**Rehabilitation for the Overhead Athlete**

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**FATIGUE**Target the muscles that are going to be fatigued in play – MAKE IT FUNCTIONAL

  

**ECCENTRICS**

Always important to consider eccentric and concentric demands!

 

**PLYOMETRICS**

Use in the advanced stages of rehab to increase dynamic neuromuscular stabilization

* Ballistic Six Program
	+ ER with theraband @ 0° shoulder abduction
	+ ER with theraband @ 90° shoulder abduction
	+ Overhead “soccer throw-in” with medicine ball
	+ 90/90 ER side-throw
	+ Deceleration baseball throw (can be done standing or half-kneeling)
	+ Baseball throw

 

**PROPRIOCEPTION**

The athletes need to realize where their body is in space to activate the correct muscles

\*Involves kinesthesia, joint position sense and neuromuscular control!

 

**KINETIC CHAIN**

Definitely do not want all of the force to come from the arm! Make the whole body work!

 

**General Rehabilitation Flow Sheet for OH Athlete Shoulder Injuries**

Kibler WB, McMullen J, Uhl T. Shoulder rehabilitation strategies, guidelines, and practice. *Oper Tech Sports Med.* 2012; 20: 103-112.



**DUKE SPORTS MED PITCHER’S THROWING PROGRAM**

**Attention to mechanics**

**Throw on line, sub-max, comfort zone**

**Criteria for next level**

**No pain or stiffness when throwing**

**No pain or stiffness after throwing**

**Effortless motion**

**Accurate**

**Every other day – may go to every 3rd day if fatigue/soreness persists**

**3 days at each level**

**45 FEET:**

First day

Warm-up throws at 20-45 feet

25 throws at 45 feet

1 set only

Rest next day

Warm-down throws

Level 2:

Warm-up throws at 20-45 feet

25 throws at 45 feet

2 sets

Rest 10 minutes between sets

Warm-down throws

Throw on alternate days

**60 FEET:**

Level 1

Warm-up throws at 20-60 feet

25 throws at 60 feet

2 sets

Rest 10 minutes between sets

Warm-down throws

Throw on alternate days

Level 2

Warm-up throws at 20-60 feet

25 throws at 60 feet

3 sets

Rest 5-10 minutes between sets

Warm-down throws

Throw on alternate day

**90 FEET:**

Level 1

Light warm-up throws at 20-90 feet

25 throws at 90 feet

2 sets

Rest 10 minutes between sets

Warm-down throws

Throw on alternate days.

Level 2

Light warm-up throws at 20-90 feet

25 throws at 90 feet

3 sets

Rest 5-10 minutes between sets

Warm-down throws

Throw on alternate days

**105 FEET:**

Level 1

Warm-up throws at 20-105 feet

25 throws at 105 feet

2 sets

Rest 10 minutes between sets

Warm-down throws

Throw on alternate days.

Level 2

Warm-up throws at 20-105 feet

25 throws at 105 feet

3 sets

Rest 5-10 minutes between sets

Warm-down throws

Throw on alternate days

**120 FEET “Hat drills”**

Level 1

Warm-up throws at 20-120 feet

Hat drill throws at 120 feet (25 throws)

2 sets

Rest 10 minutes between sets

Warm-down throws

Throw on alternate days

10 minute toss on off day

Level 2

Warm-up throws at 20-120 feet

Hat drill throws at 120 feet (25 throws)

3 sets

Rest 5-10 minutes between sets

Warm-down throws

Begin flat ground pitching at 45 feet

Throw on alternate days

10 minute toss on off day

**MOUND PROGRAM:**

Fast Ball (FB), Change (CH), Breaking Ball (BrB), Bullpen/Batting Practice (BP)

**Level 1** Warm-up throws at 20-120 feet

 1 set Hat drill throws at 120 feet 25 throws

 Rest 10 minutes

 Throw from mount (FB only) 25 throws

 50 foot throw – move catcher forward

 Warm-down throws

 Throw on alternate days

 10 minute toss on off day

 Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off

**Level 2** Warm-up throws at 20-120 feet

 1 set Hat drill throws at 120 feet 25 throws

 Rest 10 minutes

 Throw from mount (FB, CH: 1 of 5 CH) 35 throws

 55 foot throw – move catcher forward

 Warm-down throws

 Throw on alternate days

 10 minute toss on off day

 Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off

**Level 3** Warm-up throws at 20-120 feet

 1 set Hat drill throws at 120 feet 25 throws

 Rest 10 minutes

 Throw from mount (FB, CH: 1 of 5 CH) 40 throws

 55 foot throw – move catcher forward

 Warm-down throws

 Throw on alternate days

 10 minute toss on off day

 Rotate as follows: Thr/Off/Thr/Off/Off/Thr/Off/Thr/Off/Off

**Level 4** Routine warm-up

 Short Bullpen (1 of 5 BrB) 8-10 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 5** Routine warm-up

 Short Bullpen (1 of 5 BrB) 10-12 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 6** Routine warm-up

 Full Bullpen 12-15 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 7** Routine warm-up

 Short Batting Practice 8-10 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 8** Routine warm-up

 Short Batting Practice 10-12 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 9** Routine warm-up

 Batting Practice/Simulated Game 12-15 minutes

 Routine warm-down

 10 minute toss on off day

 Rotate as follows: BP/Off/BP/Off/Off/BP/Off/BP/Off/Off

**Level 10** Routine Pre-game warm-up

 Pitch in game (40 pitch count) 1-2 Innings

 Routine Post-game warm-down

 Increase pitch count and innings based on progress

**Pitchers Post Injury Throwing Program**

**Goal:**

To establish a total body awareness and control of his throwing movement before being allowed to return to normal pitching duties.

**Phase 1:**

 Player starts at a distance of 15 steps, 2-3 sets of 25 throws on a line with 5 minutes recovery between sets.

**PASS – FAIL**:

If the player can complete this task pain-free, then he may progress to Phase 2 and start the progressive throwing program. If the player can not complete Phase 1 or shows signs of poor range of motion, pain and discomfort – the program must stop at this point. The player will then return to the training room or physical therapy clinic for more treatment and functional work.

 **Coaching Point**:

During all phases of the throwing program, the player must use correct footwork and proper throwing mechanics. This is a must and needs to be monitored to ensure that a controllable amount of stress is placed on the injured area.

**Phase 2:**

The player shoulder be going through this program, 2 days on, 1 day off. The player will perform only 1 step per day. The player must be pain-free, throw with good arm mechanics/footwork, and have good accuracy (75% of throws must hit in the center chest area) before the athlete may progress to the next step.

**Pain with Throwing**:

If the athlete experiences pain while throwing, he is to stop throwing at that point of the program, take the day off and drop back one phase in the throwing program the following day.

If the athlete experiences pain or soreness after throwing and the next day it does not improve after warm-up throwing, take the day off and drop back one phase in the throwing program the following day.

If the athlete does not experience pain or soreness while throwing, but experiences some soreness the following day and the soreness disappears after warm-up throwing, continue with the program at that step or phase. If the athlete experiences severe or chronic pain or soreness, he returns to the training room for more treatment and functional work. The athlete may need 1-2 days or more of rest and treatment before he returns to the throwing program. The athlete must be pain-free before he returns to the throwing program. If the athlete has been shut down from throwing for a period of time, he should drop back one to two phases or more in the throwing program from where he experienced pain.

**Rehab Program**

The athlete should throw first, perform the Hitting Progression program second (if position player), rehab exercises third, and finally finish with the strength and conditioning program (with modifications per injury).