

Cervical Radiculopathy

Non-op Physical Therapy Protocol

Patient Education:

- Positive advice about prognosis
 - “70 to 95% of patients with cervical radicular pain will significantly improve with conservative treatment”
- Reduce fear / negative beliefs surrounding the injury
 - “Nerve root ganglion only takes up $\frac{1}{3}$ of it’s space, plenty of space for the nerve and disc”
 - “It only takes a small amounts of compression to cause symptoms”
 - “Inflammation is a more likely cause of pain over compression”
 - “Zings and zaps don’t mean damage, rather sensitivity after injury”
- Promote the body’s resiliency
 - “Nerve are big tough structures with a protective covering”
 - “Nerves recover very similar to muscles and tendons”
- Promote movement and activity
 - “Movement disperses inflammation in the nerves and brings fresh blood supply”
- Advice on returning to work and not to be fearful of the injury
 - Early return is important and generally not damaging
- Advice on modifying activities not to aggravate the area
 - Sleep position advice
 - Varied head and shoulder positions throughout the day
- General guidance on looking out for well-being
 - Optimizing sleep, reducing stress and seeking help for depression and anxiety
- Advice on how to cope with flair-ups
- Education on pain (In guidelines below)
 - What is “OK” to experience / work with

Guidelines:

- **~2-4 weeks in each phase**
 - Potentially shorter or longer
 - As much as 4-6 weeks per phase
 - As little as 1 week in each phase depending on progress
 - Keep in mind 6+ month prognosis in many people
- **The program will make up all of your upper body training:**
 - Arm work allowed as long as it is pain free
- **Pain guidelines:**
 - Pain <5/10 allowed during training
 - Pain levels must return to baseline that night and the following day
 - Pain levels must be “tolerable”

- **Training Intensity:**
 - Goal is 7-8/10 Rate of Perceived Exertion RPE for most movements
 - Exception is movements where pain is >4/10
- **1a) and 1b)**
 - These designations simply mean to alternate between the a) and b) exercises until all sets are completed
- **Rest Periods:**
 - Rest between 60 and 90 seconds between sets unless otherwise noted
- **Tempo:**
 - Assume normal repetition speed unless otherwise noted
- **Myotomal Weakness:**
 - If a patient presents with myotomal weakness (Eg: C5 → Deltoid weakness) they should be performing some sort of strength work 2-3x / week for the weak areas until symmetry is rebuilt)
 - This may take much longer to rebuild then it takes for symptoms to dissipate (several years potentially)

Manual Therapy: (Optional)

- Spend ~10-15 minutes at the start of each session focusing on each area
 - Thoracic spine, cervical spine
 - Nerve glides and stretches
 - Cervical spine soft tissue strategies
 - [Manual Therapy Video HERE](#)
 - [Soft Tissue Strategy Video HERE](#)
 - [Nerve Glide Video HERE](#)
- Place emphasis on areas with most stiffness / limitations
 - I.e. Thoracic spine, neural tension etc...
- Start with lower grade mobilizations and increase intensity with tolerance
- Frequency
 - ~2-3x / week for ~2-6 weeks

Week 0-2:

Daily Mobility Program:

- [Seated Cervical Rotation AROM](#) x 5 / direction
- [Seated Cervical Rotation with Overpressure](#) x 5 / direction
- [Seated Chin Tuck](#) x 10 reps
- [Supine Chin Tuck](#) x 10 reps
- [Scapular Retraction](#) x 10 reps
- [Cat / Cow](#) x 10 reps
- [Tray Glides](#) x 10 reps
- Notes:
 - All movements taken to tolerance - no need to push painful directions / movements
 - Can be performed multiple times per day if it provides pain relief for patients
- Walk 10-15 minutes (optional)

Training Program:

- Mobility program prior as a warm-up

Day 1:

- 1a) [Plank Plus](#)
 - 3 x 10-15 reps
 - Elevate on bench / countertop as needed
- 1b) [Prone Extension](#)
 - 3 x 10 reps
 - Cut ROM short as needed

Day 2:

- 1a) [Shoulder Taps](#)
 - 3 x 10-12 reps / side
 - Elevate to bench if needed
- 1b) [Incline Bench Dumbbell Seal Row](#)
 - 3 x 12 reps
 - 3 second eccentric (lowering)
 - Cut ROM short as needed

Day 3:

- 1a) [Dumbbell Serratus Punch](#)
 - 3 x 10-15 reps
- 1b) [Dumbbell single arm row](#)
 - 3 x 15 reps
 - 2 second eccentric
 - Cut ROM short as needed

Week 2-4:

Daily Mobility Program:

- [Seated Cervical Rotation with Overpressure](#)
- [Seated Chin Tuck](#)
- [Supine Chin Tuck + Head lift](#)
- [Scapular Retraction](#)
- [Cat / Cow](#)
- 6-way Isometrics x 10 reps / direction
 - [Flexion / Extension](#)
 - [Lateral Flexion](#)
 - [Rotation](#)
- [Median Nerve Flossing](#)
- Notes:
 - All movements taken to tolerance - no need to push painful directions / movements
 - Can be performed multiple times per day if it provides pain relief for patients
- Walk 10-15 minutes (optional)

Training Program:

- Mobility program prior as a warm-up

Day 1:

