Passive Range of Motion Exercises for the Post-Stroke Right Arm and Hand

Developed by the Northeastern Ontario Stroke Network

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This exercise package was designed to be used by the client’s family/caregiver/support worker to assist in properly carrying out passive range of motion exercises with the client. Selected exercises from this resource are to be provided by a regulated health professional, who has experience and knowledge of the client and who can best determine the appropriate exercises. The authors, contributors and supporting institutions shall not be liable for any damages, claims, liabilities, costs or obligations arising from the use or misuse of Passive Range of Motion Exercises for the Post-Stroke Right Arm and Hand. If you have any concerns while performing any of these exercises, STOP the exercises and consult your health care provider.
Before Getting Started...

Gentle movement of the limb(s) is an important exercise for the stroke survivor if they are not able to move the limb(s) themselves.

Why is this important?
- To prevent stiffness
- To assist with blood flow
- To improve awareness of the arm and or leg

Pain and damage to muscles and joints can occur if the gentle limb movement is not done correctly.

Key points to know:
- It is best to have the stroke survivor positioned in a comfortable, relaxed and supported position (most movements are done lying down but some can be done in sitting)
- When movements are done in lying, support the head with a pillow, support the arm on a flat pillow when moving the leg, keep legs straight and flat on the bed
- When movements are done in sitting, the stroke survivor should be sitting as straight as possible with their feet firmly on the floor and their arm supported on a table or pillow
- Move any sheets/blankets out of the way so you have a clear area to move in
- Make sure you are comfortable – get in close so that you are not reaching forward and straining your back, place a knee on the bed or adjust the height of the bed if possible
- Support above and below the joint you are moving – supporting the hand is important
- You must support the weight of the arm firmly but do not squeeze tightly
- Keep your movements slow and smooth; the movement should not cause pain
- Do not force the movement if the muscle or joint is stiff – move only as much as the joint and muscle will allow
- Ask the stroke survivor to watch the movements you are doing – we want to keep their brain aware of the limb that is being moved

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**Shoulder Flexion – Moving the Right Arm Up and Down**

- Support their arm just below their shoulder joint
- Your other hand holds their wrist and hand
- Slowly lift their arm up to shoulder level and stop
- Hold __________ seconds
- Slowly lower their arm back down
- Repeat the movement __________ times

**Remember:**

It is important not to let their hand hang, it can overstretch their muscles and cause pain.

Do not lift their arm past shoulder level, you can cause pinching and stretching of muscles that can lead to pain.

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**Shoulder Abduction – Moving the Right Arm Out to the Side**

- Support their arm at their elbow joint
- Your other hand holds their wrist and hand
- Move their arm out to their side, just to shoulder level
- Hold for __________ seconds
- Slowly bring their arm back down to their side
- Repeat the movement __________ times

**Remember:**
Do not lift their arm past shoulder level, you can cause pinching and stretching of muscles that can lead to pain.
Shoulder Adduction – Moving the Right Arm Across the Chest

- Support their arm at their elbow joint
- Your other hand holds their wrist and hand
- Move their arm out to their side, just to shoulder level
- Move their hand across their chest towards their opposite shoulder
- Hold for __________ seconds
- Slowly bring their arm back out away from their body
- Repeat the movement __________ times

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Internal Rotation and External Rotation – Turning the Right Shoulder In and Out (lying down)

- Support their arm at elbow, keeping their elbow against their body
- The stroke survivor’s elbow is bent so their hand is pointing up to the ceiling
- Your other hand holds at their wrist and hand
- Gently move their hand and wrist down toward their stomach
- Then bring their hand and wrist back up and move away from their stomach
- Hold for __________ seconds
- Repeat the movement __________ times

Remember:
This movement away from their stomach can be tight, do not force the movement, take it as far out as it will let you and stop.
Internal Rotation and External Rotation – Turning the Right Shoulder In and Out (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Support their arm at elbow, keeping their elbow bent and resting against their body
- Your other hand holds their wrist and hand
- Gently move their hand and wrist away from their stomach
- Then bring their hand and wrist down toward their stomach
- Hold for __________ seconds
- Repeat the movement __________ times

Remember:
If the armrest of the wheelchair is in the way, remove it and replace it once you have completed the exercises.
This movement away from their stomach can be tight, do not force the movement, take it as far out as it will let you and stop.
Elbow Flexion and Extension –
Bending and Straightening the Right Elbow (lying down)

- Let their upper arm rest on the bed or on a flat pillow
- Support their arm with your hand under their arm just above their elbow joint
- Your other hand holds their wrist and hand with their palm facing up
- Move their hand and wrist up towards their shoulder, bending at their elbow
- Slowly lower their hand and wrist, straightening their elbow
- Hold for __________ seconds
- Repeat the movement __________ times
Elbow Flexion and Extension –
Bending and Straightening the Right Elbow (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them.
- Support the weight of their arm with your hand under their arm just above their elbow joint.
- Your other hand holds their wrist and hand.
- Move their hand and wrist up towards their shoulder, bending at their elbow.
- Slowly lower their hand and wrist, straightening their elbow.
- Hold for ___________ seconds.
- Repeat the movement ___________ times.

