of this brochure. If you find a clinical trial that you think may be right for you or your child, you can bring the study details to your CF care center team. If you are considering volunteering for a study, "Questions to Ask Your Doctor" on page 7 may help you start the conversation with your CF care team.

SCREENING

The screening process determines eligibility for participating in a clinical trial, following the guidelines of the study protocol. Determining eligibility usually involves a review of your or your child's medical history, screening tests and a physical exam.

To find the right people to enroll in a study and to keep them safe, researchers use the guidelines in the protocol to include and exclude certain people from trials.

- **Inclusion criteria** are traits everyone must have to be in a certain trial. For example, a trial for a new CF medication would require that all participants have a confirmed diagnosis of CF.
- **Exclusion criteria** are traits people cannot have to be in a certain trial. For example, a trial for medication to clear mucus from the airways might exclude people with CF whose lung function is below a certain level.

STUDY VISITS

The number of visits and types of procedures done at the research site and at home vary according to the study protocol. The length of clinical trials also varies, and may last a few weeks to several months or more.

The research team will work with you to make sure that study visits are scheduled at times that are most convenient to you and your family.

You may also be asked to do some additional activities at home, such as keeping a diary, to help the research team monitor your or your child's health.

Some clinical trials require more tests and doctor visits than usual. It is important to the success of the study that participants do everything expected of them and stay in close touch with the research team.

If you are participating in a clinical trial at a CF care center other than the one where you receive care, you will still need to see your CF care team for regular clinical care visits in addition to the study visits.

Four Phases of a Clinical Trial

It typically takes 10 to 14 years from the time a drug is discovered in a laboratory to its possible approval by the U.S. Food and Drug Administration (FDA) for people with CF. This lengthy process occurs in phases, which have different purposes and help scientists answer important questions.

Phase 1

Phase 1 trials generally take several months to a year. Researchers test an **experimental drug** or treatment in a small group of people to:

- Learn if it is safe.
- Find a safe and tolerable dosage range.
- Determine the best way to administer the drug — for example, orally (as a pill), intravenously or through inhalation.
- Identify the side effects.

Phase 2

The experimental drug or treatment is then given to a larger group of people to see how well it works (also called **efficacy**) and to continue testing its safety. At this stage, the trials do not provide enough information to prove that a drug works to treat an illness, but many people may report some benefits. Phase 2 trials can take up to two years.

Phase 3

Phase 3 trials can often last several years. The experimental drug or treatment is given to a large group of people, while another group receives a placebo, an inactive medication that has no medical effect. Researchers compare the two groups to:

- Continue testing how well the drug works.
- Determine dosage amounts.
- Watch for side effects.
- Compare the drug with commonly used treatments.
- Collect information regarding its safety.

After a Phase 3 study is completed, the sponsor of the clinical trial reviews the results and decides whether to submit a new drug application to the FDA for approval. The FDA may take several months or longer to decide whether to approve the new drug.

Phase 4

After the FDA approves a drug, it becomes available for people to begin to use. Additional clinical trials may be conducted to gather more information on the drug's effect in various patient populations and any side effects associated with long-term use.

"We are flexible, and accommodate participants' schedules to help make research visits convenient for them."

— Elizabeth Hartigan, R.N.,
Research Manager,
Children's Hospital of Pittsburgh

"We feel our daughter is safe participating in a clinical trial, but if at any time we are uncomfortable we have the option to take her out of the trial."

— Tracy Anlauf, mother of Quinn, 11, who has CF

Possible Risks

Each phase of a clinical trial carries a risk that the drug might not work or may have unwanted **side effects**. Possible risks include:

- Side effects of the medications or treatments being studied.
- Unwanted events during the trial that may or may not be related to the study drug.
- Failure of a treatment to work.

The research team will continuously monitor your or your child's health and safety throughout the trial, whether you are receiving the drug being studied or a placebo.

