

## **Protocol T2 Strengthening Program for Throwers**

This sport specific protocol is for throwing athletes, especially for baseball pitchers. The program should be done under the supervision of an athletic trainer or physical therapist.

Exercises in this program comprise a comprehensive shoulder strengthening regimen including the deltoid, rotator cuff and scapular stabilizer muscles. This program is recommended to improve strength, power and endurance during the thrower's season. These exercises may be used to maintain muscle tone and strength during the off-season as well.

### **STANDING POSITION EXERCISES:**

- **Diagonal extension:** Theraband or rubber tubing is anchored over the throwing shoulder. Grasp the theraband or tubing overhead with the throwing hand and pull down and across your body out in front (as though delivering a pitch). At maximum extension, hold for 5 seconds, 10 repetitions.
- **Diagonal flexion:** Theraband or rubber tubing is anchored low on the throwing side. Grasp the theraband or tubing with the throwing hand, shoulder abducted about 45 degrees, elbow extended. Pull up and across your body out in front, flexing your throwing elbow, bringing the tubing toward the opposite shoulder. Hold for 5 seconds, 10 repetitions.
- **Dumbbell raises for deltoid:** Grasp a 1-3 pound dumbbell in the throwing hand. Start with the throwing arm at your side, elbow extended. Then raise your arm out to the side, elbow extended, palm downward until the throwing shoulder is abducted 90 degrees and the dumbbell is at shoulder level. Hold for 5 seconds, 10 repetitions.
- **Dumbbell raises for rotator cuff:** Grasp a 1-3 pound dumbbell in the throwing hand. Start with the throwing arm at your side, elbow extended. Then raise your arm out to the side and slightly toward the front, elbow extended, thumb upward until your throwing shoulder is abducted 90 degrees and the dumbbell is at shoulder level. Hold for 2 seconds, 10 repetitions.
- **Internal rotation:** Theraband or rubber tubing is anchored behind you on the throwing side. Grasp the theraband or tubing with your throwing hand. Start with throwing shoulder abducted 90 degrees, externally rotated 90 degrees and elbow flexed 90 degrees (in thrower's cocking position). Then bring your hand forward while internally rotating your shoulder (as though delivering a pitch). Hold for 5 seconds, then slowly return to starting position. Complete 10 repetitions.
- **External rotation:** Theraband or rubber tubing is anchored in front of you on the throwing side. Grasp the theraband or tubing with your throwing hand. Start with throwing shoulder abducted 90 degrees, internally rotated 90 degrees and elbow flexed 90 degrees with throwing hand out in front. Then bring your hand backward while externally rotating your shoulder (as though cocking your arm before delivering a pitch). Hold for 5 seconds, then slowly return to starting position. Complete 10 repetitions.

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(continued)

- **Biceps strengthening:** Theraband or rubber tubing is anchored below on the throwing side. Grasp the theraband or tubing with your throwing hand, elbow slightly flexed. Then flex your elbow bringing throwing hand toward throwing shoulder. Hold for 5 seconds, 3 sets of 10 repetitions.

**PRONE POSITION EXERCISES:**

- **Shoulder extension:** Lie on training table, face downward, throwing arm hanging off side of table. Theraband or rubber tubing is fixed to table leg. Grasp the theraband or tubing with your throwing hand. With the elbow extended, raise your throwing arm outward and upward as far as possible. Hold for 2 seconds, then relax. Complete 10 repetitions.
- **Rowing exercise:** Lie on training table, face downward, throwing arm hanging off side of table. Grasp a 1-3 pound dumbbell in your throwing hand. Raise your throwing arm, bending the elbow and bringing the dumbbell as high as possible. Hold this position for 2 seconds, then relax. Complete 10 repetitions.
- **Push-ups:** From prone position on the floor, perform standard military push-ups. Support your body at the top of the push-up with your elbows fully extended for 2 seconds. Complete 3 sets, 10 repetitions.

**SEATED POSITION EXERCISES:**

- **Triceps curls:** Grasp a 1-3 pound dumbbell in your throwing hand. Raise throwing arm up overhead, elbow flexed 90 degrees, supporting the elbow with opposite hand. Then straighten arm up overhead by extending your throwing elbow. Hold for 2 seconds, 10 repetitions.
- **Wrist flexion curls:** Grasp a 1-3 pound weight in your throwing hand. Support your forearm on a table, hand off the edge of the table, palm upward. Curl your wrist inward, bringing the weight toward you. Hold for 2 seconds, then relax. Complete 10 repetitions.
- **Wrist extensions:** Grasp a 1-3 pound weight in your throwing hand. Support your forearm on a table, hand off the edge of the table, palm downward. Bring your wrist into extension and hold for 2 seconds, then relax. Complete 10 repetitions.
- **Press-ups:** Sit on a fixed-position, sturdy chair. Grasp the seat of the chair with both hands, palms downward, elbows slightly flexed. Extend your elbows and push downward on the seat to raise your body from the chair. Hold the elevated position for 2 seconds, 5 repetitions.