

# FitFacts®

## Starting a Stroke-Recovery Fitness Program

A STROKE OR “BRAIN ATTACK” OCCURS WHEN A BLOOD CLOT BLOCKS THE FLOW OF BLOOD TO THE BRAIN OR WHEN A BLOOD VESSEL TEAR CAUSES BLEEDING IN THE BRAIN. IN BOTH CASES, PART OF THE BRAIN QUICKLY BEGINS TO DIE FROM OXYGEN DEPRIVATION.

Depending on which part of the brain is affected, stroke can lead to problems with movement, balance, endurance, sensory awareness, vision, communication, judgment, learning, memory and/or emotions. While some people fully recover from strokes, more than two-thirds of stroke survivors have some remaining disability; the extent of disability is dependent upon the location and severity of the stroke. A tailored stroke-recovery fitness program can help reduce disability and improve physical fitness, mobility, physical function, health, mood and quality of life.

### STRENGTH TRAINING

Spasticity, or increased muscle tone, is a common post-stroke complaint. It may cause a loss of balance or an uncontrolled movement in the involved limb(s). To minimize the risk of spasticity-related injury during strength training, increase weight gradually and begin each new exercise cautiously. If you have difficulty with some exercises, a few equipment adaptations may be all you need. For example, splints or orthotic devices help control muscle tone and joint position, preventing injury and pain. You can improve your grip with expanded or padded gripping devices. Canes, walkers and even wheelchairs can help you increase mobility.

Avoid holding your breath during exercise, as doing so can raise your blood pressure to dangerous levels. Even short-lasting very high blood pressure is a risk factor for a future stroke.

### FLEXIBILITY

Try to engage in flexibility exercises daily. Remember that paralyzed or nonfunctional muscles and joints need to be stretched just like their functional counterparts. Although active movement is preferable, joints can be moved passively by yourself, a trainer or by a family member using proper technique.

### POSTURE

Changes in muscle tone, balance and vision can lead to a stooped posture. Work on improving posture with an emphasis on extension of the head, neck, trunk, hips and knees. Let your vision lead your movement. Look up often during your exercise activities to improve your posture, movement and outlook.

Don't forget to exercise your trunk muscles as part of your fitness program. One classic exercise for the trunk is to lie on your back with knees bent and feet flat on the floor. Gently roll both knees from side to side. Advance this basic exercise by moving your arms, head, neck and shoulders in the opposite direction. Move slowly so that you can feel the stretch. Progress to trunk rotation exercises during sitting and then standing by moving your arms or legs across the midline of your body. This will enhance overall muscle tone and posture and help to improve your breathing.

### CARDIAC CONDITIONING

Research suggests that cardiorespiratory training significantly improves walking

ability and mobility for people who have suffered from a stroke. To reap this benefit, first get physician approval prior to beginning a cardiovascular exercise program. Then start with a program that you will enjoy and that you can comfortably complete. As your fitness, coordination and other skills improve, slowly increase frequency, intensity or duration of exercise.

### NUTRITION

A heart-healthy diet can help to reduce the risk of a second stroke. Choose a diet low in saturated fat, trans fat, sodium and cholesterol and high in vegetables, fruits and whole grains. Also, remember that if your activity level has decreased from before the stroke, eating the same amount and types of foods can lead to weight gain. Increased body weight may make exercise more difficult and increases the risk of a future stroke.

### GENERAL WELL-BEING

A stroke can incite many unexpected emotions, fears and challenges. You may experience poor judgment, have bouts of bad temper, feel apathetic, have a shortened attention span or be depressed or anxious. You may be afraid of falling. You may experience frustration. While medication and/or psychotherapy is sometimes needed to help you with these challenges, exercising and being fit may help reduce your risk of falls, alleviate stress, improve your ability to learn and give you a mental boost. And always remember that your friends, family, ACE-certified Personal Trainer, and physical and/or occupational therapist are by your side to help you get fit—and maybe even have a little bit of fun.

Mary Jo Korn, P.T., M.B.A., physical therapist and vice president of business development for Edgewater Rehabilitation Associates Inc. (ERA), provided many of the exercise recommendations for this educational handout.

### ADDITIONAL RESOURCES

[American Stroke Association](#)

[National Stroke Association](#)

[Medline Plus](#)

[National Institute of Neurological Disorders and Stroke](#)

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