If the research team notes any worsening of your health during the trial, they will notify your regular CF care team and the study sponsor to determine if it is related to the study drug. You should contact the study team if you notice any worsening of your or your child's health or have any concerns during the clinical trial.

Early Access to Potential Therapies

During the FDA approval process, a potential drug may be made available to volunteers who participated in the study, whether they received the drug being studied or a placebo. This is known as an **open-label clinical trial**, allowing study participants to receive a new treatment before it is approved and becomes more widely available.

In some cases, a therapy may be made available before FDA approval to people who were not eligible to participate in the clinical study. This is called an **expanded access program** and is intended to provide the drug to people who are in medical need and could benefit from the therapy prior to potential approval.

Compensation for Study Participants

In some clinical trials, volunteers receive compensation for participating. This is a decision made by the trial sponsor. Some sponsors may offer compensation for your extra time and travel expenses needed to take part in the study.

Under the **Improving Access to Clinical Trials Act** (IACT) of 2011, clinical trial participants who receive Supplemental Security Income (SSI) or Medicaid benefits may accept up to $2,000 in research compensation without losing government medical benefits. To qualify for the exemption, SSI recipients must report any compensation received for participating in a qualifying clinical trial to the Social Security Administration.

If you are considering participating in a clinical trial, you will receive information about compensation during the informed consent process before the study begins.

Getting the Results

If you or your child has participated in a clinical trial, it is important that you know the results and what they mean.

After a clinical trial is completed, the sponsor analyzes the results very carefully to find out if the therapy being studied helps people with CF. Analyzing the results can take several months or more.

The sponsor then releases the results to the public. To learn about the results of a clinical trial, talk with your CF care doctor.

The CF Foundation makes every effort to share the results of CF clinical trials on its website as those results are released and made public.

Visit **www.cff.org/Find** and use the online search tool to find the results of a specific CF clinical trial. You can then bring these results to your CF doctor to learn more about what the results mean for you or your child.

Questions to Ask Your Doctor

If you are considering a specific clinical trial, it is important to talk with your or your child's CF physician or the research coordinator at your care center. The following questions may be helpful as you make your decision:

- What is the purpose of the study?
- Why do researchers think that this particular drug or treatment might work?
- What will be asked of me or my child?
- Who will be in charge of my or my child's care?
- Do I or my child need to come off of any current CF treatments during the trial?
- Will the study benefit me or my child?
- What kinds of tests are involved?
- How do the possible risks, side effects and benefits compare with my current treatment?
- Will hospitalization be necessary?
- How will I fit the study schedule into my daily life?
- Will results of the study be given to me?

WHAT IS A PLACEBO?

In a trial of a new drug, one group of participants receives the drug or treatment being studied. The other group is given a placebo, an inactive medication that will not affect a person in any way. This group is called the control group. In some clinical trials, people receiving experimental drugs are compared with those receiving a placebo to learn how well a potential drug works.

WHAT IS A RANDOMIZED TRIAL?

Many clinical trials are called randomized trials, which means that a study volunteer is assigned by chance to one of the treatment groups. This helps make sure that each study participant has an equal chance of receiving the study drug or the placebo. The research team does not know if you are on the study drug or on the placebo.

Learn More

Cystic Fibrosis Foundation

- Find a clinical trial for people with CF: www.cff.org/Find
- Hear personal experiences of participating in a clinical trial from people with CF, their families and members of the research team: www.cff.org/research/ClinicalResearch/Participate
- Read definitions of terms used frequently in clinical research: www.cff.org/research/ClinicalResearch/Glossary

National Institutes of Health

- Search for clinical trials: www.clinicaltrials.gov
- Learn more about children and clinical research: www.nichd.nih.gov/childrenandclinicalstudies

U.S. Food and Drug Administration

- Learn more about clinical trials and the FDA approval process: www.fda.gov

Center for Information and Study on Clinical Research Participation

- Find resources on clinical research: www.ciscrp.org

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