

## Interval Throwing Program

### **Baseball Players**

Dr. David R. Guelich

The interval throwing program (ITP) is designed so that the athlete can achieve each individual level of throwing without pain or complication. The ITP should be supplemented with a weight training program and a flexibility program to maintain the athlete in a top physical condition. Weight training should be done on a throwing day and should emphasize high repetition with low weight as a maintenance program for the athlete. The athlete should be throwing every other day and using the day between for flexibility and rest. This program has been set up to minimize the risk for re-injury and emphasize pre-throwing warm-up, stretching, proper body and throwing mechanics, and the importance of weight training with the throwing athlete.

Baseline requirements of throwing include:

1. Clearance by the athlete's physician
2. Pain-free range of motion
3. Adequate muscle power
4. Adequate muscle resistance to fatigue

The athlete should warm-up by jogging, biking, or jumping rope to increase blood flow and increase the muscular flexibility. Following warm-up, stretching should be performed. Emphasis should be placed on proper throwing and body mechanics. The crow-hop method should be used to avoid stress to the throwing arm. The velocity of the throw is determined by the distance of the throw and the ball should only have enough speed to travel the appropriate distance. The athlete should begin with warm-up throws. The goal is to be able to throw the specified distance 75 times without pain.

During the recovery process the athlete may experience soreness and possibly a dull, aching sensation in the muscles and tendons. If the athlete experiences sharp pain, particularly in the joint, stop all throwing activity until the pain ceases and call the athlete's physician if pain continues.

This program is based on an individual thrower, and because all throwers will vary, there is no time for completion of the program. It is essential that the thrower complete each individual phase with the proper throwing and body mechanics and without an increase in pain. Once the phase has been completed, the athlete then progresses to the next phase. This sets up a progression that an individual goal is achieved prior to advancement instead of

advancing at a specified time. This will greatly decrease the chance for re-injury and greatly increase the most adequate and safest route to return to competition.

### From Knee

#### 25' Pre-phase

25' – 15 throws

Rest for 15 minutes

25' – 15 throws

### 45' Phase

#### Step One

Warm-up throwing (15-20' soft toss)

45' – 25 throws

Rest for 15 minutes

Warm-up throwing

45' – 25 throws

#### Step Two

Warm-up throwing

45' – 25 throws

Rest for 10 minutes

Warm-up throwing

45' – 25 throws

Rest for 10 minutes

Warm-up throwing

45' – 25 throws

### 60' Phase

#### Step Three

Warm-up throwing

60' – 25 throws

Rest for 15 minutes

Warm-up throwing

60' – 25 throws

#### Step Four

Warm-up throwing

60' – 25 throws

Rest for 10 minutes

Warm-up throwing

60' – 25 throws

Rest for 10 minutes

Warm-up throwing  
60' – 25 throws

90' Phase

Step Five

Warm-up throwing  
90' – 25 throws  
Rest for 15 minutes  
Warm-up throwing  
90' – 25 throws

Step Six

Warm-up throwing  
90' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
90' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
90' – 25 throws

120' Phase

Step Seven

Warm-up throwing  
120' – 25 throws  
Rest for 15 minutes  
Warm-up throwing  
120' – 25 throws

Step Eight

Warm-up throwing  
120' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
120' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
120' – 25 throws

150' Phase

Step Nine

Warm-up throwing  
150' – 25 throws  
Rest for 15 minutes  
Warm-up throwing

150' – 25 throws

Step Ten

Warm-up throwing  
150' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
150' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
150' – 25 throws

180' Phase

Step 11

Warm-up throwing  
180' – 25 throws  
Rest for 15 minutes  
Warm-up throwing  
180' – 25 throws

Step 12

Warm-up throwing  
180' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
180' – 25 throws  
Rest for 10 minutes  
Warm-up throwing  
180' – 25 throws

Step 13

Warm-up throwing  
180' – 25 throws  
Rest for 15 minutes  
Warm-up throwing  
180' – 25 throws

Step 14

Begin throwing off the mound or return to respective position.

Throwing program should be performed every other day, unless otherwise specified by your physician or rehabilitation specialist.

# Interval Throwing Program Throwing Off the Mound

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After completion of the Interval Throwing Program (ITP) and the athlete can throw 180', 50 times without pain the athlete will be ready for throwing off the mound or return to their respective position. 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, the athlete may start more stressful pitches. The position player should simulate a game situation, again progressing at 50, 75, and 100%. Once again, if the athlete has increased symptoms, the throwing program should be backed off and re-advanced as tolerated under direction of the rehab team.

(Use interval throwing to 120' phase as warm-up)

\*All throwing off of the mound should be done with the pitching coach or therapist present to assure proper mechanics.

## Stage One -- Fastball Only

Step One: Interval Throwing  
15 throws off mound 50%

Step Two: Interval Throwing  
30 throws off mound 50%

Step Three: Interval Throwing  
45 throws off mound 50%

Step Four: Interval Throwing  
60 throws off mound 50%

Step Five: Interval Throwing  
30 throws off mound 50%

Step Six: 30 throws off mound 75%  
45 throws off mound 50%

Step Seven: 45 throws off mound 75%  
15 throws off mound 50%

Step Eight: 60 throws off mound 75%

## Stage Two: Fastballs Only

Step Nine: 45 throws off mound 75%

Step Ten: 15 throws in batting practice  
45 throws off mound 75%  
30 throws in batting practice

Step Eleven: 45 throws off mound 75%  
45 throws in batting practice

### Stage Three

Step Twelve: 30 throws off mound 75% warm-up  
15 throws off mound 50% breaking balls  
45-60 throws in batting practice (fastball only)

Step Thirteen: 30 throws off mound 75%  
30 breaking balls 75%  
30 throws in batting practice

Step Fourteen: 30 throws off mound 75%  
60-90 throws in batting practice, 25% breaking balls

Step Fifteen: Simulated game – progressing by 15 throws per workout