

# SAINT FRANCIS SPORTS MEDICINE

Making athletes of all ages BETTER, STRONGER, FASTER since 1995.

- ⊕ Throwers Ten Exercise Program Targets Strength and Endurance
- ⊕ Stretching Program Helps Maintain Muscle Balance



## Throwers Ten Exercise Program Targets Strength and Endurance

Retaining arm and shoulder strength while preserving structural integrity is a challenging task for athletes who use an overhead throwing motion. Certified athletic trainers with the Sports Medicine team at Saint Francis Medical Center are helping baseball pitchers improve endurance and return symptom-free from injury using the Throwers Ten Exercise Program.

“The program features a structured set of exercises specific to the throwing athlete,” explains Matt Holder, ATC, certified athletic trainer at Saint Francis. “Improving strength, power and endurance are valuable both as preventive measures as well as during injury rehabilitation.”

Here are descriptions of the 10 exercises:

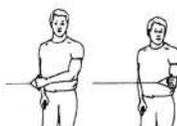
**1a. Diagonal Pattern D2 Extension** – Leading with the thumb, pull tubing (or weight machine pulley) down and across the body to the opposite side of the leg.



**1b. Diagonal Pattern D2 Flexion** – With palm facing behind you and arm crossing the body, pull arm out, up and back across your body. Rotate the arm as you move so the palm continues to face behind you.



**2a. External Rotation at 0° Abduction** – Stand with your uninvolved side next to a closed door, tubing attached to the doorknob. With your elbow bent at 90 degrees and across your body, pull outward to a parallel position.



Matt Holder, ATC

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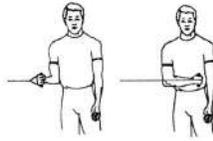
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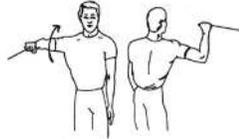
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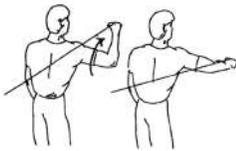
**2b. Internal Rotation at 0° Abduction** – Turn around and perform the exercise in reverse. With your elbow at 90 degrees and at your side, pull across your body and then return slowly to the starting position.



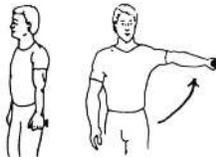
**2c. External Rotation at 90° Abduction** – Standing with your shoulder abducted at 90° and elbow flexed at 90°, grip tubing with the affixed end straight ahead and slightly lower than the shoulder. With shoulder abducted, rotate the shoulder back while keeping the elbow at 90°. Return to starting position.



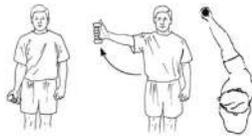
**2d. Internal Rotation at 90° Abduction** – Standing with your shoulder abducted at 90° and elbow flexed at 90°, grip tubing at ear height and rotate shoulder forward, keeping elbow at 90°. Return to starting position.



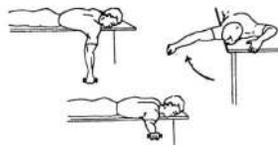
**3. Shoulder Abduction to 90°** – Stand with your arm at your side, elbow straight and palm facing your side. Raise your arm to the side, palm down, until your arm reaches shoulder level. Hold 2 seconds and return to your side. Use light weights as appropriate.



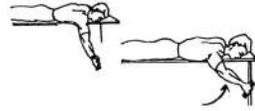
**4. Scaption (Internal Rotation)** – Standing with your elbow straight and your side and thumb up, raise your arm to shoulder level at a 45° angle in front of your body. Do not go above shoulder height. Hold 2 seconds and return to starting position. Use light weights as appropriate.



**5a. Prone Horizontal Abduction (Neutral)** – Lie facedown on a table with your involved arm hanging straight to the floor. Raise your arm to the side to a position parallel to the floor. Hold 2 seconds and lower slowly.



**5b. Prone Horizontal Abduction (Full ER, 100° Abduction)** – Lie facedown on a table with your involved arm hanging straight to the floor, thumb rotated up. Raise your arm out to the side slightly in front of shoulder, parallel to the floor. Hold 2 seconds and lower slowly.



