Biomedical Engineer – a type of engineer that uses their engineering knowledge to help develop medical devices and equipment that improve health.

Blinding – a process where clinical trial researchers and participants are not told which treatment groups patients are assigned to.

Cardiac Pacemaker – a mechanical device that synthetically produces the impulses required to control heart rate.

Central Nervous System (CNS) – the part of the nervous system that consists of the brain and spinal cord.

Clinical Trial – a research study using human volunteers that is designed to test the safety and efficacy of medical advancements.

Clinical Trial Phase – clinical trials consists of four phases that each have a different purpose and asks a different research question.

Coordinator – manages the day-to-day operations of a clinical trial including recruiting patients, conducting the informed consent process, determining the cost of the study, ensuring safety of participants, and scheduling patient visits.

Exclusion Criteria – factors that do not allow someone to participate in a clinical trial.

Functional Electrical Stimulation Therapy (FES Therapy) – a type of therapy that bypasses damaged neurons with an electrical stimulation device, which sends electrical signals to neurons to cause muscle contraction.

Functional Independence Measure (FIM) – a system of measurements that allows occupational therapists to measure the level of a patient’s disability. The FIM is an indication of how much assistance a person needs to perform daily activities.

Hypertension – high blood pressure

Inclusion Criteria – factors that allow someone to participate in a clinical trial.

Informed Consent – the process where clinical researchers fully disclose all information about a clinical trial to potential participants before they decide to participate. The informed consent process continues throughout the clinical trial to provide information to participants.

Institutional Review Board (IRB) – a group of people working at the institution that performs the clinical trial who approve and monitor research studies conducted on humans. They ensure the study is ethical and the rights of participants are protected.

Multiple Sclerosis (MS) – an autoimmune disease affecting the brain and spinal cord. MS is caused by damage to the myelin sheath of neurons, which slows down or stops nerve signals.

Muscular Dystrophy – a group of inherited disorders that involve muscle weakness and loss of muscle tissue. The disease progresses over time and may involve all muscles or only a group of muscles.
Occupational Therapy – a type of therapy that promotes health by enabling people to perform daily activities (occupations). It helps people improve basic motor functions, reasoning abilities, and teaches how to compensate for permanent loss of function so that they can live independent, productive, and satisfying lives.

Paralysis – loss of muscle function for one or more muscles.

Paraplegia – paralysis from the waist down caused by illness or injury in the spinal cord. Paraplegia can be partial, in which function from the waist down is only partially lost, or complete, in which function is totally lost from the waist down.

Paresis – partial loss of voluntary movement. Also known as partial paralysis.

Peripheral Nervous System (PNS) – the part of the nervous system that consists of the nerves that connect the central nervous system to the limbs and organs.

Placebo – an inactive substance that has no treatment value. It is designed to look exactly like the experimental treatment and sometimes given to the control group in a clinical trial in order to assess the true effect of the experimental treatment.

Principal Investigator (PI) – the lead scientists or medical doctor that is responsible for the clinical trial. The PI may be the person who conceived the research question being tested or may be a person selected by a pharmaceutical company to lead the project.

Protocol – the study plan for the clinical trial that serves as a common reference document to which people running the clinical trial can refer to.

Quadruplegia – paralysis from the neck down caused by illness or injury in the spinal cord. Quadruplegia can be incomplete, in which function from the neck down is only partially lost, or complete, in which function is totally lost from the neck down.

Randomization – a method based on chance by which a clinical trial participant is randomly selected to get the experimental treatment or an alternative treatment. The process reduces any bias that could result from assigning patients to treatment groups.


Standard Treatment – the best proven treatment available for a certain condition or disease. In a clinical trial, the control group sometimes receives the standard treatment, while the experiment group receives the test treatment.

Stroke – a rapid loss of brain function that occurs when blood flow to a part of the brain stops.