



## AMP Study

### Why your heels hurt

Between age 8-15 for boys and 7-13 for girls, your bones begin to grow very fast. While you are growing, your muscles and tendons that attach to your heel bones are also getting bigger and stronger. Your Achilles tendon can pull with more force than your heel bone can tolerate, and this can cause pain with running and jumping. Your heel may start to feel stiff and painful, especially with running and jumping activities. Normally, this pain can disappear after a break from activity but in some cases the pain can last much longer. The pain may be getting worse when you have increased your physical activities and not have had enough rest for the body to recover. It is also common that the pain varies and sometimes without an obvious reason.

### Avoid stretching

Historically, your heel pain was referred to as “growing pains.” A traditional treatment for heel pain is to stretch your muscles to keep up with your growing skeleton. Stretching is most helpful for shortened or tight muscles and may not be helpful for your heel pain. Because your heel bone is developing, stretching may only create more stress at your heel instead of helping your calf muscle tightness. We do not recommend stretching your calves to improve your heel pain.

### Exercise Smarter, Not Harder

For the first 4-8 weeks of treatment we may recommend you limit activities that aggravate your heel pain. Training hard every day can make your injury worse, instead you should exercise hard every 3 days, with light or moderate days in between. This will ensure you get all the benefits of exercise and

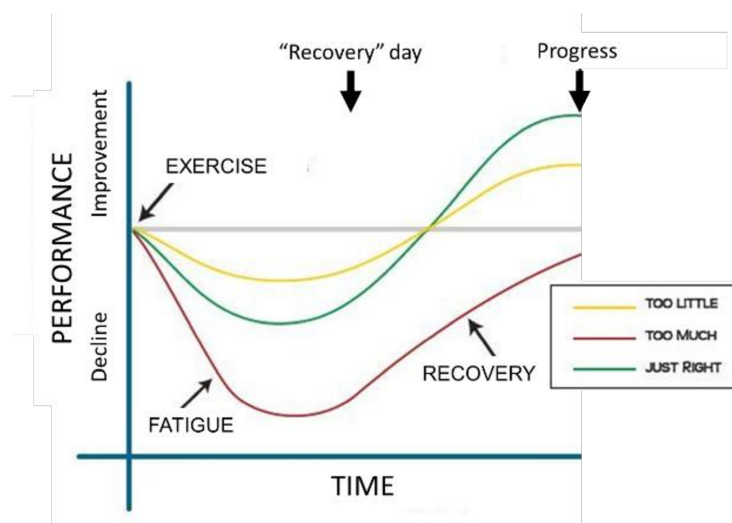


Image adapted from blog: Drummond, R. (2019, October 19). Supercompensation. Ryan's Training Tip Tuesday. <https://runegades.com/blogs/ryans-training-tip-tuesday/supercompensation>



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are fully recovered before your next hard exercise day. We will help you set up a specific plan for your exercises and training.

### When can you return to sports?

Returning to sports depends on your abilities, not time. You only progress to the next step on the Activity Ladder when you have no increased heel pain during or the next morning after the activity. When you are able to perform exercises on Step 3 with no pain above a 5/10 you can start participating in sports again. Do not go right into a full game, or you may overload your heels and risk your progress. Below is the guide you will follow to steadily increase your activity level while controlling your heel pain and allowing full recovery between heavy loading days.

You should start by participating in the team warm-up, followed by 15 minutes of team drills/practice. Each week, you can increase the amount of time training by 5-10 minutes, but you must still follow the pain monitoring rules. When you can handle a full week of full training, you can return to full activity/sports games again.

### Tracking your progress

Record all of your exercises, sets, repetitions, and resistance in the training diary. If you do any other activities, such as sports, hiking, jogging, etc. you can enter this as well. It is very important to keep track of your heel pain too. Enter a number for pain (0-10 pain scale above) when you first wake up, the worst pain you felt that day, and at the end of the day.