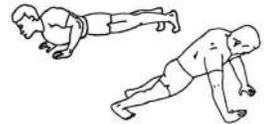
**6. Press-ups** – Seated on a chair, place both hands firmly on the sides of the chair equal with your shoulders. Slowly push downward through the hands to elevate your body. Hold 2 seconds and slowly lower your body.



**7. Prone Rowing** – Lie facedown with your involved arm hanging over the side of the table, dumbbell in hand and elbow straight. Slowly raise your arm, bend your elbow, and bring the dumbbell as high as possible. Hold 2 seconds and lower slowly.



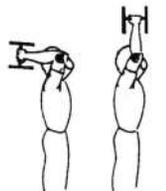
**8. Push-ups** – Start in the down position, hands shoulder-width apart. Push up as high as possible, rolling your shoulders forward after your elbows straighten. Start with a push-up against a wall, progress to a tabletop and finally to the floor as tolerable.



**9a. Elbow Flexion** – Standing with your arm against your side and palm facing inward, bend your elbow upward and turn your palm up as you progress. Hold 2 seconds and lower slowly. Use weights as appropriate.



**9b. Elbow Extension** – Raise your involved arm overhead and bend your elbow. Provide support at the elbow with your uninvolved hand. Straighten your arm overhead. Hold 2 seconds and lower slowly. Use weights as appropriate.



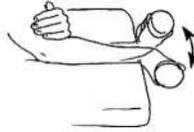
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**10a. Wrist Extension** – Support your forearm with your palm facing down. Raise the weight in your hand as far as possible, hold 2 seconds and lower slowly.



**10b. Wrist Flexion** – Support your forearm with your palm facing up. Lower the weight in your hand as far as possible, and then curl up as far as possible. Hold 2 seconds and return to start.



**10c. Supination** – With your forearm resting on a table and wrist in neutral position, hold a weight or hammer and roll your wrist outward to a palm-up position. Hold 2 seconds and return to starting position.



**10d. Pronation** – With your forearm resting on a table and wrist in a neutral position, hold a weight or hammer and roll your wrist inward to a palm-down position. Hold 2 seconds and return to starting position.



For more information, please visit [www.sfmc.net/SportsMedicine.htm](http://www.sfmc.net/SportsMedicine.htm) or call **573-331-5153**.

## Stretching Program Helps Maintain Muscle Balance

Sports medicine professionals and baseball coaches have focused on total pitch counts for years in an effort to limit injuries to young pitchers. While research shows a direct correlation between high total pitch counts and the potential for injury, the jury is still out regarding other variables affecting arm health.



David Enderle, ATC

“The baseball pitching motion is very hard on the soft tissues of the arm and shoulder for adults, much less younger athletes,” says David Enderle, ATC, certified athletic trainer at Saint Francis Medical Center’s Sports Medicine program. “The total number of pitches in a year, pitches in an inning, pitches over multiple games, and types of pitches all contribute to the stress placed on those fragile body structures.”

According to a study published in the March 2011 issue of *The American Journal of Sports Medicine*, young pitchers who threw more than 100 innings in a year were 3.5 times more likely to be injured. The 10-year study followed 481 healthy male pitchers, aged 9 to 14 years.

The most alarming finding to come out of the study was that fewer than a dozen of those 481 boys were still pitching by the end of the study. Five percent of the entire cohort had sustained a serious injury resulting in surgery or retirement from the sport, including two who had surgery before their 13th birthday.

Twenty-nine boys pitched 100 or more innings during a single year, with four of them (14 percent) sustaining an injury that led to surgery or retirement. Among the 452 pitchers who threw fewer than 100 innings in a year, 20 (4 percent) sustained such an injury. The study could not determine whether pitching curveballs before age 13 increased the risk of injury.

“The primary takeaway from anecdotal and scientific research is to err on the side of caution when it comes to young pitchers,” Enderle says. “As tempting as it may be to keep a successful pitcher in the game as long as possible and turn them into your staff workhorse, the long-term effects could result in significant injury.”

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