About clinical studies and participating in research

What is a clinical study?
A clinical study is any medical research project involving human volunteers. Scientists work constantly to find better ways to treat, prevent and diagnose diseases. Research into improved approaches usually begins with laboratory work or animal studies. Following early success with these methods, new strategies must demonstrate their effectiveness in the final proving ground of human testing.

A clinical trial is a specific type of study in which one group of volunteers gets an experimental treatment, and a similar group gets a placebo (a look-alike “dummy treatment”). Scientists evaluate the effect of the new treatment by comparing outcomes in the two groups.

Phases of clinical trials
The U.S. Food and Drug Administration (FDA) has established a rigorous sequence of phases for testing experimental treatments. The system gradually builds evidence for effectiveness and determines that the therapy has an acceptable “safety profile” (that is, the risks associated with its use are reasonable, given its potential benefit).

Experimental treatments must perform well enough in each phase to be allowed to progress to the next one. If a treatment performs adequately in all stages through Phase III, the FDA reviews all the data and determines whether to approve the drug for use in general medical practice.

The phases of clinical trials are the following:

- **Preclinical studies** in the laboratory establish a scientific basis for believing a treatment is reasonably safe and may be effective.
- **Phase I trials**, the first stage of human testing, typically enroll fewer than 100 volunteers. These studies are primarily concerned with assessing risks and side effects associated with a drug.
- **Phase II trials** enroll up to a few hundred volunteers with the condition the drug is designed to treat. These studies provide further information about safety and focus on determining the best dose of a drug. Scientists also watch for signs of effectiveness, but Phase II trials are generally too small to provide clear evidence about benefit.
- **Phase III trials** enroll several hundred to thousands of volunteers, often at multiple study sites nationwide. They provide the chief evidence for safety and effectiveness that the FDA will consider in deciding whether to approve a new drug.
- **Phase IV trials**, also called post-marketing studies, are often required by FDA after a drug is approved. The trial sponsor must monitor the health of individuals taking the drug to gain further insight into its long-term safety and effectiveness and the best way to use it.

Ensuring accuracy of study results: “Placebo control” and “double-blinding”
Scientists have learned that people can sometimes feel better, and even have improved results on medical tests, just because they believe a treatment is helping them. Doctors can also convince themselves a treatment is working because they care about their patients and want to help them get better. There are two main strategies to reduce the likelihood that hopes and beliefs will affect the outcome of clinical trials:

1. **Trials are “placebo-controlled.”** This means that some study participants are randomly chosen by a computer to receive the experimental treatment and some receive a “placebo” (an inactive, look-alike treatment).
2. **Trials are “double-blinded.”** This means that neither participants nor study staff know who is getting the drug and who is getting the placebo.

Some studies are designed so the group of participants getting the treatment is larger than the group receiving the placebo. And some studies can be designed so all participants get the treatment for part of the study.
Monitoring safety behind the scenes
Although participants and study staff don’t know who’s getting the treatment and who’s getting the placebo, most trials have a separate, independent Data Safety and Monitoring Committee with access to this information. Committee members regularly analyze data behind the scenes and step in if they notice any worrisome patterns of serious side effects in treatment recipients.

Informed consent: Knowing what to expect
Informed consent is the process of learning key facts about a study before deciding whether to volunteer. The FDA requires potential participants to be given complete information about the study in writing. Study staff also meet personally with each prospective participant to explain risks and possible benefits and answer any questions. People who decide to join the study must sign the informed consent form.

Individuals who are invited to participate in a study are not required to join. Participants are also free to leave a study at any time.

Matching participants to studies
Enrolling the right participants helps researchers maximize the likelihood of accurately measuring the effect of an experimental treatment. Some drugs, such as antibiotics for infections, have an obvious effect that is fairly easy to detect. It is often more challenging to assess the impact of drugs for chronic, serious diseases, including Alzheimer’s and related disorders. To eliminate certain factors that make it harder to evaluate a treatment, researchers define “inclusion and exclusion criteria” for each clinical study. Examples of these criteria include:
- limiting participants to a certain age range
- requiring participants to be in a certain stage of the disease being studied
- not allowing health conditions other than the one being studied
- not permitting use of certain medications other than the study drug
- requiring participation of a caregiver or “study partner”

Your participation can make a difference!
Over the last 15 years, scientists have made enormous strides in understanding how Alzheimer’s disease affects the brain. Many of these recent insights point toward promising new targets for treatment or prevention, and improved ways to diagnose Alzheimer’s and monitor its progression. In fact, several hundred studies at any given time are now recruiting participants with and without Alzheimer’s disease, related disorders or memory loss to help explore these exciting new approaches. Because progress is advancing so quickly on so many fronts, scientists report growing difficulty finding enough volunteers to complete these studies.

By considering participation to move these studies forward more quickly, you may help some of these new treatments, preventive strategies and diagnostic tools become a reality.

No one ever chooses to become ill, but anyone can consider helping to advance knowledge about an illness affecting them or someone close to them. Every clinical study contributes valuable knowledge, whether or not the experimental strategy works as hoped.

How to find a study near you
If you would like to consider participating in research, call our 24/7 Helpline at 1.800.272.3900 to learn about studies in your area. Or, visit our online Clinical Trials Index at www.alz.org. Your local Alzheimer’s Association may be aware of additional opportunities in your area.

For more information
The Alzheimer’s Association, the world leader in Alzheimer research, care and support, is dedicated to finding prevention methods, treatments and an eventual cure for Alzheimer’s. For more information about experimental treatments or answers to your other questions, please contact us anytime, day or night.

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