

Throwing Program

Interval Throwing Program for Baseball Players – Introduction

The interval Throwing Program (ITP) is designed to gradually return motion, strength and confidence in the throwing arm after injury or surgery by slowly progressing through graduated throwing distances. The ITP is initiated upon clearance by the athlete's physician to resume throwing, and performed under the supervision of the rehabilitation team, (physician, physical therapist and athletic trainer).

The program is set up to minimize the chance of re-injury and emphasize pre-throwing warm-up and stretching. In development of the interval throwing program, the following factors are considered most important.

1. The act of throwing the baseball involves the transfer of energy from the feet through the legs, pelvis, trunk, and out the shoulder through the elbow and hand. Therefore, any return to throwing after injury must include attention to the entire body.
2. The chance for re-injury is lessened by a graduate progression of interval throwing.
3. Proper warm-up is essential.
4. Most injuries occur as the result of fatigue.
5. Proper throwing mechanics lessen the incidence of re-injury.
6. Baseline requirements for throwing include:
 - Pain-free range of motion
 - Adequate muscle power
 - Adequate muscle resistance to fatigue

Because there is an individual variability in all throwing athletes, there is no set timetable for completion of the program. Most athletes, by nature, are highly competitive individuals and wish to return to competition at the earliest possible moment. While this is a necessary quality of all athletes, the proper channeling of the athlete's energies into a rigidly controlled throwing program is essential to lessen the chance of re-injury during the rehabilitation period. The athlete may have the tendency to want to increase the intensity of the throwing program. This will increase the incidence of re-injury and may greatly retard the rehabilitation process. It is recommended to follow the program rigidly as this will be the safest route to return to competition.

During the recovery process the athlete will probably experience soreness and a dull, diffuse aching sensation in the muscles and tendons. If the athlete experiences sharp pain, particularly in the joint, stop all throwing activity until this pain ceases. If continued pain, contact your physician.

Weight Training: The athlete should supplement the ITP with high repetition, low weight exercise program. Strengthening should address a good balance between anterior and posterior musculature so that the shoulder will not be predisposed to injury. Special emphasis must be

given to posterior rotator cuff musculature for any strengthening program. Weight training will not increase throwing velocity but will increase the resistance of the arm to fatigue and injury. Weight training should be done the same day as your throw; however, it should be after your throwing is completed, using the day in between for flexibility exercises and a recovery period.

A weight training pattern or routine should be stressed at this point as a “maintenance program.” This pattern can and should accompany the athlete into and throughout the season as a deterrent to further injury. It must be stressed that weight training is of no benefit unless accompanied by a sound flexibility program.

Warm-up: Jogging increases blood flow to the muscles and joints thus increasing their flexibility and decreasing the chance of re-injury. Since the amount of warm-up will vary from person to person, the athlete should jog until developing a light sweat, then progress to the stretching phase.

Stretching: Since throwing involves all muscles in the body, all muscle groups should be stretched prior to throwing. This should be done in a systematic fashion beginning with the legs and including the trunk, back, neck and arms. Continue with capsular stretches and L-bar range of motion exercises.

Throwing: The athlete should begin warm-up throws at a comfortable distance (approximately 30-45 ft.) and then progress to the distance indicated for that phase (refer to Table 1). The program consists of throwing at each step 2 to 3 times without pain or symptoms before progressing to the next stop. The object of each phase is for the athlete to be able to throw the ball without pain the specified number of feet (45 ft., 60 ft., 90 ft., 120 ft., 150 ft., 180 ft.), 75 times at each distance.

After the athlete can throw at the prescribed distance without pain, they will be ready for throwing from flat ground 60ft/ 6 in. in the normal pitching mechanics or return to their respective position (step 14). At this point, full strength and confidence should be restored in the athlete’s arm. Just as the advancement to this point has been gradual and progressive, the return to unrestricted throwing must follow the same principles. A pitcher should first throw only fast balls at 50%, progressing to 75% and 100%. At this time, he may start more stressful pitches such as breaking balls. The position player should simulate a game situation, again progressing at 50-75-100%. Once again, if an athlete has increased pain, particularly at the joint, the throwing program should be backed off and re-advanced as tolerated, under the direction of the rehabilitation team.

Batting: Depending on the type of injury that the athlete has, the time of return to batting should be determined by the physician. It should be noted that stress placed upon the arm and shoulder in the batting motion are very different from the throwing motion. Return to unrestricted use of the bat should also follow the same progression guidelines as seen in the training program. Begin with dry swings progressing to hitting off the tee, then soft toss and finally live pitching.

Throwing Program

Interval Throwing Program for Baseball Players – Off season/Post op UCL reconstruction (Tommy John) Phase 1

