

Criteria to initiate program:

* Proper alignment and eccentric control with bilateral and unilateral closed chain movements.
* Complete 4 week return to jogging program to build aerobic base to prepare for more intense runs. Athlete should be able to jog for 10 consecutive minutes prior to starting program. Goal is not speed or distance when jogging 10 minutes but having a solid aerobic foundation to build upon.
* Single leg single hop test and single leg press >70% on Limb Symmetry Index.

Key notes:

* Perform program on every other day basis to allow for 24-48 hours recovery time.
* Perform each level 2-3 sessions before moving on to next level- move to next level once able to complete with proper mechanics, good strength, and without symptoms.
* Athletes will progress at different rates through the program dependent upon confidence, degree of inflammation, severity of injury, age, and type of surgical intervention. Pain and swelling are the best guides to determining tolerance at each phase and whether an athlete should progress to the next step. Progression through the phases is combined evaluation and guidance of rehab provider and coach.
* Setbacks are common during return to sport progressions and sound judgment should be used regarding an extra rest day(s) or regressing back to prior phase if pain and swelling are problematic.
* Continue with strengthening exercises 2-3 times a week while progressing through program- strengthening exercises may overlap days of program and be performed after; however, must have one complete rest day per week.
* Active warm-up to initiate each session with cooldown following. Ice for 10-15 minutes following session as pain and swelling dictate.

Active warm-up

Pre-running drills (15 yards down and back each): jogging, skipping, side shuffle, backpedal, high knees, butt kicks, grapevine

Dynamic stretching (10 yards down and back each): single leg RDL, quad stretch, side lunge, forward lunge, reverse lunge, knee tucks, glute stretch, inchworms, arm swings

Footwork drills: speed ladder or hurdles

Cool down

 5-10 minutes global upper extremity, trunk, and lower extremity stretching

Ice for 10-15 minutes as pain and swelling dictates

Phase I:

* Goal: build confidence with running, linear running drills with acceleration and deceleration, build confidence with swing technique, no participation in team drills
* Limb Symmetry Index: >70% with single leg single hop and single leg press
* Level 1:
	+ 60 yard run at 50-60% intensity x 10 repetitions (20 yard acceleration with 50-60% as top speed and then gradual deceleration), 20-25 second rest time
	+ 10 yards backpedal run at 50% intensity x 10 repetitions, 20-25 second rest time
* Level 2:
	+ 60 yard run at 60-75% intensity x 10 repetitions (decrease acceleration distance to 10 yards and deceleration distance to 10 yards), 20-25 second rest time
	+ 10 yard backpedal run at 60-75% intensity x 5 repetitions
	+ Sprint transition at 50% intensity (5 yards forwards/5 yards backwards) x 5
	+ Sprint transition at 50% intensity (5 yards backwards/5 yards forwards) x 5
	+ Focus on planting with involved leg during sprint transitions
* Level 3:
	+ 40 yard run at 75% intensity x 10 repetitions (5-10 yard acceleration and deceleration distance), 20-25 second rest time
	+ 10 yard backpedal run at 60-75% intensity x 5 repetitions
	+ Sprint transitions at 60-75%
		- 5 yards forward/5 yards backwards x 5-10
		- 5 yards backwards/5 yards forwards x 5-10
	+ Zig-zag run at 50% intensity for 15-20 yards x 5-10 repetitions
		- Start with large interval between cones and gradually decrease distance for changing directions
	+ Box drills at 50-60% x 3 repetitions each direction
		- Cones mark box that is 20-25 feet each side
		- Forward, shuffle, backpedal, shuffle

Sport specific:

* Straight plane dribbling forward and backwards at 50% speed
* Lateral plane dribbling at 50% speed with change in direction at visual stimulus (cone/line)
* Stationary shots from inside the 3-point line
* Free throws from foul line

Phase II:

