

Shoulder Osteoarthritis

Osteoarthritis (OA) is a common condition that affects the cartilage in joints, causing pain, stiffness, and reduced mobility. Exercise is crucial in managing OA, as it strengthens muscles, supports the joint, and helps hydrate the cartilage.

Important Exercise Guidelines:

1. **Scapular Function:** Proper shoulder blade engagement is essential for optimal muscle activation.
2. **Pain vs. Harm:** It's normal to experience some soreness, but pain should stay within a 0-5/10 range, and soreness should settle within 24 hours.
3. **Progressive Loading:** Gradually increase the intensity of exercises to continue improving strength. Typically, significant changes in strength take 4-6 weeks.

Aim to start with 2-3 exercise sessions per week, gradually progressing to 4-5 sessions, and adjust intensity based on your progress.

Exercises are most effective when guided by a qualified professional, such as a physiotherapist, athletic therapist, or strength and conditioning coach. If you have any concerns, it's always a good idea to consult with an expert.

Level 1

Potential inclusion criteria:

- 50% or high on the Disabilities of the Arm, Shoulder and Hand Questionnaire (DASH) <https://dash.iwh.on.ca/conditions-use?n=dash>
- Unable to do any overhead reaching
- Altered arm use with activities of daily living
- Irritability - high

Goals

- Low impact aerobic exercise 150 min/week
- Daily stretching 2 x 20 sec/stretch
- Strength 2-3 x/week, 2-3 sets of 8-12 reps

Low impact, upper extremity inclusive aerobic exercise:

Ideas: walking with nordic walking poles, gentle arm bike, or aerobics, elliptical, tai chi

1. Shoulder Scaption PROM (Pulley)

Sets: 3 | **Reps:** 20 | **Tempo:** 2 seconds up and down |
Intensity: To painful limits | **Frequency:** Daily

Preparation:

- Stand with good posture in front of a pulley and rope
- Hold the ends of the rope and let your affected arm dangle at your side.
- Turn at a 45° angle to the pulley, so that your affected arm is slightly closer to the pulley, as shown

Execution:

- Use your strong arm to pull your affected arm overhead and out to the side as high as you can
- Gradually relax your strong arm, letting gravity pull your affected arm back to the start position



Grab ends of rope



Strong arm pulls affected arm overhead and out to side - keep the weaker arm relaxed!

2. Shoulder Abduction PROM (Pulley)

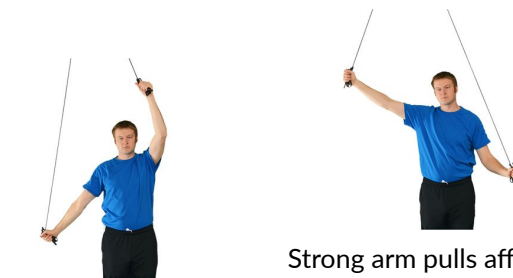
Sets: 3 | Reps: 20 | Tempo: 2 seconds up and down | Intensity: To painful limits | Frequency: Daily

Preparation:

- Stand with good posture next to a pulley and rope as shown
- Hold the ends of the rope and let your weak arm dangle at your side

Execution:

- Use your strong arm to pull your weak arm out to the side as high as you can
- Gradually relax your strong arm, letting gravity pull your weak arm back to the start position



Grab ends of rope

Strong arm pulls affected arm straight out to side - keep the weaker arm relaxed!

3. Shoulder Flexion PROM (Pulley)

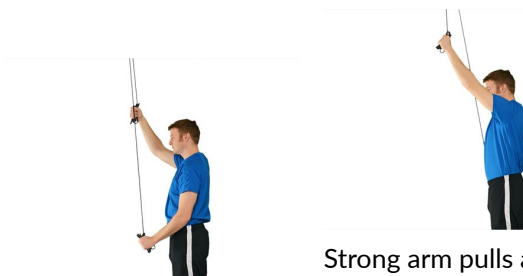
Sets: 3 | Reps: 20 | Tempo: 2 seconds up and down | Intensity: To painful limits | Frequency: Daily

Preparation:

- Stand with good posture in front of a pulley and rope
- Hold the ends of the rope and let your affected arm dangle at your side

Execution:

- Use your strong arm to pull your affected arm to shoulder height
- Gradually relax your strong arm, letting gravity pull your weak arm back to the start position



Grab rope in both hands

Strong arm pulls affected arm straight overhead - keep weaker arm relaxed!

