



# TEXAS BONE & JOINT

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## Dr. Payne Throwing Program

The goal of this throwing protocol is to gradually advance to strength, motion and confidence in your throwing arm after injury or surgery. In this protocol you will progress through a series of increasing throwing distances. It is recommended that you have painless range of motion, sufficient flexibility and strength before proceeding with the demands of this protocol.

Please note there is no set time-frame for completion or progression of this protocol. Please adhere to program to prevent re-injury of the arm. Dull achiness and soreness is expected as you introduce your arm to throwing motion again. However, if you experiences sharp pain or pain that lasts longer than 48 hours after throwing, please discontinue all throwing activity until the pain subsides.

Throwing should be done every other day, as symptoms allow. As an adjunct to this protocol, it is recommended to maintain rotator cuff dynamic stability strengthening exercises as advised by Dr. Fullick and team.

Strengthening the shoulder should focus on anterior and posterior musculature to avoid injury. Weight exercises should be done on the same day after throwing. The off day in between throwing should include flexibility exercises and recovery. Warm up every day with light stretching and cardiovascular activity (ie jogging or stationary bicycle) to encourage circulation and increase flexibility. All muscle groups should be stretched prior to throwing. This should be done in an orderly fashion starting with the legs and progressing through the torso, back, neck and arms.

### INTERVAL THROWING PROTOCOL

It is very important to maintain proper mechanics and form during this program. A good way to help ensure proper mechanics is with the crow-hop throwing motion. The crow hop components include a hop, followed by a skip, followed by a throw. Using the crow-hop method the patient should begin warm up with throws at a comfortable distance (usually about 35-40 ft) and progress to the distance indicated for the phase (see below). The patient will throw at each step 2-3 times without any pain or symptoms prior to advancing to the next step. The objective of the program is for the patient to be able to throw at each distance without pain a total of 75 times.

### Phase I: crow-hop, flat ground throwing

45 foot phase:

Step 1:

- Warm up throwing
- 45' (25 throws)
- rest 5-10 min
- warm up throwing
- 45' (25 throws)

Step 2:

- Warm up throwing
- 45' (25 throws)
- Rest 5-10 min
- Warm up throwing
- 45' (25 throws)
- Rest 5-10 min
- Warm up throwing
- 45' (25 throws)

60 foot phase:

Step 3:

- Warm up throwing
- 60' (25 throws)
- Rest 5-10 min
- Warm up throwing
- 60' (25 throws)

Step 4:

- Warm up throwing
- 60' (25 throws)
- Rest 5-10 min
- Warm up throwing
- 60' (25 throws)
- Rest 5-10 min
- Warm up throwing
- 60' (25 throws)

Repeat for 90 feet (steps 5 and 6), 120 feet (steps 7 and 8), 150 feet (steps 9 and 10) and 180 feet (steps 11 and 12). After the patient can comfortably complete 75 throws at 180 feet flat ground throwing using pitching mechanics can be initiated.

**Flat ground throwing:**

- Warm up throwing
- Throw 60' (10-15 throws)
- Throw 90' (10 throws)
- Throw 120' (10 throws)
- Throw 60' (flat ground) using pitching mechanics (20-30 throws)
- Throw 60-90' (10-15 throws)
- Throw 60' (flat ground) using pitching mechanics (20 throws)

**Phase II: Throwing off the mound and simulated games.**

Once the patient can complete phase I of the program without pain he or she is ready for throwing off

the mound or a return to their respective position. The patient should have full strength and confidence in the arm at this point. The return to unrestricted throwing should follow the same gradual and orderly progression as the first part of the program. The pitcher should start throwing only fast balls and then gradually progress to throwing breaking balls. If the thrower experiences pain it is important to back off the program and advance only as symptoms allow.

### **Stage I: fastballs only**

Step 1:

- Interval throwing 120' phase as warmup
- 15 throws off mound at 50% velocity.

Step 2:

- Interval throwing 120' phase as warmup
- 30 throws off mound at 50% velocity

Step 3:

- Interval throwing 120' phase as warmup
- 45 throws off mound at 50% velocity

Step 4:

- Interval throwing 120' phase as warmup
- 60 throws off mound at 50% velocity

Step 5:

- Interval throwing 120' phase as warmup
- 70 throws off mound at 50% velocity

Step 6:

- 45 throws off mound at 50% velocity
- 30 throws off mound at 75% velocity

Step 7:

- 30 throws off mound at 50% velocity
- 45 throws off mound at 75% velocity

Step 8:

- 65 throws off mound at 75% velocity
- 10 throws off mound at 50% velocity

### **Stage II: fastballs only**

Step 9:

- 60 throws off mound at 75% velocity
- 15 throws in batting practice

Step 10:

- 50-60 throws off mound at 75% velocity
- 30 throws in batting practice

Step 11:

- 45-50 throws off mound at 75% velocity
- 45 throws in batting practice

### **Stage III: initiate breaking ball pitches**

Step 12:

- 30 throws off mound at 75% velocity warm up
- 15 throws off mound at 50% velocity, breaking balls
- 45-60 throws in batting practice, fastballs only

Step 13:

- 30 throws off mound at 75% velocity warm up
- 30 throws off mound at 75% velocity, breaking balls
- 30 throws in batting practice

Step 14:

- 30 throws off mound at 75% velocity warm up

□ 60-90 throws in batting practice, gradually increase breaking balls

Step 15: Simulated game, progress by 15 throws per workout