



# SPECTRUM MEDICAL

Surgical Date: \_\_\_\_\_

Rehab Start Date: \_\_\_\_\_

Interval Throwing Protocol

## INTERVAL THROWING PROGRAM

The interval-throwing program 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 distance of the throw determines the velocity 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.

- All throws should be on an arc with a crow-hop.
- Warmups consist of 10-20 throws at approximately 30'.
- Program should be completed every other day with rest day in between each session.
- Only 3 days per week for throwing program.
- Repeat the step if soreness/or discomfort presents itself before advancing.



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## 30' PHASE

### **Step One - (Delayed/Slowed Throwing Only)**

- Warm-up throwing
- 30' – 25 throws
- Rest for 15 minutes
- Warm-up throwing
- 30' – 25 throws

### **Step Two - (Delayed/Slowed Throwing Only)**

- Warm-up throwing
- 30' – 25 throws
- Rest for 10 minutes
- Warm-up throwing
- 30' – 25 throws
- Rest for 10 minutes
- Warm-up throwing
- 30' – 25 throws

## 45' PHASE

### **Step Three**

- Warm-up throwing
- 45' – 25 throws
- Rest for 15 minutes
- Warm-up throwing
- 45' – 25 throws

### **Step Four**

- 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 Five**

- Warm-up throwing
- 60' – 25 throws
- Rest for 15 minutes
- Warm-up throwing
- 60' – 25 throws

### **Step Six**

- 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 Seven**

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



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## Step Eight

- 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 Nine

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

## Step Ten

- 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 11

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

## Step 12

- 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 13

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

## Step 14

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



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Interval Throwing Protocol

- Warm-up throwing
- 180' – 25 throws

### Step 15

- 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
- Rest for 10 minutes
- Warm-up throwing
- 180' – 25 throws
- Rest for 10 minutes
- Warm-up throwing
- Progressing from 120' to 90' – 15 throws

### FLAT GROUND THROWING FOR PITCHERS ONLY

### Step 16

- Warm-up Throwing
- 60' – 10-15 Throws
- 90' – 10 Throws
- 120' – 10 Throws
- 60' (Flat Ground) using pitching mechanics – 20-30 Throws

### Step 17

- Warm-up Throwing
- 60' – 10-15 Throws
- 90' – 10 Throws
- 120' – 10 Throws
- 60' (Flat Ground) using pitching mechanics – 20-30 Throws
- 60' – 90' – 10-15 Throws
- 60' (Flat Ground) using pitching mechanics – 20 Throws

### Step 18

- 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.

## THROWING OFF THE MOUND

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.

### **(Use interval throwing to 120' phase as warm-up for the first 5 Steps)**

\*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 1:** Interval Throwing  
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%



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- Step 6: 45 throws off mound 50%  
30 throws off mound 75%
- Step 7: 45 throws off mound 50%  
30 throws off mound 75%
- Step 8: 60 throws off mound 50%  
60 throws off mound 75%

### Stage Two: Fastballs Only

- Step 9: 60 throws off mound 75%  
15 throws in batting practice
- Step 10: 50-60 throws off mound 75%  
30 throws in batting practice
- Step 11: 45-50 throws off mound 75%  
45 throws in batting practice

### Stage Three

- Step 12: 30 throws off mound 75% warm-up  
15 throws off mound 50% BEGIN BREAKING BALLS  
45-60 throws in batting practice (fastball only)
- 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)
- Step 15: *Simulated game* – progressing by 15 throws per workout (Pitch Count)

\*\*\*\*However, Little League and many experts recommend breaking balls should not be thrown until age 14.

### Pitch Count and Other ASMI Recommendations

#### PITCH COUNTS

Age	Max Pitches/Game	Max Games/Week
8-10	52	2
11-12	68	2
13-14	76	2
15-16	91	2
17-18	106	2

#### RECOVERY TIMES (Pitches Thrown in Game)

Age	1 Day Rest	2 Day Rest	3 Day Rest	4 Day Rest
8-10	21	34	43	51
11-12	27	35	55	58
13-14	30	36	56	70
15-16	25	38	62	77
17-18	27	45	62	89

#### AGE RECOMMENDATIONS FOR LEARNING DIFFERENT PITCHES

Pitch	Age
Fastball	8-10
Change-Up	10-13
Curve Ball	14-16
Knuckle Ball	15-18
Slider	16-18
Fork Ball	16-18
Screw Ball	17-19