AAOS
American Academy of Orthopaedic Surgeons

Prepared for: _____

Prepared by: _____

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Rotator Cuff and Shoulder Conditioning Program

Purpose of Program

After an injury or surgery, an exercise conditioning program will help you return to daily activities and enjoy a more active, healthy lifestyle. Following a well-structured conditioning program will also help you return to sports and other recreational activities.

This is a general conditioning program that provides a wide range of exercises. To ensure that the program is safe and effective for you, it should be performed under your doctor's supervision. Talk to your doctor or physical therapist about which exercises will best help you meet your rehabilitation goals.

Strength: Strengthening the muscles that support your shoulder will help keep your shoulder joint stable. Keeping these muscles strong can relieve shoulder pain and prevent further injury.

Flexibility: Stretching the muscles that you strengthen is important for restoring range of motion and preventing injury. Gently stretching after strengthening exercises can help reduce muscle soreness and keep your muscles long and flexible.

Target Muscles: The muscle groups targeted in this conditioning program include:

- Deltoids (front, back and over the shoulder)
- Trapezius muscles (upper back)
- Rhomboid muscles (upper back)
- Teres muscles (supporting the shoulder joint)
- Supraspinatus (supporting the shoulder joint)
- Infraspinatus (supporting the shoulder joint)
- Subscapularis (front of shoulder)
- Biceps (front of upper arm)
- Triceps (back of upper arm)

Length of program: This shoulder conditioning program should be continued for 4 to 6 weeks, unless otherwise specified by your doctor or physical therapist. After your recovery, these exercises can be continued as a maintenance program for lifelong protection and health of your shoulders. Performing the exercises two to three days a week will maintain strength and range of motion in your shoulders.

Getting Started

Warmup: Before doing the following exercises, warm up with 5 to 10 minutes of low impact activity, like walking or riding a stationary bicycle.

Stretch: After the warm-up, do the stretching exercises shown on Page 1 before moving on to the strengthening exercises. When you have completed the strengthening exercises, repeat the stretching exercises to end the program.

Do not ignore pain: You should not feel pain during an exercise. Talk to your doctor or physical therapist if you have any pain while exercising.

Ask questions: If you are not sure how to do an exercise, or how often to do it, contact your doctor or physical therapist.

Additional Notes

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Rotator Cuff and Shoulder Conditioning Program

STRETCHING EXERCISES

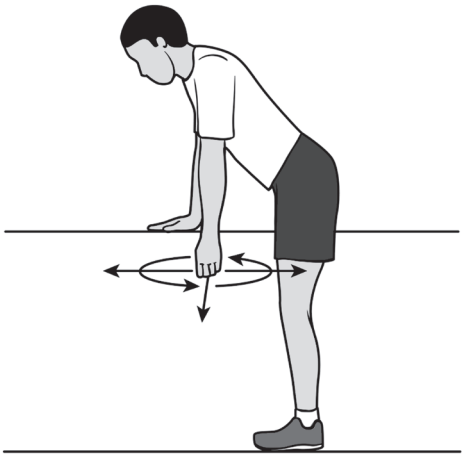
1. Pendulum

Repetitions
2 sets of 10

Days per week
5 to 6

Main muscles worked: Deltoids, supraspinatus, infraspinatus, subscapularis

Equipment needed: None



Step-by-step directions

- Lean forward and place one hand on a counter or table for support. Let your other arm hang freely at your side.
- Gently swing your arm forward and back. Repeat the exercise moving your arm side-to-side, and repeat again in a circular motion.
- Repeat the entire sequence with the other arm.

Tip	Do not round your back or lock your knees.

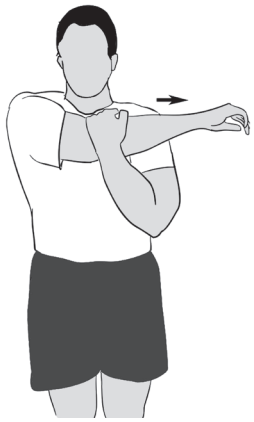
2. Crossover Arm Stretch

Repetitions
4 each side

Days per week
5 to 6

Main muscles worked: Posterior deltoid
You should feel this stretch at the back of your shoulder

Equipment needed: None



Step-by-step directions

- Relax your shoulders and gently pull one arm across your chest as far as possible, holding at your upper arm.
- Hold the stretch for 30 seconds and then relax for 30 seconds.
- Repeat with the other arm.