4. Shoulder Flexion AAROM | Full Range (Stick)

Sets: 3 | Reps: 20 | Tempo: 2 seconds up and down | Intensity: To painful limits | Frequency: Daily

Preparation:

- Stand with good posture
- Hold the stick / cane in front of your hips as shown

Execution:

- Use your strong arm to help raise your affected arm forward and up all the way over your head
- Return in a controlled manner to the original position



Hold stick

Use strong arm to raise affected arm

Raise affected arm all the way up

5. Shoulder Abduction AAROM | End Range (Stick)

Sets: 3 | Reps: 20 | Tempo: 2 seconds up and down | Intensity: To painful limits | Frequency: Daily

Preparation

- Stand with good posture.
- Hold the stick / cane in front of your hips as shown.

Execution

- Use your strong arm to help raise your affected arm out to the side.
- Raise all the way up overhead in pain free range of motion.
- Return in a controlled manner to the original position.



6. Scapular Retraction

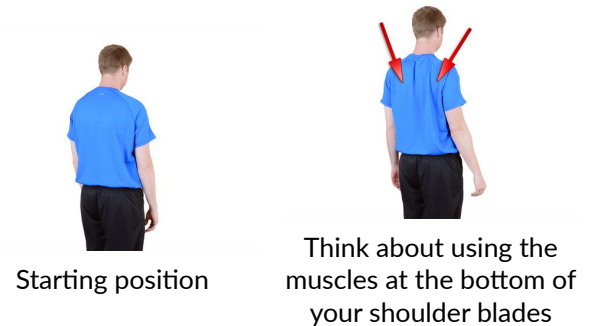
Sets: 2-3 | Reps: 5-10 | Load: as tolerated | Hold: 5 seconds | Intensity: moderate | Frequency: Daily as able

Preparation:

- Sit or stand with good posture

Execution:

- Bring your shoulder back and shoulder blades together



7. Row (Band)

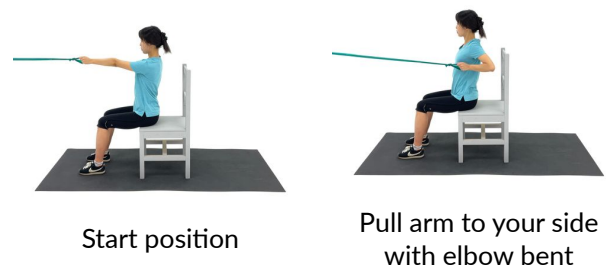
Sets: 2-3 | Reps: 5-10 | Load: as tolerated | Hold: 5 seconds | Intensity: moderate | Frequency: Daily as able

Preparation:

- Sit with good posture, holding a band with your arm straight out in front of you

Execution:

- Row arm to your side with elbow bent
- Squeeze shoulder blades down and back
- Return to start position
- Keep your shoulders down and avoid arching your back



8. Shoulder External Rotation Isometric

Sets: 2-3 | Reps: 5-10 | Load: as tolerated | Hold: 5 seconds | Intensity: moderate | Frequency: Daily as able

Preparation:

- Stand with good posture facing a wall or doorframe
- Hold your arm by your side, elbow at 90 degrees, palm facing away from wall or doorframe

Execution:

- Rotate your hand outwards into the wall or doorframe
- Keep your elbow at your side



Rotate hand outward into doorframe

9. Shoulder Internal Rotation Isometric

Sets: 2-3 | Reps: 5-10 | Load: as tolerated | Hold: 5 seconds | Intensity: moderate | Frequency: Daily as able

Preparation:

- Stand with good posture facing a wall or doorframe
- Hold your arm by your side, elbow at 90 degrees, palm facing wall or doorframe

Execution:

- Rotate your hand inwards into the wall or doorframe
- Keep your elbow at your side



Rotate hand into doorframe

10. Shoulder Flexion Isometric | Elbow Bent

Sets: 2-3 | Reps: 5-10 | Load: as tolerated | Hold: 5 seconds | Intensity: moderate | Frequency: Daily as able

Preparation:

- Stand in front of a wall or doorframe, elbow bent as shown

Execution:

- Push your fist against the wall

Tip:

- Use a pillow to avoid hurting your hand



Push fist against wall

**11. Shoulder Adduction
Isometric**

Sets: 2-3 | **Reps:** 5-10 | **Load:** as tolerated | **Hold:** 5 seconds |
Intensity: moderate | **Frequency:** Daily as able

Preparation:

- Stand with good posture, holding a towel under your elbow

Execution:

