

Interval Throwing Program for Quarterbacks

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 football 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 graduated 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:
 - Adequate time from injury or surgery to allow for healing
 - Pain-free range of motion
 - Adequate muscle power
 - Adequate muscle resistance to fatigue

Because there is 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 process. 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 a 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 you 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.

Individual Variability: The ITP is designed so that each level is achieved without pain or complications before the next level is initiated. This sets up a progression in which a goal is achieved prior to advancement rather than advancing to a specific timeframe. Because of this design, the ITP may be used for different levels of skills and abilities from those in high school to professional levels. “Listen to your body – it will tell you when to slow down.” Again, completion of the steps of the ITP will vary from person to person. There is no set timetable in terms of days to completion.

Warm-up: We recommend jogging to assist in 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.

Summary: In using the Interval Throwing Program (ITP) in conjunction with a structured rehabilitation program, the athlete should be able to return to full competition status, minimizing any chance of re-injury. The program and its progression should be modified to meet the specific needs of each individual athlete. A comprehensive program consisting of a maintenance strength and flexibility program, appropriate warm-up and cool down procedures, proper throwing mechanics, and progressive throwing and batting will assist the quarterback in returning safely to competition.

THROWING ACTIVITIES OCCUR EVERY OTHER DAY TO ALLOW TIME FOR RECUPERATION

Day #	Throwing Activities
Day 1	Warm-up Tossing → 20-25 throws (15-20 yds)
Day 2	Warm-up Tossing → 25-30 throws (15-25 yds)
Day 3	Warm-up Tossing → 2 sets of 25 htrows (20-25 yds)
Day 4	Warm-up Tossing → 2 sets of 25-30 throws (25 yds)
Day 5	Warm-up Tossing → 25-30 throws (30-35 yds)
Day 6	Warm-up Tossing → 2 sets of 30 throws (35 yds)
Day 7	Warm-up Tossing → 10-15 throws (40 yds) → 20 throws (25-30 yds) → 20 throws (20-25 yds on a line)
Day 8	Warm-up Tossing → 20 throws (40-50 yds) → 20 throws (25-30 yds) → 20 throws (20-25 yds)
Day 9	Warm-up Tossing → 20 throws (25-35 yds) → 20 throws (40-50 yds) → 20 throws (20 yds, on a line) → 10-15 throws (10-15 yd, on a line)
Day 10	arm-up Tossing → 20-25 throws (20-25 yds) → 20-25 throws (45-55 yds) → 20-25 throws (30-35 yds) → 20-25 throws (10-15 yds, on a line)
Day 11	Warm-up Tossing → 15-20 throws (20-30 yds) → 20-25 throws (40-50 yds) → 20-25 throws (30-40 yds) → 20-25 throws (10-20 yds, on a line) → 15-20 throws (20-30 yds, on a line)
Day 12	Warm-up Tossing → 15 throws (20-30 yds) → 20 throws (40-50 yds) → 20 throws (30-40 yds) → 20 throws (10-20 yds, on a line) → 20 throws (20-30 yds, on a line) → 15 throws (10-20 yds, rolling out to throwing side)
Day 13	Warm-up Tossing → 15 throws (20-30 yds) → 20 throws (40-50 yds) → 20 throws (30-40 yds) → 20 throws (10-20 yds, on a line) → 20 throws (20-30 yds, on a line) → 15 throws (10-20 yds, rolling out to throwing side) → 15 throws (10-20 yds, rolling to non-throwing side)
Day 14	Warm-up Tossing → Progress to Practice Situation