**AMP Study****OBJECTIVES OF THE INTERVENTION****Step 1**

- Adjust training/exercise to improve recovery and heel pain
- Learn how to perform slow, controlled bodyweight exercises
- Learn to use your pain as a guide (Pain Monitoring Model)
- Avoid stretching

**Step 2**

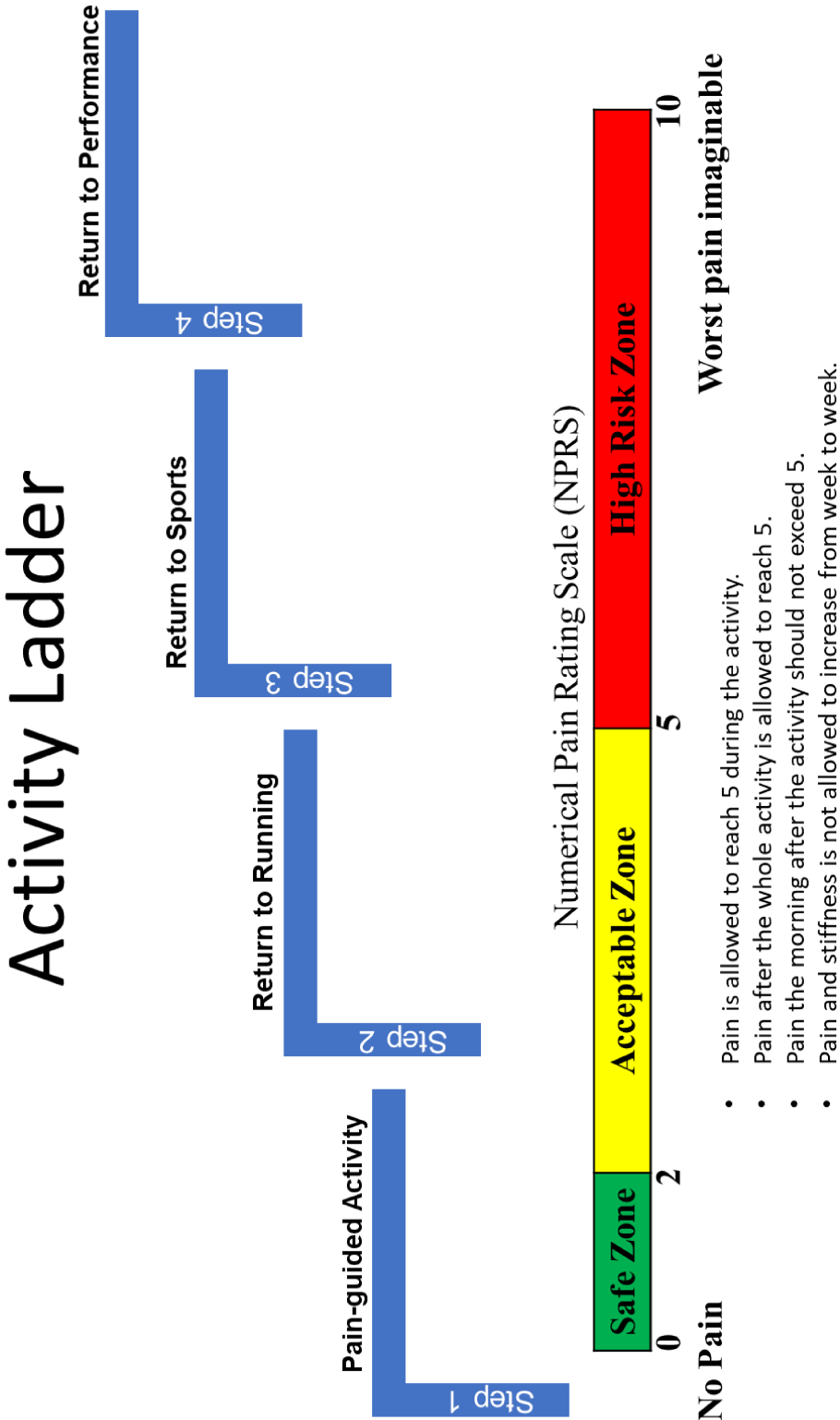
- Sports-specific exercises
- Learn how to plan out training weeks based on heavy, moderate, and light exercise days
- Return to team warm-up activities/drills

**Step 3**

- Improve lower body strength and stamina
- Learning advanced jumping exercises
- Return to sports competition

**Step 4**

- Return to full activity and performance
- Continue to spread heavy exercise to every 3 days with recovery





## Training Diary

Subject ID: \_\_\_\_\_ Start date: \_\_\_\_\_ Week #: \_\_\_\_\_

Date	Home exercises (include which exercise, reps, sets and load)	Running and/or Jumping	Physical activity	Pain level 0-10 0=no pain 10=worst pain imaginable
		Yes _____ No _____		Morning: _____ Today's lowest: _____ Today's highest: _____
		Yes _____ No _____		Morning: _____ Today's lowest: _____ Today's highest: _____
		Yes _____ No _____		Morning: _____ Today's lowest: _____ Today's highest: _____
		Yes _____ No _____		Morning: _____ Today's lowest: _____ Today's highest: _____
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