Tip	Do not pull or put pressure on your elbow.

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Rotator Cuff and Shoulder Conditioning Program
STRETCHING EXERCISES

3. Passive Internal Rotation

Repetitions
4 each side

Days per week
5 to 6

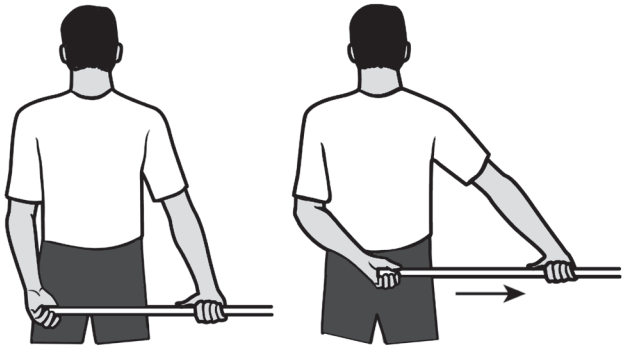
Main muscles worked: Subscapularis
You should feel this stretch at the front of your shoulder

Equipment needed: Light stick, such as a yardstick

Step-by-step directions

- Hold a stick behind your back with one hand, and lightly grasp the other end of the stick with your other hand.
- Pull the stick horizontally as shown so that your shoulder is passively stretched to the point of feeling a pull without pain.
- Hold for 30 seconds and then relax for 30 seconds.
- Repeat on the other side.

Tip	Do not lean over or twist to side while pulling the stick.



4. Passive External Rotation

Repetitions
4 each side

Days per week
5 to 6

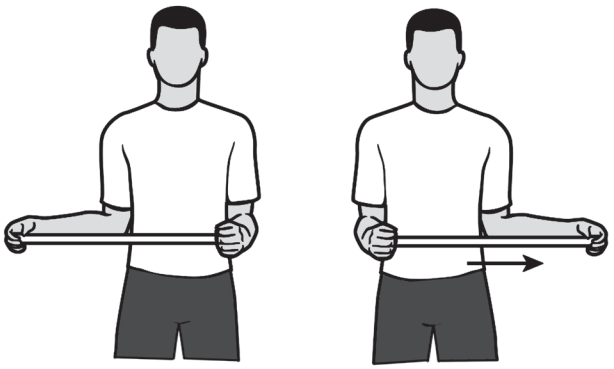
Main muscles worked: Infraspinatus, teres minor
You should feel this stretch in the back of your shoulder

Equipment needed: Light stick, such as a yardstick

Step-by-step directions

- Grasp the stick with one hand and cup the other end of the stick with the other hand.
- Keep the elbow of the shoulder you are stretching against the side of your body and push the stick horizontally as shown to the point of feeling a pull without pain.
- Hold for 30 seconds and then relax for 30 seconds.
- Repeat on the other side.

Tip	Keep your hips facing forward and do not twist.



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Rotator Cuff and Shoulder Conditioning Program

STRETCHING EXERCISES

5. Sleeper Stretch

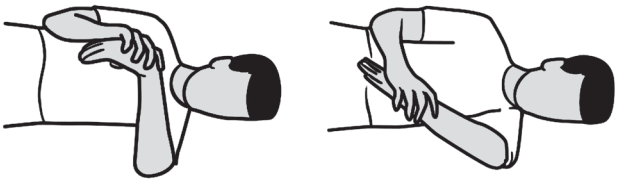
Repetitions
4 reps, 3x a day

Days per week
Daily

Main muscles worked: Infraspinatus, teres minor
You should feel this stretch in your outer upper back, behind your shoulder

Equipment needed: None

Sleeper position



Start Finish

Step-by-step directions

- Lie on your side on a firm, flat surface with the affected shoulder under you and your arm bent, as shown. You can place your head on a pillow for comfort, if needed.
- Use your unaffected arm to push your other arm down. Stop pressing down when you feel a stretch in the back of your affected shoulder.
- Hold this position for 30 seconds, then relax your arm for 30 seconds.

Tip	Do not bend your wrist or press down on your wrist.

