

# REHABILITATION AFTER STROKE

**In the United States, more than 700,000 people suffer a stroke each year, and approximately two-thirds of these individuals survive and require rehabilitation. The goals of rehabilitation are to help survivors become as independent as possible and to attain the best possible quality of life.**

## WHAT IS POST-STROKE REHABILITATION?

Rehabilitation helps stroke survivors relearn skills that are lost when part of the brain is damaged.

Rehabilitation also teaches survivors new ways of performing tasks to circumvent or compensate for any residual disabilities. Individuals may need to learn how to bathe and dress using only one hand, or how to communicate effectively when their ability to use language has been compromised.

Rehabilitation:

- Begins in the acute-care hospital, often within 24 to 48 hours after the stroke
- Promotes independent movement because many individuals are paralyzed or seriously weakened
- Helps reacquire the ability to carry out basic activities such as bathing, dressing, and using a toilet
- Continues as an ongoing process to maintain and refine skills

## WHAT DISABILITIES CAN RESULT FROM A STROKE?

### *Paralysis or problems controlling movement (motor control)*

- Usually on the side of the body opposite the side of the brain damaged by stroke, and may affect the face, an arm, a leg, or the entire side of the body

### *Sensory disturbances including pain*

- Loss of the ability to feel touch, pain, temperature, or position
- Numbness or odd sensations of tingling or prickling in paralyzed or weakened limbs
- Loss of urinary continence
- Chronic pain syndromes resulting from stroke-induced damage to the nervous system

### *Problems using or understanding language (aphasia)*

- Impairments involving the ability to speak, write, and understand spoken and written language

### *Problems with thinking and memory*

- Shortened attention spans or may experience deficits in short-term memory
- Loss of ability to make plans, comprehend meaning, learn new tasks, or engage in other complex mental activities

### *Emotional disturbances*

- Fear, anxiety, frustration, anger, sadness, and a sense of grief for physical and mental losses
- Emotional disturbances and personality changes

## WHAT MEDICAL PROFESSIONALS SPECIALIZE IN POST-STROKE REHABILITATION?

### Physicians

Physicians have the primary responsibility for managing and coordinating the long-term care of stroke survivors, including:

- Recommending which rehabilitation programs will best address individual needs
- Caring for the stroke survivor's general health
- Providing guidance aimed at preventing a second stroke, such as controlling high blood pressure or diabetes and eliminating risk factors such as cigarette smoking, excessive weight, a high-cholesterol diet, and high alcohol consumption

Neurologists usually lead acute-care stroke teams and direct patient care during hospitalization. They sometimes participate on the long-term rehabilitation team.

Other subspecialists often lead the rehabilitation stage of care, especially physiatrists, who specialize in physical medicine and rehabilitation.

### Rehabilitation nurses

Nurses specializing in rehabilitation help survivors:

- Relearn how to carry out the basic activities of daily living
- Learn about routine health care
- Reduce risk factors that may lead to a second stroke
- Provide training for caregivers
- Manage personal care issues, such as bathing and controlling incontinence



## Physical therapists

Physical therapists specialize in treating disabilities related to motor and sensory impairments. They are trained in all aspects of anatomy and physiology related to normal function, with an emphasis on movement.

Physical therapists:

- Assess strength, endurance, range of motion, gait abnormalities, and sensory deficits
- Design individualized rehabilitation programs aimed at regaining control over motor functions
- Teach compensatory strategies to reduce the effect of remaining deficits
- Establish ongoing exercise programs to help people retain their newly learned skills

## Occupational and recreational therapists

Like physical therapists, occupational therapists are concerned with improving motor and sensory abilities, and ensuring patient safety in the post-stroke period. Occupational therapists help survivors:

- Relearn skills needed for performing self-directed activities (also called occupations) such as personal grooming, preparing meals, and housecleaning
- Develop compensatory strategies and change elements of their environment that limit activities of daily living

Recreational therapists help people with a variety of disabilities to develop and use their leisure time to enhance their health, independence, and quality of life.

## Speech-language pathologists

Speech-language pathologists help stroke survivors:

- Relearn how to use language or develop alternative means of communication
- Improve their ability to swallow, and they work with patients to develop problem-solving and social skills needed to cope with the after-effects of a stroke

## Vocational therapists

Vocational therapists perform many of the same functions that ordinary career counselors do.

They can help people with residual disabilities:

- Identify vocational strengths and develop résumés that highlight those strengths
- Assist in specific job searches, and provide referrals to stroke vocational rehabilitation agencies
- Understand their rights and protections as defined by the Americans with Disabilities Act of 1990 requiring employers to make “reasonable accommodations” for disabled employees

## Inpatient rehabilitation units

Inpatient facilities may be freestanding or part of larger hospital complexes. Patients stay in the facility, usually for 2 to 3 weeks, and engage in a coordinated, intensive program of rehabilitation. Such programs often involve at least 3 hours of active therapy a day, 5 or 6 days a week. Inpatient facilities offer a comprehensive range of medical services, including full-time physician supervision and access to the full range of therapists specializing in post-stroke rehabilitation.

## Outpatient units

Outpatient facilities are often part of a larger hospital complex and provide access to physicians and the full range of therapists specializing in stroke rehabilitation. Patients typically spend several hours, often 3 days each week, at the facility taking part in coordinated therapy sessions and return home at night. Comprehensive outpatient facilities frequently offer treatment programs as intense as those of inpatient facilities, but they also can offer less demanding regimens, depending on the patient’s physical capacity.

## Nursing facilities

Rehabilitative services available at nursing facilities are more variable than are those at inpatient and outpatient units. Skilled nursing facilities usually place a greater emphasis on rehabilitation, whereas traditional nursing homes emphasize residential care. In addition, fewer hours of therapy are offered compared with outpatient and inpatient rehabilitation units.

## Home-based rehabilitation programs

Home rehabilitation allows for great flexibility so that patients can tailor their program of rehabilitation and follow individual schedules. Stroke survivors may participate in an intensive level of therapy several hours per week or follow a less demanding regimen. These arrangements are often best suited for people who require treatment by only one type of rehabilitation therapist.

### WHEN CAN A STROKE PATIENT GET REHABILITATION?

Rehabilitation should begin as soon as a stroke patient is stable, sometimes within 24 to 48 hours after a stroke. This first stage of rehabilitation can occur within an acute-care hospital; however, it is very dependent on the unique circumstances of the individual patient.



### WHERE CAN A STROKE PATIENT GET REHABILITATION?

At the time of discharge from the hospital, the stroke patient and family coordinate with hospital social workers to locate a suitable living arrangement. Many stroke survivors return home, but some move into some type of medical facility.