<p>45' Phase</p> <p>Step 1:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 45' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 45' (25 Throws) <p>Step 2:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 45' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 45' (25 Throws) F) Rest 5-10 min. G) Warm-up Throwing H) 45' (25 Throws) 	<p>60' Phase</p> <p>Step 3:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 60' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 60' (25 throws) <p>Step 4:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 60' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 60' (25 Throws) F) Rest 5-10 min. G) Warm-up Throwing H) 60' (25 Throws) 	<p>90' Phase</p> <p>Step 5:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 90' (25 Throws) C) Rest 5-10 min. D) Warm-up E) 90' (25 Throws) <p>Step 6:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 90' (25 Throws) C) Rest 5-10 min. D) Warm-up E) 90' (25 Throws) F) Rest 5-10 min. G) Warm-up Throwing H) 90' (25 Throws) 	<p>120' Phase</p> <p>Step 7:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 120' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 120' (25 Throws) <p>Step 8:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 120' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 120' (25 Throws) F) Rest 5-10 min. G) Warm-up Throwing H) 120' (25 Throws)
<p>150' Phase</p> <p>Step 9:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 150' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 150' (25 Throws) <p>Step 10:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 150' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 150' (25 Throws) F) Rest 5-10 min. G) Warm-up Throwing H) 150' (25 Throws) 	<p>180' Phase</p> <p>Step 11:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 180' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 180' (25 Throws) <p>Step 12:</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) 180' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 180' (25 Throws) F) Rest 5-10 min. G) Warm-up Training H) 180' (25 Throws) 	<p>Step 13:</p> <ul style="list-style-type: none"> A) Warm-up Training B) 180' (25 Throws) C) Rest 5-10 min. D) Warm-up Throwing E) 180' (25 Throws) <p>Step 14:</p> <p>Begin throwing off the mound or return to respective position</p>	<p>Throwing program should be performed every other day, unless other wise specified by your physician or rehabilitation Specialist.</p> <p>Perform each step __ times before progressing to the next step.</p>
<p>Flat Ground Throwing</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) Throw 60 ft. (10 -15 throws) C) Throw 90 ft. (10 throws) D) Throw 120 ft. (10 throws) E) throw 60 ft. (flat ground) using pitching mechanics (20-30 throws) 		<p>Flat Throwing</p> <ul style="list-style-type: none"> A) Warm-up Throwing B) Throw 60 ft. (10-15 throws) C) Throw 90ft. (10 throws) D) Throw 120 ft. (10 throws) E) Throw 60 ft. (flat ground) using pitching mechanics (20-30 throws) F) Throw 60-90 ft. (10-15 throws) G) Throw 60 ft. (flat ground) using pitching mechanics (20 throws) 	

Throwing Program

Interval Throwing Program for Baseball Players – Off season/Post op UCL reconstruction (Tommy John) Phase 2 – Throwing off the mound

STAGE ONE: FASTBALLS ONLY

Step 1: Interval Throwing
(Use Interval Throwing to 120')
15 Throws off mound 50%

Step 2: Interval Throwing
30 Throws off mound 50%

Step 3: Interval Throwing
45 Throws off mound 50%

Step 4: Interval Throwing
60 Throws off mound 50%

Step 5: Interval Throwing
70 Throws off mound 50%

Step 6: 45 Throws off mound 50%
30 Throws off mound 75%

Step 7: 30 Throws off mound 50%
45 Throws off mound 75%

Step 8: 65 throws off mound 75%
10 throws off mound 50%

STAGE TWO: FASTBALLS ONLY

Step 9: 60 throws off mound 75%
15 throws in batting practice

Step 10: 60 throws off mound 75%
30 throws in batting practice

Step 11: 60 throws off mound 75%
45 throws batting practice

STAGE THREE

Step 12: 30 Throws off mound 75% warm-up
15 Throws off mound 50% BREAKING BALLS

Step 13: 30 Throws off mound 75%
30 Breaking Balls 75%
30 Throws in Batting Practice

Step 14: 30 Throws off mound 75%
60-90 throws in Batting Practice (Gradually
increase breaking balls)

Throwing Program

Interval Throwing Program for Baseball Players – In Season/Short Term

Warm up 3 minutes @ 45 feet at the start of each day, 1 throw to 6 second rest ratio

<p>Day 1 3 minutes @ 45 ft (30 throws) 3 minutes @ 60 ft (30 throws)</p>	<p>Day 11 5 minutes @ 60 ft (50 throws) 2 minutes @ 90 ft (20 throws) 3 minutes @ 120 ft (50 throws) 2 minutes @ 60 ft (20 throws)</p>
<p>Day 2 5 minutes @ 45 ft (50 throws) 5 minutes @ 60 ft (50 throws)</p>	<p>Day 12 OFF</p>
<p>Day 3 15 minutes @ 60 ft (150 throws)</p>	<p>Day 13 10 minutes @ 60ft (100 throws) Bullpen Mound 25 throws at 75% (fastballs only)</p>
<p>Day 4 10 minutes @ 60 ft (100 throws) 3 minutes @ 90 ft (30 throws) 2 minutes @ 60 ft (20 throws)</p>	<p>Day 14 Soft Toss Program 5 minutes @ 45 ft (50 throws) 3 minutes @ 90 ft (50 throws) 2 minutes @ 120 ft (20 throws) 2 minutes @ 45 ft (20 throws)</p>
<p>Day 5 OFF</p>	<p>Day 15 10 minutes @ 60ft (100 throws) Bullpen Mound 35 throws at 80% (fastballs & changeups only)</p>
<p>Day 6 10 minutes @ 60 ft (100 throws) 3 minutes @ 90 ft (30 throws) 2 minutes @ 60 ft (20 throws)</p>	<p>Day 16 OFF</p>
<p>Day 7 5 minutes @ 60 ft (50 throws) 5 minutes @ 90 ft (50 throws) 5 minutes @ 60 ft (50 throws)</p>	<p>Day 17 10 minutes @ 60ft (100 throws) Bullpen Mound 45 throws at 100% (all pitches)</p>
<p>Day 8 5 minutes @ 60 ft (50 throws) 5 minutes @ 90 ft (50 throws) 3 minutes @ 120 ft (25 throws) 2 minutes @ 60 ft (20 throws)</p>	<p>Day 18 Soft Toss Program (day 14)</p>
<p>Day 9 OFF</p>	<p>Day 19 Simulated game 25 pitches</p>
<p>Day 10 5 minutes @ 60 ft (50 throws) 2 minutes @ 90 ft (20 throws) 3 minutes @ 120 ft (50 throws) 2 minutes @ 60 ft (20 throws)</p>	<p>Day 20 Soft Toss Program (day 14)</p>
	<p>Day 21 Simulated game 25-35 pitches</p>