

CPT Group Therapy Programs
Educational Group
CVA Group

Purpose: The purpose of this group is to provide education to a patient that has suffered from a CVA. A CVA is a loss of brain function resulting from a disruption of blood flow to part of the brain. 4 causes: thrombosis (blood clot), embolus (wandering blood clot), compression (pinched artery from tumor or swelling), hemorrhage (bleeding in the brain)

Admission Criteria:

- Free of isolation precautions
- Able to tolerate sitting for at least 30 min
- History of CVA
- Short BCAT 16/ACL of 4.0 or greater
- Stable Vital signs

Objectives/Goals

- Increased knowledge about CVA and how to prevent or treatment

Suggested Materials List

- Handouts-print outs of attached materials
- E-stim machine for demonstration purpose to present during discussion

Suggested Activities

- Discussion
- Presentation of material
- Shared stories

Factors that Increase risk of CVA:

Non-controllable factors

- Age
- Family hx
- Race
- Sex (men more than women)
- Prior stroke

Controllable factors

- HTN
- Cardiac disease
- Oral contraceptives
- DM
- Smoking
- Obesity
- High sodium diet
- Atherosclerosis

Warning signs:

- Sudden temporary weakness or numbness on 1 side of the body
- Temporary loss of speech or slurred speech / loss of vision blurred vision
- Unexplained dizziness, unsteady, falls
- Change in level of consciousness

Possible effects of CVA:

- Paralysis or weakness 1 side of the body
- Difficulty w speech or language
- Memory loss or confusion
- Urine or fecal incontinence
- Difficulty swallowing
- Visual deficits

How to Prevent:

- Stop smoking
- Exercise daily
- Low fat low salt diet
- Avoid alcohol
- Lose weight
- Control BP
- Control DM
- Avoid oral contraceptives

How to treat:

- PT OT ST rehab
- A PROM
- Prevent skin breakdown
- Bowel bladder training
- Good nutrition
- Emotional support
- Safe environment

Suggestions for Improving R sided awareness

- Place grooming items on R side, CG can help guide hand with pts to locate and use items
- Place clothing on R side. Need to turn head toward R to find them.
- Place R arm on table. Use brightly colored placemat to help locate borders around plate.
- Place nightstand items on R side
- Have CG sit or stand on R side when providing help
- Use brightly colored tape to outline work area. Trace around the edge with fingers
- Write words or drawings on the R side of large erase board. Pt re-writes them on the L side.
- Squeeze rubber ball with R hand
- Pick up objects and place in R hand
- Wear watch with timer on R wrist. Set timer to go off and have pt look at R wrist to see time.

CVA (stroke) – other activities:

- Improve R sided awareness – see handout
- Use Motor Assessment Test
 - Set up supplies needed to do UE activities on test
 - Demo how to move from supine to sidelying using strategies from test
 - Demo how to facilitate co-contraction around the shoulder girdle using strategies from the test

From Web MD:

Recovering after a stroke may feel like a daunting task. Among other things, your brain must relearn skills it lost when it was damaged by the stroke. Recent research, though,

shows that the brain is amazingly resilient and capable of adapting after a stroke. This means that recovery is more possible than previously thought.

Recovering use of your arm does bring special challenges, though -- different than those experienced with the leg, says Susan Ryerson PT, ScD, owner of Making Progress, a physical therapy business. Ryerson has specialized in post-stroke recovery for more than 40 years with a special interest in rehab for arms.

"But you don't have to do anything with the arm because you have the other one to use," Ryerson says. "In the beginning, it's easier to do things with your 'good' arm. So you develop a behavioral pattern of nonuse." But because early muscle activation is critical to good recovery, you should be devoting as much time as possible to getting your arm to work, she says.

What to Expect During Stroke Rehab for Your Arm

Your stroke rehabilitation program involves working with a team to guide you. This usually includes physical and occupational therapists. The rehab team will likely recommend combining a variety of exercises and other techniques to help your arm recover. Two big goals of stroke rehab are to enhance muscle control and reduce spasticity. This is a constant contraction of muscles that can lead to pain and other problems.

Stroke rehabilitation for your hand and arm includes passive movements or exercises that are movements done with the help of a therapist and more active exercises you do with little or no assistance.

Stroke rehabilitation can be tiring. It may also help to be active during times of the day when you have more energy. Set realistic goals.

Stretching Arm Exercises After a Stroke

Stretching is especially important for reducing spasticity. "Stretching should be used not as an alternative to medications, but as a foundation," says Joel Stein, MD, director of the rehabilitation medicine service and physiatrist-in-chief at NewYork-Presbyterian Hospital. "Patients that are very meticulous about it can often manage with substantial spasticity."

Your therapist will teach you range-of-motion stretches. Some of these involve using your other arm to produce the forces needed to move the disabled arm. Called passive exercises, these can help prevent muscle shortening and joint stiffness.

"Taking the arm and stretching it with the other arm is the bedrock of spasticity self-management," Stein says. You can also use the unaffected hand to stretch the thumb and all the fingers on the affected hand.