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Rotator Cuff and Shoulder Conditioning Program
STRENGTHENING EXERCISES

6. Standing Row

Repetitions
3 sets of 8

Days per week
3

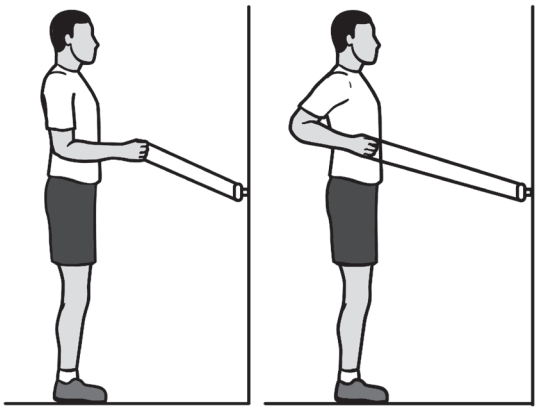
Main muscles worked: Middle and lower trapezius
You should feel this exercise at the back of your shoulder and into your upper back

Equipment needed: Use an elastic stretch band of comfortable resistance. As the exercise becomes easier to perform, progress to 3 sets of 12 repetitions. If you have access to a fitness center, this exercise can also be performed on a weight machine. A fitness assistant at your gym can instruct you on how to use the machines safely.

Step-by-step directions

- Make a 3-foot-long loop with the elastic band and tie the ends together. Attach the loop to a doorknob or other stable object.
- Stand holding the band with your elbow bent and at your side, as shown in the start position.
- Keep your arm close to your side and slowly pull your elbow straight back.
- Slowly return to the start position and repeat.

Tip	Squeeze your shoulder blades together as you pull.



7. External Rotation With Arm Abducted 90°

Repetitions
3 sets of 8

Days per week
3

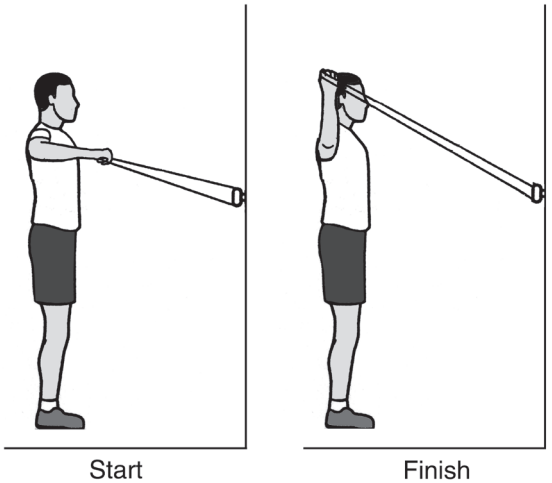
Main muscles worked: Infraspinatus and teres minor
You should feel this exercise at the back of your shoulder and into your upper back

Equipment needed: Use an elastic stretch band of comfortable resistance. As the exercise becomes easier to perform, progress to 3 sets of 12 repetitions. If you have access to a fitness center, this exercise can also be performed on a weight machine. A fitness assistant at your gym can instruct you on how to use the machines safely.

Step-by-step directions

- Make a 3-foot-long loop with the elastic band and tie the ends together. Attach the loop to a doorknob or other stable object.
- Stand holding the band with your elbow bent 90° and raised to shoulder-height, as shown in the start position.
- Keeping your shoulder and elbow level, slowly raise your hand until it is in line with your head.
- Slowly return to the start position and repeat.

Tip	Make sure your elbow stays in line with your shoulder.



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Rotator Cuff and Shoulder Conditioning Program
STRENGTHENING EXERCISES

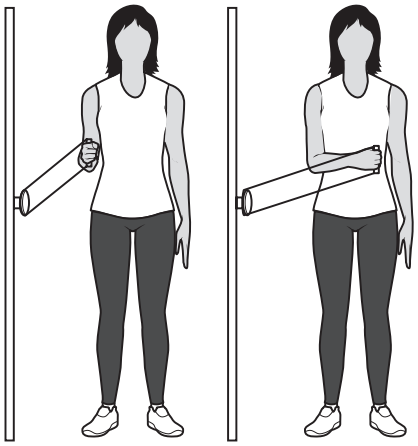
8. Internal Rotation

Repetitions
3 sets of 8

Days per week
3

Main muscles worked: Pectoralis, subscapularis
You should feel this exercise at your chest and shoulder

Equipment needed: Use an elastic stretch band of comfortable resistance. As the exercise becomes easier to perform, progress to 3 sets of 12 repetitions. If you have access to a fitness center, this exercise can also be performed on a weight machine. A fitness assistant at your gym can instruct you on how to use the machines safely.



