A Return to Running Plan

Post-injury, follow this step-by-step plan with guidelines to evaluate what pain is okay to run through and what is not.

Sarah Barker Jan 19, 2022

Let's say you're coming back from patellar realignment surgery. Or a stress fracture, or a ruptured Achilles — something that kept you out of action for more than four weeks. Just like training, returning from injury is highly individual, maddeningly non-linear, and clouded with uncertainty. Two steps forward, one back. And then a sideways slide?

Even if you're working with a physical therapist, things come up and decisions have to be made on the fly. Should you run? If it hurts a little? Is that stiffness? What's normal?

What's needed is a Return To Running decision tree, an algorithm that follows every twist and turn of the recovery dance. I was given such a thing by Krystan Coyle, a physical therapist with Twin Cities Orthopedics in Minnesota, as I rehabbed from patellar realignment. It was enormously helpful, and so practical I found myself consulting it almost daily in the months it took to get back to my pre-surgery level of running. I rang Krystan up to talk about the provenance of the Return To Running guide.

She was quick to point out that this guide was a mashup of a protocol devised by Brigham and Women's Hospital in Boston, and other evidence-based

information gleaned from the years of practice of the therapists at Twin Cities Orthopedics who specialize in running.

Prerequisites

Prerequisite to anything that looks like running is the ability to walk for 30 minutes, and do everyday activities like climbing stairs, standing for a period of time, and getting into and out of chairs with a pain level no more than 2 out of 10.

Another prerequisite, according to the RTR guide, was being able to complete a large number of double- and single-leg hops that mimic the landing and pushing off of running. Krystan amended this part of the program in my case, in favor of 30 single-leg calf raises per leg.

Two other caveats, Krystan added: Swelling should be gone or minimal before embarking on running since it impedes normal motion; and those returning from a stress reaction or stress fracture should work with a nutritionist to ensure they're meeting energy needs as they return to running. This will reduce the risk of re-injury.

First Jogs

All those prerequisites met? Fine, you're ready to jog. For one minute. On a flat, even surface. Like a treadmill. Though it's not mentioned explicitly, every phase of this program is inherently a patience-building opportunity. Though progress is the game, players must accept that there will be many *go back one spaces*, some *lose a turns*, but hopefully not a *return to start*.

	Walk	Jog	Repetitions	Total Time
Stage 1	5 min	1 min	5x	30 min
Stage 2	4 min	2 min	5x	30 min

The planned progression looks like this:

Stage 3	3 min	3 min	5x	30 min
Stage 4	2 min	4 min	5x	30 min

Exciting, huh? These 30-minute "workout" stages are to be done every other day. That allows you to assess your body's reaction both during the 30-minute activity and in the 24 hours following. Begin and end each 30-minute session with 5 minutes of walking. Off days can involve walking, 30 minutes of non-impact cardio, or total rest. You should be able to accomplish the stage without pain before advancing to the next one. Again, rate of progress is highly individual, and your path will very likely involve some returns to a previous stage.

Tightness Evaluation \rightarrow Action

Some muscle soreness and tightness is to be expected. Here's what to do...

If tightness is experienced \rightarrow stop and stretch the affected area for 30 seconds \rightarrow resume stage

If tightness returns \rightarrow stretch again \rightarrow resume stage

If tightness is not alleviated by stretching and affects your running form \rightarrow stop running, walk remainder of 30 minutes \rightarrow next time, go back to previous stage \rightarrow advance to next stage when you can complete the current stage with a normal stride

Pain Evaluation \rightarrow Action

There's tightness and there's pain. Let's talk about pain. Here's what to do...