- 1a) [DB Floor Press](#)
 - 3 x 10-12 reps
 - 2 second eccentric (lowering)
- 1b) [Ring / TRX row](#)
 - 3 x 10 reps
 - 3 second eccentric (lowering)
 - Cut ROM short as needed
- 2a) [DB "T" on Incline Bench](#)
 - 3 x 10-12
- 2b) [½ Side Plank Hold](#)
 - 3 x 20-40 seconds / side

Day 2:

- 1a) [Plank Toe Taps](#)
 - 3 x 10-12 reps / side
 - Elevate to bench if needed
- 1b) [Incline Bench Dumbbell Seal Row](#)
 - 3 x 12 reps
 - 3 second eccentric (lowering)

- Cut ROM short as needed
- 2a) [Incline Bench Cervical Flexor ISOmetric](#)
 - 3 x 20-40 seconds
 - Inclined as much as needed (Lower = harder)
- 2b) [Incline Bench Cervical Extensor ISOmetric](#)
 - 3 x 20-40 seconds
 - Inclined as much as needed (Lower = harder)

Day 3:

- 1a) Single Arm [DB Floor Press](#) + [Punch at Top of Rep](#)
 - 3 x 10-12 reps
- 1b) [Dumbbell single arm row](#)
 - 3 x 10-12 reps / side
 - 2 second eccentric
 - Cut ROM short as needed
- 2a) [Dumbbell Lateral Raise](#)
 - 3 x 10-12 reps
- 2b) [TRX Face Pull](#)
 - 3 x 8-10

Week 4-6:

Daily Mobility Program:

- [Seated Cervical Rotation with Overpressure](#)
- [Supine Chin Tuck + Head lift + Rotate](#)
- [Scapular Retraction](#)
- [Cat / Cow](#)
- 6-way Isometrics x 10 reps / direction
 - [Flexion / Extension](#)
 - [Lateral Flexion](#)
 - [Rotation](#)
- [Median Nerve Flossing \(with Head\)](#)
- Notes:
 - All movements taken to tolerance - no need to push painful directions / movements
 - Can be performed multiple times per day if it provides pain relief for patients
- Walk 10-15 minutes (optional)

Training Program:

- Mobility program prior as a warm-up

Day 1:

- 1a) [DB Bench Press](#)
 - 3 x 10-12 reps
- 1b) [Seated Cable Row](#)
 - 3 x 10 reps
 - 2 second eccentric (lowering)
- 2a) [DB "Y" on Incline Bench](#)
 - 3 x 10-12
- 2b) [½ Side Plank Hold + head turns](#)
 - 3 x 10-15 seconds / direction / side

Day 2:

- 1a) [Lateral Bear Crawl](#)
 - 3 x 10-12 steps / side / direction
- 1b) [Incline Bench Dumbbell Seal Row](#)
 - 3 x 10 reps
 - 2 second eccentric (lowering)
- 2a) [Supine Chin Tuck + Head lift Dead Bug](#)
 - 3 x 20-40 seconds
- 2b) [Prone Cobra](#)
 - 3 x 20-40 seconds
 - Inclined as much as needed (Lower = harder)

Day 3:

- 1a) [Square Stance Landmine Press](#)
 - 3 x 10-12 reps
- 1b) [Dumbbell single arm row](#)
 - 3 x 10-12 reps / side
 - 2 second eccentric
- 2a) [Cable Lateral Raise](#)
 - 3 x 10-12 reps
- 2b) [Single Arm Cable Pull-down](#)
 - 3 x 8-10

Week 6-8:

Daily Mobility Program:

- [Seated Cervical Rotation with Overpressure](#)
- [Supine Chin Tuck + Head lift + Rotate](#)
- [Cat / Cow](#)
- [Median Nerve Stretch](#)
- Notes:
 - All movements taken to tolerance - no need to push painful directions / movements
 - Can be performed multiple times per day if it provides pain relief for patients
- Walk 10-15 minutes (optional)

Training Program:

- Mobility program prior as a warm-up

Day 1:

- 1a) [Incline \(30 degrees\) DB Bench Press](#)
 - 3 x 10 reps
- 1b) [Seated Cable Row](#)
 - 3 x 8-10 reps
 - 2 second eccentric (lowering)
- 2a) [Bear Plank DB "T" on Bench](#)
 - 3 x 10-12 / side
- 2b) [Band Resisted Lateral Flexion Side-stepping](#)
 - 3 x 10-15 seconds / direction / side

Day 2:

- 1a) [Forward / Backwards Bear Crawl](#)
 - 3 x 10-12 steps / side / direction
- 1b) [Incline Bench Dumbbell Seal Row](#)
 - 3 x 8 reps
 - 2 second eccentric (lowering)
- 2a) [Weighted Supine Chin Tuck + Head Lift](#)
 - 3 x 10-12
- 2b) [Cobra "T"](#)
 - 3 x 20-40 seconds

Day 3:

- 1a) [Alternating Incline \(60 degrees\) DB Press](#)
 - 3 x 8-10 reps / side
- 1b) [Dumbbell single arm row](#)
 - 3 x 8-10 reps / side

- 2 second eccentric
- 2a) [Cable "Y"](#)
 - 3 x 10-12 reps
- 2b) [Lat Pull-down](#)
 - 3 x 10-12 reps