

Interval Throwing Return to Sport Protocol

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Patient Name:

Date of Surgery:

General principles

The **Interval Throwing Program** is designed to help athletes re-introduce throwing to their rehabilitation program. The program is divided into two protocols. The **Distance/Endurance Protocol** is designed to develop those specific qualities in the throwing motion. The **Pitching Protocol** is a progression from the first protocol and is designed to further develop the pitching motion in both strength and endurance. A speed gun may be used to aid in the assessment of effort for the **Pitching Protocol**. All throwing off the mound should be performed in the presence of a pitching coach or qualified person to stress proper mechanics. Both protocols should be used in combination with the **Throwing Athlete Exercise Program**.

The athlete should ice the affected extremity for 20 minutes following all throwing activity. The athlete should only progress to the next step of each phase if he/she was able to complete the present step without pain or difficulty. Under the direction of a therapist or athletic trainer, the athlete may progress through the steps and phases as tolerated. Emphasis should be placed on developing and maintaining proper throwing mechanics without developing symptoms.

Distance/Endurance Protocol

45° phase	<i>Step 1:</i> Warm-up throwing 45° (25 throws) Rest 6 minutes Warm-up throwing 45° (25 throws)	<i>Step 2:</i> Warm-up throwing 45° (25 throws) Rest 6 minutes Warm-up throwing 45° (25 throws) Rest 6 minutes Warm-up throwing

Distance/Endurance Protocol (continued)

60° phase	<i>Step 3:</i> Warm-up throwing 60° (25 throws) Rest 6 minutes Warm-up throwing 60° (25 throws)	<i>Step 4:</i> Warm-up throwing 60° (25 throws) Rest 6 minutes Warm-up throwing 60° (25 throws) Rest 6 minutes Warm-up throwing 60° (25 throws)
90° phase	<i>Step 5:</i> Warm-up throwing 90° (25 throws) Rest 6 minutes Warm-up throwing 90° (25 throws)	<i>Step 6:</i> Warm-up throwing 90° (25 throws) Rest 6 minutes Warm-up throwing 90° (25 throws) Rest 6 minutes Warm-up throwing 90° (25 throws)
120° phase	<i>Step 7:</i> Warm-up throwing 120° (25 throws) Rest 9 minutes Warm-up throwing 120° (25 throws)	<i>Step 8:</i> Warm-up throwing 120° (25 throws) Rest 9 minutes Warm-up throwing 120° (25 throws) Rest 9 minutes Warm-up throwing 120° (25 throws)
150° phase	<i>Step 9:</i> Warm-up throwing 150° (25 throws) Rest 10 minutes Warm-up throwing 150° (25 throws)	<i>Step 10:</i> Warm-up throwing 150° (25 throws) Rest 10 minutes Warm-up throwing 150° (25 throws) Rest 10 minutes Warm-up throwing 150° (25 throws)

Distance/Endurance Protocol (continued)

180° phase	<p><i>Step 11:</i> Warm-up throwing 180° (25 throws) Rest 10 minutes Warm-up throwing 180° (25 throws)</p>	<p><i>Step 12:</i> Warm-up throwing 180° (25 throws) Rest 10 minutes Warm-up throwing 180° (25 throws) Rest 10 minutes Warm-up throwing 180° (25 throws)</p>	<p><i>Step 13:</i> Warm-up throwing 180° (25 throws) Rest 10 minutes Warm-up throwing 180° (25 throws) Rest 10 minutes Warm-up throwing 180° (25 throws)</p>

Pitching Protocol

Phase I: (fastball only - normal stride)	<i>Step 1:</i> Interval throwing <ul style="list-style-type: none"> • 15 throws off mound 50% • Rest 6 minutes • 20 throws off mound 50% 	<i>Step 2:</i> Interval throwing <ul style="list-style-type: none"> • 20 throws off mound 50% • Rest 6 minutes • 25 throws off mound 50% 	<i>Step 3:</i> Interval throwing <ul style="list-style-type: none"> • 20 throws off mound 50% • Rest 6 minutes • 25 throws off mound 50%
	<i>Step 4:</i> Interval throwing <ul style="list-style-type: none"> • 45 throws off mound 50% • Rest 6 minutes • 50 throws off mound 50% 	<i>Step 5:</i> Interval throwing <ul style="list-style-type: none"> • 35 throws off mound 75% 	<i>Step 6:</i> <ul style="list-style-type: none"> • 35 throws off mound 75% • Rest 6 minutes • 45 throws off mound 50%
	<i>Step 7:</i> <ul style="list-style-type: none"> • 45 shows off mound 75% • Rest 6 minutes • 15 shows off mound 50% 	<i>Step 8:</i> <ul style="list-style-type: none"> • 60 throws off mound 75% 	
Phase II: (fastball only - normal stride)	<i>Step 9:</i> <ul style="list-style-type: none"> • 45 throws off mound 75% • Rest 6 minutes • 15 throws in batting practice 	<i>Step 10:</i> <ul style="list-style-type: none"> • 45 throws off mound 75% • Rest 6 minutes • 30 throws in batting practice 	<i>Step 11:</i> <ul style="list-style-type: none"> • 45 throws off mound 75% • Rest 6 minutes • 35 throws in batting practice
Phase III:	<i>Step 12:</i> 30 throws off mound 75% warm-up Rest 4 minutes 15 throws off mound 50% breaking balls Rest 4 minutes 45-60 throws in batting practice (fastball only)		

Pitching Protocol (continued)

Phase III:	<i>Step 12:</i> <ul style="list-style-type: none"> • 30 throws off mound 75% warm-up • Rest 4 minutes • 15 throws off mound 50% breaking balls • Rest 4 minutes • 45-60 throws in batting practice (fastball only) 	<i>Step 13:</i> <ul style="list-style-type: none"> • 30 throws off mound 75% • Rest 4 minutes • 30 breaking balls 75% • Rest 4 minutes • 30 throws in batting practice 	<i>Step 14:</i> <ul style="list-style-type: none"> • 30 throws off mound 75% • Rest 4 minutes • 60-90 throws in batting practice 25% breaking balls
	<i>Step 15:</i> Simulated game		

Simulated game

- 10 minute warm up of 50-60 pitches with gradually increasing velocity
- 5-8 Innings for starters, 3-5 innings for relievers, 2-3 innings for closers
- 15-20 Pitches per inning, includes 10-15 fastballs
- 9 Minutes rest between innings