- Squeeze your arm against your side



Squeeze arm against side

**12. Shoulder Abduction
Isometric | Elbow Bent**

Sets: 2-3 | **Reps:** 5-10 | **Load:** as tolerated | **Hold:** 5 seconds |
Intensity: moderate | **Frequency:** Daily as able

Preparation:

- Stand beside a wall or doorframe, elbow bent as shown

Execution:

- Push elbow outward against the wall

Tip:

- Use a pillow to avoid hurting your elbow



Push elbow outward, against wall

**13. Shoulder Extension
Isometric | Elbow Bent**

Sets: 2-3 | **Reps:** 5-10 | **Load:** as tolerated | **Hold:** 5 seconds |
Intensity: moderate | **Frequency:** Daily as able

Preparation:

- Stand in front of a wall or doorframe, elbow bent as shown

Execution:

- Push elbow backward, against the wall

Tip:

- Use a pillow to avoid hurting your elbow



Push elbow backward against wall

Level 2

When Can I Start Level 2?

- Completed level 1 goals
- Irritability – medium

Potential inclusion criteria:

- Able to exercise inclusive of upper extremity 15-30 min
- Reduction of 15% on DASH questionnaire
- Irritability – medium

Goals

- Low impact aerobic exercise 150 min/week
- Daily stretching 2 x 30 sec/stretch
- Strength 3-4 x/week, 3 sets of 8-12 reps

1. Chest Stretch | Legs Bent (Foam Roller)

Sets: 3 | **Hold:** 30-60 seconds | **Intensity:** moderate | **Frequency:** Daily

Preparation:

- Lie on your back with a foam roller under your spine
- Bend your knees with your feet flat as shown

Execution:

- Relax and breathe while you stretch your chest
- Adjust the position of your arms as needed to increase or decrease the intensity of the stretch



Lying on your back, foam roller under your spine, knees bent and feet flat



Reach your arms straight out to the side



Place hands behind your head, relax and breathe while you stretch

2. Latissimus 'Open-Book' Stretch

Sets: 3 | **Hold:** 30-60 seconds | **Intensity:** moderate | **Frequency:** Daily

Preparation:

- Arms on table, palms up

Execution:

- Lean backward from the hips



Arms on table, palms up - lean backward from the hips

3. Row | Neutral (Band)

Sets: 2-3

Reps: 8-12

Intensity: moderate

Frequency: Alternate days

Preparation:

- Sit on a chair with good posture.

Execution:

- Row against the resistance, pulling your hands to your sides.
- Pull your shoulder blades back and down.



Sit on a chair



Row against the resistance

4. Shoulder External Rotation Concentric | Neutral (Band)

Sets: 2-3

Reps: 8-12

Intensity: moderate

Frequency: Alternate days

Preparation:

- Standing, elbow at 90 degrees
- Tuck a folded towel between your body and your elbow

Execution:

- Gently pull shoulder blades together
- Keeping elbow close to body, slowly rotate hand outward
- Return to start position



Start Position



Rotate hand outward

5. Shoulder Internal Rotation Concentric - Neutral (Band)

Sets: 2-3

Reps: 8-12

Intensity: moderate

Frequency: Alternate days

Preparation:

- Stand with good posture
- Tuck a folded towel between your body and your elbow as shown

Execution:

- Keeping elbow close to body, rotate hand inward, toward your stomach
- Return to start position



Start Position



Rotate hand inward

6. Elbow Flexion Concentric (Band)

Sets: 2-3 | Reps: 8-12 | Intensity: moderate | Frequency: Alternate days

Preparation:

- Sit or stand with your arm at your side
- Hold a band in your hand

Execution:

- Bend your elbow up towards your chest
- Return to the start position



Hold band, palm up



Bend elbow up

7. Triceps Extension | Unilateral (Band)

Sets: 2-3 | Reps: 8-12 | Intensity: moderate | Frequency: Alternate days

Preparation:

- Stand with good posture
- Hold band or tubing in hand as shown

Execution:

- Straighten elbow against resistance
- Only elbow should move



Start Position



Straighten elbow



Start Position



Straighten elbow

8. Lat Pull Down (Band)

Sets: 2-3 | Reps: 8-12 | Intensity: moderate | Frequency: Alternate days

Preparation:

- Kneel on both knees

Execution:

- Pull elastic band down to front of chest
- Relax back to start position, straightening arms