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Pronation and Supination –
Turning the Right Palm Up and Down (lying down)

- Let their upper arm rest on the bed
- Support their arm with your hand under their arm just above their elbow joint
- With your other hand, hold their forearm and wrist
- Gently turn their forearm and wrist together to bring their palm up
- Hold __________ seconds
- Gently turn their palm down
- Repeat the movement __________ times

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Pronation and Supination –
Turning the Right Palm Up and Down (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Support their arm with your hand under their arm just above their elbow joint
- With your other hand, hold their hand
- Gently turn their forearm and wrist together to bring their palm up
- Hold __________ seconds
- Gently turn their palm down
- Repeat the movement __________ times

Remember:
Support their arm by resting it on a table or pillow so that their shoulder is well supported and the weight of their arm is not pulling down on it.
Wrist Flexion and Extension –
Bending the Right Wrist Up and Down (lying down)

- Let their upper arm rest on the bed
- Support their forearm above their wrist
- Place your other hand with your fingers on their palm of their hand and your thumb on top of their hand
- Move their hand and wrist back, do not force the movement
- Hold __________ seconds
- Then move their hand and wrist down gently
- Repeat the movement __________ times

Remember:
Let their fingers rest, you are only moving their wrist.
If their fingers are tight and you cannot open their hand, place your thumb in the palm of their hand and your fingers on the back of their hand and move their hand and wrist back. Do not force their fingers open.
Wrist Flexion and Extension – Bending the Right Wrist Up and Down (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Support their forearm above their wrist
- Place your other hand with your fingers on the palm of their hand and your thumb on top of their hand
- Move their hand and wrist back, do not force the movement
- Hold __________ seconds
- Then move their hand and wrist down gently
- Repeat the movement __________ times

Remember:
If the armrest of the wheelchair is in the way, remove it and replace it once you have completed the exercises.

If their arm is difficult to support, rest it on a table or pillow so that their shoulder is well supported and the weight of their arm is not pulling down on it.

Let the stroke survivor’s fingers rest, you are only moving their wrist.

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Radial and Ulnar Deviation – Moving the Right Hand Side to Side (lying down)

- Let their upper arm rest on the bed
- Support their forearm above their wrist
- Place your other hand with your fingers on the palm of their hand and your thumb on top of their hand
- Move their hand to one side slowly like their hand is waving
- Hold __________ seconds
- Move their hand to the other side slowly
- Hold __________ seconds
- Repeat the movement __________ times

Remember:
Let the stroke survivor’s fingers rest, you are only moving their wrist.
Radial and Ulnar Deviation –
Moving the Right Hand Side to Side (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Support their forearm above their wrist
- Place your other hand with your fingers on the palm of their hand and your thumb on top of their hand
- Move their hand to one side slowly like their hand is waving
- Hold __________ seconds
- Move their hand to the other side slowly
- Hold __________ seconds
- Repeat the movement __________ times

Remember:
Let the stroke survivor’s fingers rest, you are only moving their wrist.
Flexion and Extension of the Fingers – Straightening and Bending of the Right Hand’s Fingers (lying down)

- Let their arm rest on the bed
- Support their wrist with one hand
- Hold their fingers by gripping them between your fingers and your thumb, with your thumb across their palm
- Gently bend their fingers, curling them in toward their palm
- Hold for __________ seconds
- Then straighten their fingers out
- Keep the movement slow and smooth
- Hold for __________ seconds
- Repeat the movement __________ times
Flexion and Extension of the Fingers – Straightening and Bending of the Right Hand’s Fingers (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Support their wrist with one hand
- Hold their fingers by gripping them between your fingers and your thumb, with your thumb across their palm
- Gently bend their fingers curling them in toward their palm
- Hold for __________ seconds
- Then straighten their fingers out
- Keep the movement slow and smooth
- Hold for __________ seconds
- Repeat the movement __________ times

Remember:
Make sure their arm is supported on a pillow or table to prevent strain on their shoulder

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Moving the Right Thumb (lying down)

- Let their arm rest on the bed
- Hold their fingers with one hand
- Place the fingers of your other hand along the front of their thumb – palm side
- Your thumb is on the back of their thumb
- Bend their thumb in toward their palm toward the bottom of their little finger
- Hold __________ seconds
- Then straighten their thumb up and away from their palm
- Hold __________ seconds
- Repeat the movement __________ times
Moving the Right Thumb (in sitting)

- The stroke survivor is sitting up in a chair and you are sitting beside them
- Hold their fingers with one hand
- Place the fingers of your other hand along the front of their thumb – palm side
- Your thumb is on the back of their thumb
- Bend their thumb in toward their palm toward the bottom of their little finger
- Hold ___________ seconds
- Then straighten their thumb up and away from their palm
- Hold ___________ seconds
- Repeat the movement ___________ times

Remember:
Make sure their arm is supported on a pillow or table to prevent strain on their shoulder.