## (n)Sports Medicine University of Colorado

## Running Progression Program \& Guidelines

## Purpose of this Program:

This program was developed to optimize the return to sporting activities with minimal setbacks by establishing a progressive stepwise program. Included in this program are a dynamic warm up, recommended strengthening exercises, a plyometric/drill progression, and a return to running progression. This program is only a guideline which can be altered according to individual needs.

## Key Points:

1. Progress gradually: give your recovering tissue and joints time to adapt to load
2. Avoid speed and hills in early progressions
3. Start running on soft surface or treadmill before progressing to pavement/road
4. Cross train especially in initial phases
5. Incorporate adequate recovery between runs

## Monitor Discomfort Level:

| Acceptable: Continue to Progress Training | Unacceptable: Back off Training |
| :--- | :--- |
| 1. General muscle soreness | 1. Pain that lasts for 2-3 days after a workout |
| 2. Slight joint discomfort after workout or next day <br> that is gone in 24 hours | 2. Pain that is evident at the beginning of a run/walk <br> then becomes worse as run/walk continues |
| 3. Slight stiffness at beginning of run or walk that <br> dissipates after first 10 minutes | 3. Pain that is keeping you awake at night |
|  | 4. Pain that changes your stride |

## Strength Maintenance Exercises:

During this program, it is important to continue strengthening exercises provided by your physical therapist. Some examples include:


Dynamic Warm-Up: This warm-up should be performed prior to each workout or run to make sure the muscles used with running are warmed up, activated, and the mobility needed to perform the activity is available.

| Exercise | Repetitions | Video Links |
| :---: | :---: | :---: |
| Soldier Walks |  | Soldier Walks <br> https://youtu.be/hB3OsqYJuW8 <br> $2 \times 20$ steps |
| Glute Kicks |  | Clute Kicks <br> https://youtu.be/H2OQ9v4k8g8 |
| Swing Kicks |  | Swing Kicks <br> https://voutu.be/0G6czNCrTXg $2 \times 20$ steps |
| Knee Hug to Calf Raise |  | Knee Hug to Calf Raise <br> https://voutu.be/RiYVoDjdbys <br> $2 \times 20$ steps |
| In/Out Heel Taps |  | In/Out Heel Taps <br> https://voutu.be/61ZT2tPZsmw $2 \times 20$ steps |
| Walking Lunges with Reach and Rotation |  | Walking Lunges Reach-Rotate <br> https://youtu.be/OGO1ZsckaDk $2 \times 10$ steps |
| Lunge Twist |  | Lunge Twist <br> https://voutu.be/DVFwBCQQnHo $2 \times 10$ steps |
| Quick Steps | 20 in place then forward $20 \mathrm{ft}, 20$ in place then backward 20ft $2 x$ | Quick Steps <br> https://youtu.be/BMLrzElmuNM |
| Single Leg Mini-Squat to Calf Raise |  | Single Leg Mini-Squat to Galf <br> Raisehttps://youtu.be/Kpid9kelUnsX12 each leg |

## Phase 1: Walking Program

You should be able to walk 30 minutes pain free at a fairly aggressive pace ( 3.5 miles per hour or higher). Start on a treadmill before progressing to outdoor surfaces.

## Phase 2: Quick Response and Plyometric Routine

Quick muscle response and plyometrics will be initiated in this phase, progressing to about 500-600 foot contacts between 1 and 2 legs. Successful completion of this phase is a good indicator that an athlete is ready to initiate the running program.

Level 1:

| Ladders (40 ft) |  |
| :---: | :---: |
| Forward- 2 feet each box | X1 |
| Lateral- 2 feet each box | X1 |
| Forward-1 foot each box | X1 |
| In-In/Out-Out | X1 |
| In-In/Out (zig-zag shuffle) | X1 |
| Rest 2 minutes, Repeat x 3 | Ladders |


| 2 Foot Line Jumps Front/Back with Bounce |  | 2 Foot Line Jumps <br> https://youtu.be/7cqivO8yhUk $3 \times 12$ |
| :---: | :---: | :---: |
| 2 Foot Dot Hops |  | Dot Hops <br> https://voutu.be/zB6s32K 654 $3 \times 3$ rounds each way |
| Alternating Hop/Hold |  | Alternating Hop/Hold <br> https://youtu.be/f33-b-spZeo $3 \times 10$ total jumps |
| Alternating 1 Leg Hops with Bounce |  | Alternating Hop/Bounce <br> https://youtu.be/hixtS7t0 SU $3 \times 10$ total jumps |

Upon completion of the Level 1 plyo program, the walk/jog progression can be initiated if the following criteria have been met:

1. Successful completion of Phase I and II.
2. No pain with daily activities.
3. Walk without a limp.

## Walk/Jog Program

Goal: To initiate and gradually progress your running volume without an increase in symptoms. It may be best to begin your running program on a treadmill as you have more control over speed and distance before proceeding to outdoors.