Step-by-step directions

- Make a 3-foot-long loop with the elastic band and tie the ends together. Attach the loop to a doorknob or other stable object.
- Stand holding the band with your elbow bent and at your side, as shown in the start position.
- Keep your elbow close to your side and bring your arm across your body.
- Slowly return to the start position and repeat.

Tip	Keep your elbow pressed into yourside.

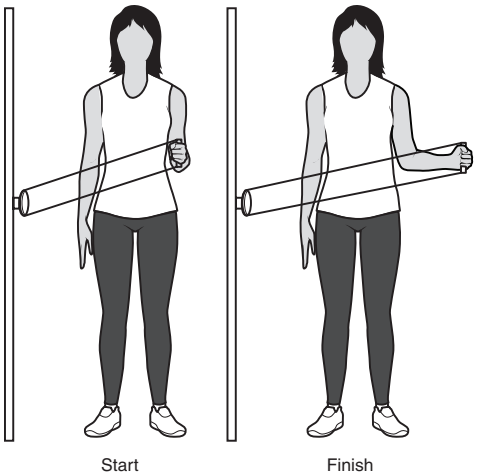
9. External Rotation

Repetitions
3 sets of 8

Days per week
3

Main muscles worked: Infraspinatus, teres minor, posterior deltoid
You should feel this stretch in the back of your shoulder and upper back

Equipment needed: Use an elastic stretch band of comfortable resistance. As the exercise becomes easier to perform, progress to 3 sets of 12 repetitions. If you have access to a fitness center, this exercise can also be performed on a weight machine. A fitness assistant at your gym can instruct you on how to use the machines safely.



Step-by-step directions

- Make a 3-foot-long loop with the elastic band and tie the ends together. Attach the loop to a doorknob or other stable object.
- Stand holding the band with your elbow bent and at your side, as shown in the start position.
- Keeping your elbow close to your side, slowly rotate your arm outward.
- Slowly return to the start position and repeat.

Tip	Squeeze your shoulder blades together when you pull your elbow back.

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Rotator Cuff and Shoulder Conditioning Program

STRENGTHENING EXERCISES

10. Elbow Flexion

Repetitions
3 sets of 8

Days per week
3

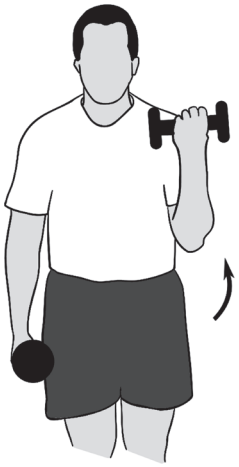
Main muscles worked: Biceps
You should feel this exercise at the front of your upper arm

Equipment needed: Begin with a weight that allows 3 sets of 8 repetitions and progress to 3 sets of 12 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 3 sets of 8 repetitions.

Step-by-step directions

- Stand tall with your weight evenly distributed over both feet.
- Keep your elbow close to your side and slowly bring the weight up toward your shoulder as shown.
- Hold for 2 seconds.
- Slowly return to the starting position and repeat.

Tip	Do not do the exercise too quickly or swing your arm.



11. Elbow Extension

Repetitions
3 sets of 8

Days per week
3

Main muscles worked: Triceps
You should feel this exercise at the back of your upper arm

Equipment needed: Begin with a weight that allows 3 sets of 8 repetitions and progress to 3 sets of 12 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 3 sets of 8 repetitions.

Step-by-step directions

- Stand tall with your weight evenly distributed over both feet.
- Raise your arm and bend your elbow with the weight behind your head. Support your arm by placing your opposite hand on your upper arm.
- Slowly straighten your elbow and bring the weight overhead.
- Hold for 2 seconds.
- Slowly lower your arm back down behind your head and repeat.

Tip	Keep your abdominal muscles tight and do not arch your back.

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Rotator Cuff and Shoulder Conditioning Program
STRENGTHENING EXERCISES

12. Trapezius Strengthening

Repetitions
3 sets of 20

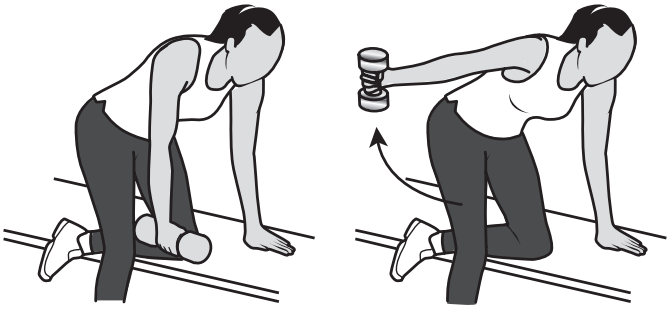
Days per week
3 to 5

Main muscles worked: Middle and posterior deltoid, supraspinatus, middle trapezius
You should feel this exercise at the back of your shoulder and into your upper back

Equipment needed: Begin with a light enough weight to allow 3 to 4 sets of 20 repetitions without pain. As the exercise becomes easier to perform, add 2 to 3 pounds of weight, but do fewer repetitions. Progress to 3 sets of 15 repetitions at each weight increment, with the maximum weight approximately 5 to 7 pounds.