If pain is noted at the start of activity, but goes away within 10 minutes \rightarrow complete the 30-minute stage that day \rightarrow next time, stay at the same stage until it can be done pain-free

If pain is evident at the start of activity and remains after 10 minutes or gets worse \rightarrow stop running for the day, ice for 20 minutes \rightarrow return to previous stage the next workout day

If pain is noted after the 30-minute activity \rightarrow gently stretch the affected area, ice for 20 minutes \rightarrow next time, go back to previous stage \rightarrow advance when no pain is noted during or after activity

If pain comes on at night or wakes you up \rightarrow return to previous state the next workout day

If pain is evident in the morning \rightarrow return to previous stage the next workout day even if pain diminishes as the day goes on

If pain moves around and does not change your stride \rightarrow continue workout for the day \rightarrow next workout day, you may advance to the next stage but keep pace easy

If pain is sharp and in a constant location \rightarrow stop running for the day \rightarrow take two rest days, resume at previous level preferably on a soft surface

Pain That is Okay

In general, pain that allows you to continue running that day and maintain rehab level, is:

- General muscle soreness
- Slight joint discomfort after workout or next day that is gone in 24 hours
- Slight stiffness at beginning of run or walk that dissipates after first 10 minutes
- Pain that is generalized or moves around

Pain That is Not Okay

Pain that requires cessation of running for the day, rest and a cautious return at a lower stage, is pain that:

- Keeps you awake at night
- Evident at beginning of the 30-minute session, doesn't diminish, and may become worse
- Changes your stride
- Is accompanied by swelling in joint
- Is sharp and consistent in location

Continuous and Consecutive Runs

After completing Stage 4 pain-free, continue to decrease walk breaks until you can run 30 minutes consecutively, every other day. That marks a new phase — congrats! — of gradually longer runs every other day, and after 8 weeks, back-to-back days of running. Off days can involve non-impact cardio, walking, or rest. Like the earlier walk/jog stages, the progression below is a general outline and should not be thought of as linear.

Week		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1	Minutes	30	_	30	_	30	_	35
2		-	30	_	30	_	35	-
3		35	_	30	_	35	_	35
4		-	35	_	40	-	35	_
5		35	-	40	_	40	_	35
6		-	40	_	40	-	40	_
7		45	_	40	_	40	_	45
8		-	45	_	40	_	45	30

Run multiple days in a row after 8 weeks.

Week		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
9	Minutes	-	45	35	_	45	40	-
10		45	45	_	45	45	30	-
11		45	45	35	-	45	45	40

Cadence and Pace

This new phase allows you to manipulate more variables, one of which is cadence, or steps per minute. Krystan recommended increasing cadence before pace, particularly for those returning from a tibial stress fracture, because a shorter, quicker stride reduces the stress of ground contact through the lower leg. You can increase cadence without increasing pace. Aim for about 170 steps per minute, which, coincidentally, is about the same as your most upbeat playlist.

Pace during recovery, in general, should be slower than your typical pace, increasing gradually. In the progression above, duration remains the same for three runs, you run for 30 minutes three times before bumping up to 35 minutes. Increase your pace slightly with each of those 30-minute runs, e.g. 9:00 pace the first 30-minute session, 8:45 the next, and 8:30 the third time, if you were a 8:00-8:30 min per mile runner pre-injury. When you increase to 35 minutes of running, drop the pace back down to 8:30 – 9:00. Again though, try to keep quick cadence.

Pain, Redux

As in the earlier stages, adjust the program based on pain during or in the 24 hours following your runs. At this point, there are more ways to do that.

If pain is noted during a run \rightarrow stop, stretch, walk for 5 minutes \rightarrow resume running

If pain remains longer than 10 minutes or worsens \rightarrow stop running for the day, next workout day decrease duration of the run, **or** increase rest days between runs, **or** split the run into two shorter runs separated by 6 to 8 hours, e.g. a 40-minute run becomes two 20-minute runs, one in the morning, the other in the evening

If pain is noted after the run or the next day \rightarrow next time, decrease duration of run, **or** increase rest days between runs, **or** split the run into two shorter runs separated by 6 to 8 hours, e.g. a 40-minute run becomes two 20-minute runs, one in the morning, the other in the evening

Running Into the Sunset

When you reach the holy grail of running multiple days in a row:

- As you increase the number of runs per week, decrease the duration of each run. So, if you ran 3 x 45 minutes in a week, when you increase to 5x per week, start out at 25 – 35 minutes each time.
- Increase weekly volume by no more than 10% per week.
- Continue to exercise willingness to step back in duration or pace, or add rest days, if pain develops.