Protect Your Weak Arm and Shoulder after Stroke

After having a stroke, it is common to have weakness on one side of the body, called hemiparesis. Learn how to prevent injuries by protecting your arm and shoulder on your weak side.

About the shoulder joint
The shoulder joint is made up of 3 bones:
• Clavicle at the front
• Scapula or shoulder blade at the back
• Humerus in your upper arm
The ball shaped end of the humerus is held in the shallow socket of the scapula by muscles and tendons, called the rotator cuff. The scapula and humerus work together to allow your arm to rise up.
When you have weakness on one side, the muscles of the arm and shoulder are not able to work as well.
You need to limit some motions to prevent injuries.

Common shoulder injuries and how to prevent them
Muscle Pinch (Impingement)
You may not have the strength to raise your weak arm without help. If you or someone raises your elbow on your weak side above your shoulder, the humerus gets pushed into the scapula socket.
The muscle can get pinched between the scapula and humerus. This injury is called impingement. Pain and long term damage can occur in the joint.
To protect your shoulder joint from this type of injury:

- Do not raise your weak arm above the level of your shoulder with your other hand.
- Do not let anyone else lift it higher than your shoulder.
- Do not pull on or twist your arm at the shoulder.

**Ball Slips Out of Socket (Subluxation)**

If your rotator cuff muscles get weak and lose tone, the humerus in your upper arm may slip down out of the scapula socket. This is called **subluxation**.

Exercises can help keep these muscles strong and prevent this injury. Strong shoulder muscles can pull the humerus back into the socket.

**Treatment to protect your arm and shoulder**

Hemiparesis of the arm is treated with:

- Good posture and balance when sitting
- Exercises to strengthen the shoulder and arm

Using an arm sling does not help a shoulder with hemiparesis. The sling may actually keep the arm in poor position and cause more pain and swelling. Your therapist can work with you to find ways to support your shoulder, such as using a lap tray on your wheelchair to keep your arm in a neutral position.

**Use Good Posture**

Your posture impacts how well the shoulder joint works.

To improve your shoulder movement, sit up tall as often as you can to keep your shoulder blades in the correct position.

**Do Not Lean or Slouch**

If you sit in a slouched or leaning position, your shoulder blade, called scapula, is not able to move as well and can prevent your upper arm from moving, causing injury.

Using good posture can help prevent this injury.
Use Rolled Towel When Sitting
When you sit in a chair, place a rolled towel or pad in the curve of your lower back. This helps you sit upright and keeps your back comfortable, keeping your shoulders over your hips.

Exercises

- **Shoulder Raise (Elevation)**
  - Raise your shoulders up toward your ears, keeping your neck straight. Relax your shoulders back down and repeat.
  - If you are not able to do this by yourself:
    - Have another person help you by placing the palm of his or her hand on the front of your affected shoulder and the other hand on the bottom of your shoulder blade on the same side.
    - Lean toward your helper, so that your shoulder and shoulder blade raise up.

- **Shoulder Squeeze (Retraction)**
  - Pull your shoulders back and squeeze your shoulder blades together. Relax and repeat.
  - If you are not able to do this by yourself:
    - Have another person help you by placing the palm of his or her hand on the front of your affected shoulder and the other hand cupping your shoulder blade on the same side.
    - Turn your body away from your helper, so that your shoulder blade pulls inward.

- **Backward Shoulder Roll**
  - Roll your shoulder backward in a circle. Relax and repeat.
  - Do not roll your shoulder forward.
Rocking the Baby

- Cross your arms in front of you. Your affected arm is on top, with your elbow supported by the hand of your other arm.
- Rotate your body from side to side while supporting the affected arm.
- Repeat this 10 times each hour.

Outside Shoulder Stretch (External Rotation)

Do not try this stretch until your therapist has shown you how to do it properly.

- Lie on your back with your arm at a 45 degree angle to your side.
- Gently rotate your hand back, supporting your lower arm on a pillow.
- Leave your arm in this position for ____ minutes for a long stretch.

As you gain more strength and movement in your arm, your therapist will give you exercises to increase coordination between your arms.