



## What I Learned Treating my Own Ankle Sprain

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Stepping in a sprinkler hole this summer while jogging gave me an unexpected opportunity to experience my own response to a variety of current treatment approaches for lateral ankle sprain to determine their efficacy. See Figure 1.



Figure 1: Ankle swelling post injury

As clinicians, we tend to fall into routine treatment patterns and may be reluctant to vary our treatment approaches. I wanted to determine what I might change in my treatment of ankle sprains to enhance my clinical practice.

### ***Wearing an ankle brace designed to prevent inversion during the acute phase***

The day after my injury, I was unable to walk with a normal gait pattern without support. I chose to wear the [Push ortho Ankle Brace Aequi](#) (Figure 2) as it limits inversion while allowing functional ankle motion. (2) I wore the brace full time for 12 weeks and thereafter only during activity. My goal was to eliminate mid to end range ankle inversion.

Knowing there is a high likelihood of developing chronic ankle instability after a sprain (1), I recalled the treatment approach of a podiatrist with whom I worked. He believed that allowing any excessive stress to the lateral ankle ligaments (ankle inversion) before 12 weeks disrupts the healing process



Figure 2: Push<sup>®</sup> ortho Ankle Brace Aequi

which in turn reduces the ligament tensile strength, and thus decreases the ability to support the ankle joint. His patients wore an ankle brace for 12 weeks while performing only pain-free activities not requiring ankle inversion.

Examples of those activities are walking or running on a treadmill, Olympic weightlifting, biking, and elliptical. See Figure 3.

Initially I was struck by how vulnerable my ankle was when showering without the brace support,



Figure 3: Running on treadmill while wearing Push ortho Ankle Brace Aequi

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and I learned how uncomfortable it is to begin to regain inversion after 12 weeks of limiting that motion. I will now encourage patients to expect some discomfort as they start to recover inversion.

Although I will strongly encourage all patients with an ankle sprain to wear a brace for 12 weeks, individuals without a medical/rehab background or a previous injury may be reluctant. I will require patients with a recurrent ankle sprain to wear the brace for this long to avoid long term instability.

## **Starting Olympic weightlifting 48 hours after initial injury**

I initiated Olympic weightlifting 48 hours after my injury to prevent my loss of strength and the associated negative neural adaptation of the muscles supporting my ankle, knee, and hip, which has been seen in athletes (3). I performed the Olympic squat and deadlift at 75% of my one-rep max for 4 sets of 8 reps, always wearing the Push ortho Ankle Brace Aequi. See Figure 4 and 5. I monitored my ankle for swelling pre-exercise, post-exercise, and 24 hours post-workout and noted no changes, so I repeated



Figure 4: Performing the Olympic squat while wearing the ankle brace.

the Olympic training again 48 hours later. Had I observed edema, I would have rested 96 hours before repeating the exercise.

Before completing the resistance training, I felt apprehensive when walking, and I don't know why. I found this exercise beneficial in reducing my apprehension and improving my balance while performing a single-leg stance, which I tested before and



Figure 5: Performing a deadlift while wearing the ankle brace.

after my training session.

Since this weightlifting approach requires protection of the injured ankle while loading, I will reserve this for patients who are able to monitor their own response to exercise accurately.

## **Wearing the ankle brace for one year while exercising**

Previously, I assumed continuing to wear an ankle brace weakened the ankle, potentially limiting long-term function. Evidence continues to show, however, that in addition to improving functional ability during the early stages of recovery, long term use of an ankle orthosis prevents recurrent injuries and does not reduce muscle strength nor impair function (4).

Now six-months post-injury, I struggle to wear the ankle brace daily while exercising because I do not feel I need it. If I were not aware of the research that supports continued use of a brace to prevent a future re-injury, I would not continue to wear it (1). Based upon my experience, I realize how important it is to convince patients to wear an ankle brace long term to prevent re-injury.

## **Keeping going with long term exercise**

I discontinued my home exercise balance activities after four months. About two weeks later, I noticed unequal stance time while running on the treadmill. I resumed my balance exercises and noticed an improvement shortly thereafter. Most individuals do not continue to work on balance as part of their routine training after they have completed rehabilitation. Now understanding the importance

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of continued balance training, I will stress this with all my patients. I now see my patients at four-, six- and twelve-month intervals for follow up to reinforce the need to continue balance exercises and use of the brace.

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