A close-up of a logo

Description automatically generated

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 second rest time
  + 10 yard backpedal run at 60-75% intensity x 5 repetitions, 20 second rest time
  + 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 feet each side
    - Forward, shuffle, backpedal, shuffle

Sport specific:

* Bump passes at 50% effort
* Sets at 50% effort
* Serves at 50% effort

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 at 80% intensity x 10 repetitions, 15 second rest break
  + Sprint transitions at 80% intensity x 5 each direction (forward to backwards and backwards to forwards, each at 5 yard distance)
  + Lateral shuffle from centerline to 10-foot line at 50% intensity x 4 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 60-75% intensity x 3 repetitions each direction
    - Cones mark box that is 15 feet each side
    - Forward, shuffle, backpedal, shuffle
* Level 2:
  + Run length of court at 90% intensity x 10 repetitions, 15 second rest break
  + Run width of court at 90% intensity x 10 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 60% intensity x 4 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 75% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Jump, shuffle, jump, sprint at 50% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
* Level 3:
  + Run length of court at 90% intensity x 10 repetitions, 15 second rest break
  + Run width of court at 90% intensity x 10 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 60-75% intensity x 4 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 75% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 50% intensity
  + Jump, shuffle, jump, sprint at 60% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
* Level 4:
  + Run length of court at 90% intensity x 12 repetitions, 15 second rest break
  + Run width of court at 90% intensity x 12 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 75% intensity x 5 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 75-90% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 60-75% intensity
  + Jump, shuffle, jump, sprint at 60% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
  + Backpedal into turn and run at 50% intensity
  + Linear run at 50% into jump stop to prepare for block
* Level 5:
  + Run length of court at 100% intensity x 12 repetitions, 15 second rest break
  + Run width of court at 100% intensity x 12 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 75-85% intensity x 5 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 90% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 75-85% intensity
  + Jump, shuffle, jump, sprint at 75% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
  + Backpedal into turn and run at 60-75% intensity
  + Linear run at 60-75% into jump stop to prepare for block

Sport specific:

* Bump passes at 75% effort
* Sets at 75% effort
* Serves at 60-75% effort
* Digs at 50% effort
* Blocks at 50-75% effort
* Easy full-court hits
* Footwork: approach net at 50% effort progressing to 75% effort

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 12 repetitions, 15 second rest break
  + Run width of court at 100% intensity x 12 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 90-100% intensity x 5 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 100% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 80-90% intensity
  + Jump, shuffle, jump, sprint at 80-90% intensity x3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
  + Backpedal into turn and run at 75-85% intensity
  + Linear run at 75-85% into jump stop to prepare for block
  + Lateral shuffle at 50% into jump stop to prepare for block
  + Backpedal at 50% into jump stop
* Level 2:
  + Run length of court at 100% intensity x 12 repetitions, 15 second rest break
  + Run width of court at 100% intensity x 12 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 100% intensity x 5 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 100% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 90-100% intensity
  + Jump, shuffle, jump, sprint at 90-100% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
  + Backpedal into turn and run at 80-90% intensity
  + Linear run at 80-90% into jump stop to prepare for block
  + Lateral shuffle at 60-75% into jump stop to prepare for block
  + Backpedal at 60-75% into jump stop
* Level 3:
  + Run length of court at 100% intensity x 12 repetitions, 15 second rest break
  + Run width of court at 100% intensity x 12 repetitions, 15 second rest break
  + Lateral shuffle from centerline to 10-foot line at 100% intensity x 5 repetitions
    - 1:1 ratio of work: rest (ex. 30 seconds on: 30 seconds off)
  + Box drills at 100% intensity x 3 repetitions each direction (15 foot box; forward, shuffle, backpedal, shuffle)
  + Backpedal run into forward sprint with reacting to direction (lateral, forward, forward angle) at 90-100% intensity
  + Jump, shuffle, jump, sprint at 100% intensity x 3 repetitions (1:4 work: rest ratio)
    - Start on 10-foot line facing sideline. 3 squat jumps for height, shuffle from 10-foot line to centerline and back 3 times, 3 squat jumps for height, sprint from 10-foot line to opposite 10-foot line and back 3 times.
  + Backpedal into turn and run at 90-100% intensity
  + Linear run at 90-100% into jump stop to prepare for block
  + Lateral shuffle at 75-85% into jump stop to prepare for block
  + Backpedal at 75-85% into jump stop

Sport specifics:

* Bump passes at 75-90% effort
* Attack hits at 75-90% effort
* Sets at 75-90% effort
* Game placement serves
* Digs at 50-75% effort
* Blocks at 75-90% effort
* Easy full-court hits
* Footwork: approach net at 75% effort progressing to 100% effort

Phase IV:

* Full participation in team drills with 75% effort in scrimmages
* Participation in team conditioning at full intensity

Phase V:

* 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