# THE BEST GUIDE FOR REDUCING JOINT SWELLING



When your body swells after an injury, it's trying to protect and begin repairing the damaged area. Swelling, part of the inflammatory response, is essentially a collection of fluid in the body part that has been injured. The swelling itself is caused by increased white blood cells, as well as other fluids and chemicals that enlarge the injured area and sometimes make it appear red and feel hot. The redness and heat are the results of blood rushing to the swollen area. Did you know there are different types of swelling?



#### **DIFFERENT TYPES OF SWELLING:**

EDEMA is the result of fluid that has collected outside of a joint area (typically in soft tissue). EFFUSION is the collection of fluid that is located within a joint (e.g., an <u>ankle injury</u>). HEMARTHROSIS means there is blood in the accumulated fluid within a joint capsule. ACUTE SWELLING is an accumulation of fluid that occurs 24 hours after injury. CHRONIC SWELLING is persistent over long periods of time.

# **HOW TO REDUCE SWELLING:**

After an injury that causes the body to swell, protect the damaged area. This might mean using some sort of stabilizer (a brace or wrap) or simply keeping weight off the swollen area. Once the injury is protected, proceed to follow the **RICE** guidelines (Rest, Ice, Compression, Elevation).



#### 1. REST

Resting is easier said than done for athletes, but if swelling is present, it is imperative. Resting helps prevent further injury to the area and therefore reduces swelling.



## 2. ICE

The inflammatory response releases certain chemicals with various byproducts, one being heat. Icing an injury can help draw out the heat and slow down the inflammatory response. The coldness numbs the nerve endings that cause discomfort and therefore helps alleviate pain caused by inflammation.

There are many methods you can utilize to cool the injured area. Cold packs, ice baths, and <u>cold therapy systems like PowerPlay</u> are a few proven methods to help reduce swelling.



# 3. COMPRESSION

Compression physically restricts increases in swelling. Some people use compression socks to accomplish this. <u>Pneumatic compression</u> devices like PowerPlay systematically push edema out of the affected area, which helps promote quicker healing.

Learn More About The Evolution of Cold and Compression Therapy



#### 3. ELEVATION

According to the <u>ACE Physical Therapy & Sports Medicine Institute</u>, "if a body part accumulates an excess in fluid, gravity can force it to flow to an unrelated area of the body (e.g., the ankle when the knee is injured). If the injury site is elevated, the excess in fluid will tend to 'flow' towards the internal organs that are responsible for cleansing the blood and re-using anything that is re-usable and excreting the waste. The fluid returns to these organs via the lymphatic system."

Basically, by elevating the swollen area above heart-level, you can utilize gravity to have the accumulating fluid flow towards the body so it's easier to get rid of, as opposed to having it pool in your ankles or other extremities.



#### WHAT TO DO IF SWELLING PERSISTS:

If swelling persists for more than two weeks, you should consult a doctor. Your doctor may recommend you to a physical therapist or prescribe medication or therapeutic exercises. Swelling is your body's way of trying to protect an injured area.

# SOURCES:

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"Both intermittent compression and continuous cryotherapy are more effective in reducing post-traumatic edema than cool pack therapy. Intermittent compression showed the most significant reduction."

Fastest Reduction of Post-traumatic Edema: Continuous Cryotherapy or Intermittent Impulse Compression, Stockle U et al, Foot Ankle Int 1997; 18 (7): 432-438.

"Compression therapy is essential to helping prevent post-op swelling during recovery. One study evaluated 48 TKA patients for one week after surgery. Lower limb swelling and pain were significantly reduced for the compression group vs. the control group."

Journal of Arthroplasty," April 1999; 14 (3): 333-8.



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