

# COLD THERAPY SLOWS MUSCLE GROWTH

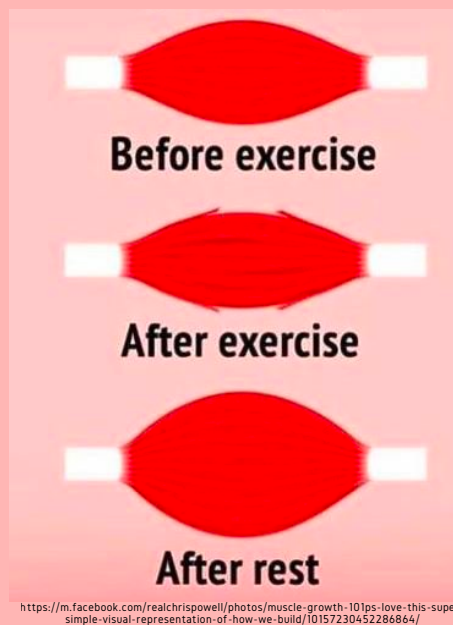
Most households have grown accustomed to treating soreness and swelling with ice because it grants almost instantaneous pain relief, however, ice packs and other forms of commonly used cold therapy restrict blood-flow. While this may numb the nerve of an effected area, inflammation is also slowed. When the body's natural processes are hindered, proper recovery cannot occur.



<https://www.menshealth.com/fitness/a29710918/icing-sore-muscles/>

## MUSCULAR HYPERTROPHY

After exercise, muscle fibers break down causing micro-tears which then regenerate thicker and in larger quantities. In this process of hypertrophy, proper blood flow is required to ensure regenerative particles can enter the muscle, and damaged ones can exit. Inflammation can occur at the site of hypertrophy, and cold therapy being introduced slows down the entire process(Berra).



<https://m.facebook.com/realchrispowell/photos/muscle-growth-101ps-love-this-super-simple-visual-representation-of-how-we-build/10157230452286864/>

## INFLAMMATION



<https://www.elevatedhealth.md/ab-tests/3c4rrnkmy8ej9s8hymk6k4ac6uw0ng-kxm8m-2td46-kaca2-b76h7-jyxse>

VS



<https://www.buoyhealth.com/learn/swelling-of-one-arm>

Inflammation is commonly associated with pain, and as a result, is misunderstood. In this process, beneficial nutrients and other recovery particles are transferred to the site of damage through the bloodstream(Gallatin Valley Chiropractic). Inflamed body parts cannot necessarily be seen by the human eye. Cold therapy restricts blood flow and hinders this beneficial recovery process.

When inflammation is more severe as a result of more serious injury, swelling can occur. The puffiness and red skin are a result of built-up particles and blood that need to be removed through phagocytosis(Gallatin Valley Chiropractic). That being said swelling should be iced depending on circumstance and severity. If extreme swelling is present cold therapy is a logical solution because pain can be more severe.



"COACHES HAVE USED MY "RICE" GUIDELINE FOR DECADES, BUT NOW IT APPEARS THAT BOTH ICE AND COMPLETE REST MAY DELAY HEALING, INSTEAD OF HELPING" (MIRKIN).

<https://www.lifetimerunning.net/2018/11/profile-dr-gabe-mirkin-has-been.html>

## R.I.C.E METHOD

In 1978, Gabe Mirkin, a Harvard physician, popularized using ice in his recovery method "Rest, Ice, Compress, Elevate." He now refutes his method as studies have revealed ice dampens the immune response to injury(Mirkin).

## BETTER METHODS

Icing can slow hypertrophy, and when overused, damage current tissue, so how can we recover from exercise? The best way to legitimately remove the damaged tissue is through muscle activation, which both increases blood flow and flushes out the damaged tissue(Berra). This does not mean exercising with the same rigor that caused the inflammation, but lesser muscle activation through cardio and light weights can be beneficial.

Works Cited  
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Mirkin, Gabe. "Why Ice Delays Recovery." DrMirkin.com, 9 May 2021, [www.drmirkin.com/fitness/why-ice-delays-recovery.html](http://www.drmirkin.com/fitness/why-ice-delays-recovery.html). Accessed 1 Dec. 2022.