Step-by-step directions

- Place your knee on a bench or chair and lean forward so that your hand reaches the bench and helps support your weight. Your other hand is at your side, palm facing your body.
- Slowly raise your arm, rotating your hand to the thumbs-up position and stopping when your hand is shoulder height, with your arm parallel to the floor.
- Slowly lower your arm to the original position to a count of 5.



Tip	Use a weight that makes the last few repetitions difficult, but pain-free.

13. Scapula Setting

Repetitions
10

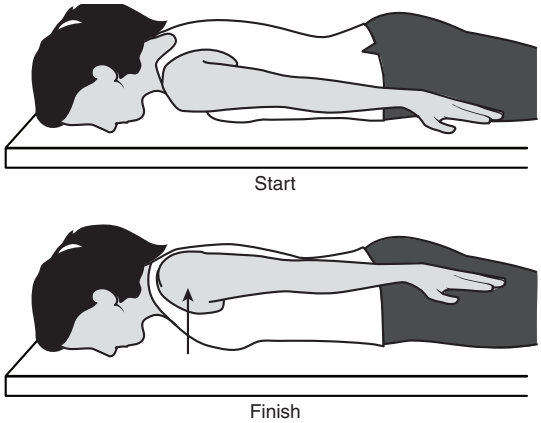
Days per week
3

Main muscles worked: Middle trapezius, serratus
You should feel this exercise in your upper back, at your shoulder blade

Equipment needed: None

Step-by-step directions

- Lie on your stomach with your arms by your sides. Place a pillow under your forehead for comfort, if required.
- Gently draw your shoulder blades together and down your back as far as possible.
- Ease about halfway off from this position and hold for 10 seconds.
- Relax and repeat 10 times.



Tip	Do not tense up in your neck.

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Rotator Cuff and Shoulder Conditioning Program
STRENGTHENING EXERCISES

14. Scapular Retraction/Protraction

Repetitions
2 sets of 10

Days per week
3

Main muscles worked: Middle trapezius, serratus
You should feel this exercise in your upper back at your shoulder blade

Equipment needed: Begin with a weight that allows 2 sets of 8 to 10 repetitions and progress to 3 sets of 15 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 2 sets of 8 to 10 repetitions.

Step-by-step directions

- Lie on your stomach on a table or bed with your injured arm hanging over the side.
- Keep your elbow straight and lift the weight slowly by squeezing your shoulder blade toward the opposite side as far as possible.
- Return slowly to the starting position and repeat.

Tip	Do not shrug your shoulder toward your ear.

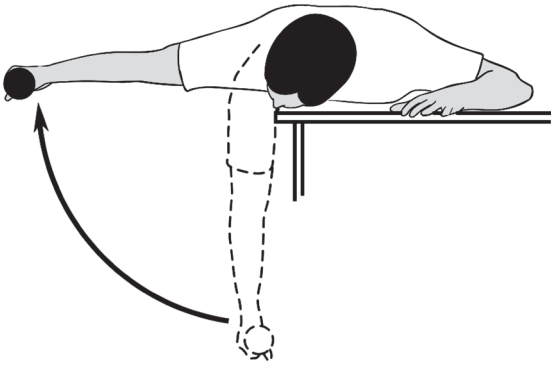
15. Bent-Over Horizontal Abduction

Repetitions
3 sets of 8

Days per week
3

Main muscles worked: Middle and lower trapezius, Infraspinatus, teres minor, posterior deltoid
You should feel this exercise at the back of your shoulder and into your upper back

Equipment needed: Begin with a weight that allows 3 sets of 8 repetitions and progress to 3 sets of 12 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 3 sets of 8 repetitions.



Step-by-step directions

- Lie on your stomach on a table or bed with your injured arm hanging over the side.
- Keep your arm straight and slowly raise it up to eye level.
- Slowly lower it back to the starting position and repeat.