Kneel on both knees



Pull to chest

Level 3

When Can I Progress To Level 3

- Completed Level 2 Goals

Able to strength train 30+ min

- Another reduction of 15% on DASH questionnaire
- Irritability – low

Goals

- Low impact aerobic exercise 150 min/week
- Daily stretching 2 x 30 sec/stretch
- Strength 4-5 x/week, 3 sets of 8-12 reps

1. Shoulder Slides (Band, Wall)

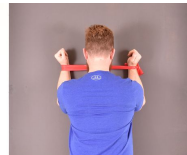
Sets: 2-3 | **Reps:** 8-12 | **Load:** As tolerated (No higher than 4/10 on pain scale) | **Frequency:** 2-3x weekly

Preparation:

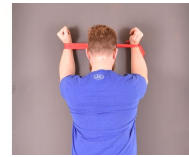
- Stand with both arms on the wall as shown
- Wrap a band around your wrists, or hold it in your hands

Execution:

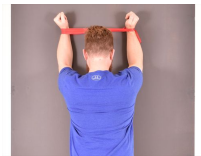
- Slide forearms up the wall pulling your wrists apart and keeping your elbows in
- Return to the start position



Start Position



Slide forearms up the wall pulling your wrists apart and keeping your elbows in!



Go as high up the wall as you can

2. Shoulder Abduction | Deltoid Focus (Band)

Sets: 2-3 | **Reps:** 8-12 | **Load:** As tolerated (No higher than 4/10 on pain scale) | **Frequency:** 2-3x weekly

Preparation:

- Stand with good posture, band under one foot
- Have thumb pointed forward

Execution:

- Lift arm out straight out to the side up to shoulder height
- Return to the start position



Start Position



Raise arm to shoulder height



Start Position



Keep arm in line with torso

3. Shoulder Flexion Concentric | Mid Range 0-90° (Band)

Sets: 2-3 | Reps: 8-12 |

Load: As tolerated (No higher than 4/10 on pain scale) |

Frequency: 2-3x weekly

Preparation:

- Stand with good posture, feet shoulder width apart
- Hold anchored band in your hand by your side

Execution:

- Lift arms forward up above shoulder height, but not all the way up
- Return to the start position



Start Position



Raise arm to above shoulder height

4. Bilateral Row | Wide Grip (Band)

Sets: 2-3 | Reps: 8-12 |

Load: As tolerated (No higher than 4/10 on pain scale) |

Frequency: 2-3x weekly

Preparation:

- Stand with good posture, hold tubing

Execution:

- Row toward chest, elbows out



Start Position



Row toward chest, elbows out

5. Shoulder Press (Band)

Sets: 2-3 | Reps: 8-12 |

Frequency: 2-3x weekly

Load: As tolerated (No higher than 4/10 on pain scale) |

Preparation

- Anchor cable / tubing at floor level.
- Stand with good posture, feet shoulder width apart.
- Hold handles at level of collarbone, elbows bent. Direction of pull is down.

Execution

- Press arms straight up, toward ceiling.
- Slowly return to the start position.

Tips:

- Keep back straight. Do not lean under the resistance.



Start Position



Press arms overhead

6. Push Up (Wall, Large Ball)

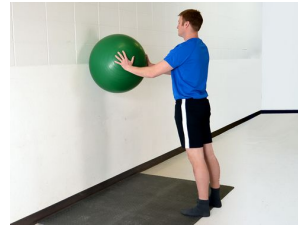
Sets: 2-3 | **Reps:** 8-12 | **Load:** As tolerated (No higher than 4/10 on pain scale) |
Frequency: 2-3x weekly

Preparation:

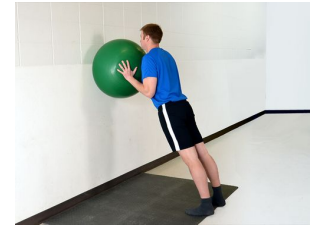
- Stand in front of a wall holding ball as shown

Execution:

- Perform pushup motion, keeping elbows in



Stand in front of a wall holding ball



Perform pushup motion, keeping elbows in

7. Shoulder D2 Pattern | Ascending (Band)

Sets: 2-3 | **Reps:** 8-12 |
Load: As tolerated (No higher than 4/10 on pain scale) |
Frequency: 2-3x weekly

Preparation:

- Start with your arm across your body with your hand rotated in, thumb pointed down

Execution:

- Bring your arm up and across your body diagonally
- As you do, rotate your hand outwards
- Finish with your hand above your head and out to the side - pulling your sword from its sheath



Hold on to your sword



Lead with your elbow



Draw your sword