* Goal: speed development and running technique, initiate change in direction with visual stimulus of place to change direction
* Limb Symmetry Index: >80% with single leg single hop and single leg press
* Level 1:
	+ Run length of court (94 feet) at 80% intensity x 10 repetitions
	+ Sprint transitions at 80% intensity x 5 each direction (forward to backwards and backwards to forwards, each at 5 yard distance)
	+ Cone drills/cutting (zig-zag drill without ball) for width-length of court x 4 repetitions at 50% intensity
		- Focus on getting low and bending knees to change direction with outside foot. Gradually move cones closer for a sharper angle cut.
	+ Box drills at 60-75% intensity x 3 repetitions each direction
		- Cones mark box that is 20-25 feet each side
		- Forward, shuffle, backpedal, shuffle
* Level 2:
	+ Run length of court (94 feet) at 90% intensity x 10 repetitions
	+ Run width of court (50 feet) at 90% intensity x 10 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 60-75% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 50% intensity
	+ Box drills at 75% intensity x 3 repetitions each direction (20-25 foot box; forward, shuffle, backpedal, shuffle)
* Level 3:
	+ Run length of court (94 feet) at 90% intensity x 12-15 repetitions
	+ Run width of court (50 feet) at 90% intensity x 10 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 75% intensity with sharper angle cut
	+ Backpedal cone drills for length of court x 4 repetitions at 60-75% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 50% intensity
	+ 50% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-near free throw line-baseline) x 4 repetitions
	+ Box drills at 75% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with visual stimulus to change directions
* Level 4:
	+ Run length of court (94 feet) at 90% intensity x 12-15 repetitions
	+ Run width of court (50 feet) at 90% intensity x 12-15 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 75% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 75% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 60-75% intensity
	+ 50% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-far free throw line-baseline-far baseline-starting baseline) x 4 repetitions
	+ Box drills at 75-85% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with visual stimulus to change directions
	+ Backpedal into turn and run at 50% intensity
	+ Linear run at 50% into jump stop
		- Start with athlete chosen stop and progress to visual or verbal instruction to stop
* Level 5:
	+ Run length of court at 100% intensity x 12-15 repetitions
	+ Run width of court at 100% intensity x 12-15 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 80-90% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 80-90% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 75-85% intensity
	+ 60-75% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-far free throw line-baseline-far baseline-starting baseline) x 4 repetitions
	+ Box drills at 75-85% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with auditory stimulus to change directions
	+ Backpedal into turn and run at 60-75% intensity
	+ Linear run at 60-75% into jump stop
		- Start with athlete chosen stop and progress to visual or verbal instruction to stop

Sport specific:

* Dribbling forward and backwards at 75% speed
* Multidirectional dribbling (around cones, to markers, zig-zag drill, etc) at 50% speed
* Lateral dribbling at 75% speed with change in direction at visual stimulus (cone/line) progressing to auditory command
* Short distance shots (inside 3-point line)
	+ 10 jump shots
	+ 10 layups to each side
* Longer distance shots
	+ 10 shots outside 3-point line

Phase III:

* Goal: build repeated sprint ability, introduce sport-specific demands with participation in team drills, change in direction with reactive or auditory stimulus, linear speed at 90-100% intensity, multidirectional speed at 80-100%
* Level 1:
	+ Run length of court at 100% intensity x 15 repetitions
	+ Run width of court at 100% intensity x 15 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 90-100% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 90-100% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 75-85% intensity
	+ 75-85% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-far free throw line-baseline-far baseline-starting baseline) x 4 repetitions
	+ Box drills at 80-90% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with auditory stimulus to change directions
	+ Backpedal into turn and run at 75-85% intensity
	+ Linear run at 75% into jump stop
	+ Lateral shuffle at 50% into jump stop
	+ Backpedal at 50% into jump stop
		- Start with athlete chosen stop and progress to visual or verbal instruction to stop
* Level 2:
	+ Run length of court at 100% intensity x 15 repetitions
	+ Run width of court at 100% intensity x 15 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 100% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 100% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 80-90% intensity
	+ 80-90% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-far free throw line-baseline-far baseline-starting baseline) x 4 repetitions
	+ Box drills at 90-100% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with auditory stimulus to change directions
	+ Backpedal into turn and run at 80-90% intensity
	+ Linear run at 80% intensity into jump stop
	+ Lateral shuffle at 60-75% into jump stop
	+ Backpedal at 60-75% into jump stop
* Level 3:
	+ Run length of court at 100% intensity x 15 repetitions
	+ Run width of court at 100% intensity x 15 repetitions
	+ Cone drills/cutting for length of court x 4 repetitions at 100% intensity
	+ Backpedal cone drills for length of court x 4 repetitions at 100% intensity
	+ Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 90-100% intensity
	+ 90-100% intensity for line shuttle (baseline-near free throw line-baseline-half court line-baseline-far free throw line-baseline-far baseline-starting baseline) x 4 repetitions
	+ Box drills at 100% intensity (20 foot box; forward, shuffle, backpedal, shuffle) with auditory stimulus to change directions
	+ Backpedal into turn and run at 90-100% intensity
	+ Linear run at 90-100% intensity into jump stop
	+ Lateral shuffle at 75-85% into jump stop
	+ Backpedal at 75-85% into jump stop

Sport specifics:

* Straight line dribbling at 100% speed
* Multidirectional dribbling and change in speed at 75% progressing to 100% speed (zig-zag drill)
* Lateral dribbling movements with changing direction on auditory command at 75% progressing to 100% speed
* Shooting on the run
	+ Half court to top of the key
	+ Half court to wing
	+ Half court to corner
* Short distance shots (inside 3-point line)
	+ 10 jump shots
	+ 10 layups to each side
* Longer distance shots
	+ 10 shots outside 3-point line
* Participation in non-contact team drills (passing, walk throughs on offense and defense, etc)

Phase IV:

* Goal: maximal speed including changes in direction, acceleration, and deceleration, technical skills progression and participation in team drills
* Limb Symmetry Index: >90% on single leg single hop and single leg press
* Participation in team conditioning at full intensity

Sport specific:

* 1-on-1 with teammate
* Half court team scrimmage

Phase V:

* Goal: full intensity in training sessions in all scenarios with limited playing time initially progressed to unlimited playing time to prepare for game play
* Participation in team conditioning at full intensity

Sport specific:

* Scrimmage with team full court