Tip	Control the movement as you lower the weight.

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Rotator Cuff and Shoulder Conditioning Program
STRENGTHENING EXERCISES

16. Internal and External Rotation

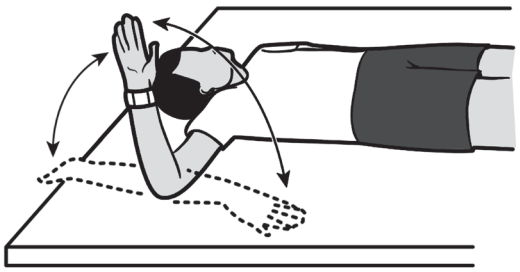
Repetitions
3 to 4 sets of 20

Days per week
3 to 5

Main muscles worked: *Internal rotation:* anterior deltoid, pectoralis, subscapularis, latissimus. *External rotation:* posterior deltoid, infraspinatus, teres minor
You should feel this exercise in the front and back of your shoulder, your chest, and upper back

Equipment needed: Begin with a light enough weight to allow 3 to 4 sets of 20 repetitions without pain. As the exercise becomes easier to perform, add 2 to 3 pounds of weight, but do fewer repetitions. Progress to 3 sets of 15 repetitions at each weight increment, with the maximum weight approximately 5 to 7 pounds.

Step-by-step directions



- Lie on your back on a flat surface.
- Extend your arm straight out from the shoulder and bend the elbow 90° so that your fingers are pointed up.
- Keeping your elbow bent and on the floor, slowly move your arm in the arc shown. Bring your elbow down to a 45° angle if you experience pain at 90°.

Tip	Use a weight that makes the last few repetitions difficult, but pain-free.

17. External Rotation

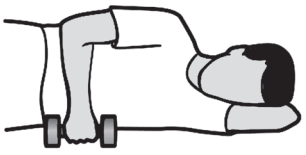
Repetitions
2 sets of 10

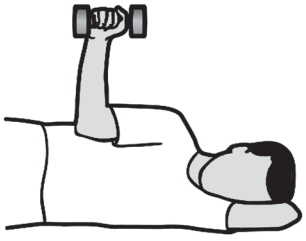
Days per week
3

Main muscles worked: Infraspinatus, teres minor, posterior deltoid
You should feel this stretch in the back of your shoulder and upper back

Equipment needed: Begin with weights that allow 2 sets of 8 to 10 repetitions (approximately 1 to 2 pounds), and progress to 3 sets of 5 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 2 sets of 8 to 10 repetitions.

Step-by-step directions


Start


Finish

- Lie on your side on a firm, flat surface with your unaffected arm under you, cradling your head.
- Hold your injured arm against your side as shown, with your elbow bent at a 90° angle.
- Keep your elbow against your side and slowly rotate your arm at the shoulder, raising the weight to a vertical position.
- Slowly lower the weight to the starting position to a count of 5.

Tip	Do not let your body roll back as you raise the weight.

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Rotator Cuff and Shoulder Conditioning Program

STRENGTHENING EXERCISES

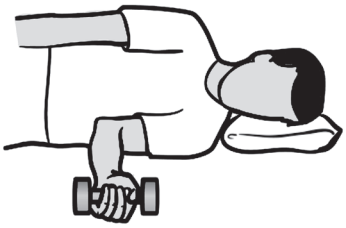
18. Internal Rotation

Repetitions
2 sets of 10

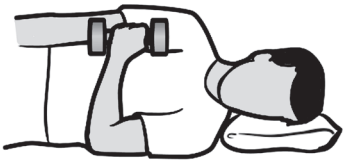
Days per week
3

Main muscles worked: Subscapularis, teres major
You should feel this stretch in the front of your shoulder

Equipment needed: Begin with weights that allow 2 sets of 8 to 10 repetitions (approximately 1 to 2 pounds), and progress to 3 sets of 5 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 2 sets of 8 to 10 repetitions.



Start



Finish

Step-by-step directions

- Lie on a firm, flat surface on the side of your affected arm. Place a pillow or folded cloth under your head to keep your spine straight.
- Hold your injured arm against your side as shown, with your elbow bent at a 90° angle.
- Keep your elbow bent and against your body and slowly rotate your arm at the shoulder, raising the weight to a vertical position.
- Slowly lower the weight to the starting position.

Tip	Do not let your body roll back as you raise the weight.

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