## Key Points:

1. No hills or incline.
2. No speed work.
3. Work on form.
4. Run every other day

## Walk/Jog Progression:

| Run Interval | Walk Interval | Repetitions | Total Run Time | Total Time Spent |
| :---: | :---: | :---: | :---: | :---: |
| 1 minute | 1 minute | $\mathrm{X7}$ | 7 minutes | 14 minutes |
| $2-3$ minutes | 1 minute | X 5 | $10-15$ minutes | $15-20$ minutes |
| $3-5$ minutes | 1 minute |  | 20 minutes | $24+$ minutes |

Run until fatigue or form failure, then walk 1-2 minutes, repeat for a total run time of 25-30 minutes Initiate running outdoors
Jog every other day with a goal of reaching $\mathbf{3 0}$ consecutive minutes.
** End each run with a 3-5 minute walk and mobility/stretching exercises.
** Do each step 2-3 times before progressing to the next step.
Depending on your athletic goals and recommendations of your physical therapist, continue with the level 2 and 3 drills, and the return to distance running program.

Level 2 Drills:
Do all $\mathbf{1 / 2}$ court, down and back $3 x$ with a 2 min. rest between sets



## Level 3 Drills:

| Matrix Jacks $3 \times 30 \mathrm{sec}$ |  | Matrix Jacks <br> https://youtu.be/2LT9CbeAVfQ |
| :---: | :---: | :---: |
| 1 Foot Forward Line Hops <br> a) Pause: $3 \times 12$ <br> b) No pause: $3 \times 12$ |  | 1 Ft Forward Line https://youtu.be/niv_fSOusGc |
| 1 Foot Line Hops w/Bounce <br> a) Front/back: $3 \times 10$ <br> b) Side/side: $3 \times 10$ |  | Line Hops Bounce <br> https://www.youtube.com/watch?v=DALpKQE6zfs |
| 1 Foot Dot Hops (start with pause, progress to hot dots) 2-3 x3 each way |  | 1 Ft Dot Hops <br> https://youtu.be/kQfms RmTpo |
| Skater Hops $3 \times 45$ seconds/1 minute |  | Skater Hops <br> https://youtu.be/014ziA73p7w |
| Box Hoppers $3 \times 12$ |  | Box Hoppers <br> https://voutu.be/JdSVfzDfTOA |
| Jump Rope | 2-3 sets of: 2 feet $\times 50$; R/L alternate $\times 50$; R only $\times 15$; $L$ only $\times 15$ |  |

## Phase 3: Return to Distance Running

## Guidelines:

1. Work below your breakpoint: find your baseline.

- Your baseline is the distance you can run without pain during the run and for 48 hours after the run. First find your baseline on a treadmill as you have more control over speed and distance. Run for as long as comfortable, stop if painful and note distance, time and pace. The goal is to identify a distance and speed you can do without increasing your symptoms. When you feel comfortable on the treadmill, you can progress to a level running route outdoors.

2. Allow at least one day between each run.

- It may take longer depending on discomfort or recovery.

3. Change one thing at a time (distance, speed, hills).
4. Progress gradually.

## Progression Guidelines:

- Weeks 1-2:
- Run 2-3 times per week.
- Always separated by a rest day.
- Two shorter runs between 50-60\% of your baseline.
- One longer run at baseline distance.


## - Weeks 3-6:

- Run 3 times per week separated by a rest day all at baseline level.
- Increase distance by $10 \%$ each week.
- 5+ Weeks:
- Reassess your baseline.
- Increase your distance accordingly.
- Monitor your pain during and for 24-48 hours after you increase.
- Progress weekly volume and long run distance by no more than $10 \%$ each week.
- Once you reach your goal distance, you can then initiate speed work or hill work.
- ONLY change one thing at a time (ie. If you add speed work do not increase distance, do not add hills.) When initiating hill work, be cautious of down hills.