Your therapist will instruct you on how to do stretches, but these are some general guidelines:

- Move the arm through its full range of motion at least three times a day.*
- Gently stretch tighter muscles to a point of slight discomfort.*
- Then hold the stretch for at least 60 seconds.*

Although these stretches are helpful in preventing spasticity and other problems, they don't directly address the primary impairment -- control of the arm, Ryerson says.

Functional Arm Exercises After a Stroke

Repeatedly using the arm to complete tasks is effective for recovery after a stroke, says Stein, chairman of the department of rehabilitation medicine at Columbia University's College of Physicians and Surgeons. And, repetitive practice is now considered key to stroke rehab, much like practicing scales when learning a musical instrument.

Ryerson says that researchers now better understand how the brain controls movement. "They've learned that a lot of our movements are set down in the brain in a functional context. So we've moved from treating isolated impairments of the arm to treating the arm in a functional context."

One technique for encouraging use of the affected arm is called **constraint-induced movement therapy** (CIMT). It involves restricting use of the unaffected hand for several hours a day by putting a mitt on it and performing tasks over and over with the affected arm. The EXCITE trial, conducted at seven academic institutions between 2001 and 2003, showed that this technique promoted use of the affected arm in people with mild to moderate stroke impairment. Improvement lasted at least two years.

Other research is showing that this kind of repeated "forced use" of the hand and fingers can actually cause the brain to reorganize to help move the hand -- the first demonstration of the brain's plasticity in response to intensive therapy after a stroke.

Unfortunately, few centers offer CIMT for two main reasons, Stein says. Insurance doesn't pay for it and high-intensity, short-duration therapy is difficult for many patients. "You also have to have a certain degree of movement to participate in CIMT," Stein says. However, variations of this therapy -- spread out over a longer period of time -- are being tried and have been shown to be useful in limited studies, he says.

Ryerson adapts techniques used in the EXCITE trial to encourage use of the hand and arm. She provides patients specific, simple arm movements that don't require hand manipulation. These are activities that most should be able to do, even with severe stroke damage.

These are examples of activities Ryerson suggests trying daily:

- Put your fingers around a refrigerator door handle. Or put your fingers around a drawer handle. Open and close the door or drawer.*
- Hold a plastic shopping bag in your affected hand and carry it across the room. Practice putting something light in the bag.*
- Pull laundry out of the dryer and carry it in a small bag.*
- Carry light objects, supporting them against your body with your upper and lower arm.*
- Put a soap dispenser on your hand. Then put it on the table and turn it over more than once.*
- Put a tube of toothpaste in your affected hand. Try to squeeze it while you manipulate the tooth brush with your unaffected hand.*
- Flip a light switch on and off with your affected hand.*

"It's important to keep the sensory messages going into the brain to prevent the nonuse cycle," she says. The sensory information you get from touching may lead to greater recovery. And, doing activities like these also help you gain independence while you're recovering. For example, using a bag to carry objects to and from the refrigerator can free your other arm for use with a cane, if needed, Ryerson says.

Arm-Strengthening Exercises After a Stroke

In the past, there has been some controversy about strength training for the arm and hand after a stroke. It was thought that strengthening spastic muscles might do more harm than good. Now research indicates that strengthening spastic muscles can even reduce spasticity.

A recent review of 13 studies including 517 stroke patients with mild to moderate impairment of their arms found that strengthening hands and arms with small weights, resistance bands, and pulley weights could be done without increasing spasticity and pain.

Other Techniques to Help With Arm Recovery

In addition to stretching, functional, and strengthening exercises, other techniques may also help you recover use of your arm after a stroke. The effectiveness of some of these techniques and devices is still being explored.

Active-passive bilateral therapy. A stroke upsets the balance between the two sides of the brain. Active-passive bilateral therapy involves performing a task by using the non-affected and the affected hand together. It may help the two sides of the brain work better together, restoring balance and possibly improving hand function when combined with other therapy.

A form of bilateral therapy called BATRAC (bilateral arm training with rhythmic auditory cueing) may also help the brain reorganize after a stroke. It uses sound cues to signal participants to start pushing or pulling on two T-bar handles. You may do this by either using both arms at the same time or by using one arm, and then the other.

Ryerson takes these principles and adapts them so that patients can use everyday objects to act as an assist. "Can they take their cane or a broom handle or a towel rolled up into a cylinder and reach it forward, rotate up and down, slide it left and right, and reach it to the floor?"

Functional electrical stimulation. This technique involves generation of an electrical current that stimulates nerve activity in limbs affected by stroke, strengthening weak or spastic muscles. Ryerson says this technique may be helpful for opening a contracted hand. Some devices are commercially available and becoming more widely used, even in the home, Stein says. However, they are not currently covered by insurance.

Biofeedback. Although biofeedback is not well researched, this technique provides a sound or light signal that shows if muscles are active. This might help by creating greater awareness of muscle contractions, which is impaired after a stroke. With greater awareness, it may become easier to relax muscles and coordinate hand movements.

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