

# Whole Body Cryotherapy (WBC): A “Cool” Trend that Lacks Evidence, Poses Risks

**Y**our rheumatoid arthritis is flaring up? A trainer at your local gym suggests a safe and easy way to treat it: a three-minute session in a freezing tank, called whole body cryotherapy (WBC). He says not only will WBC help you put an end to rheumatoid arthritis pain better than an ice bath or pack, but also promises that a couple sessions will help with depression and weight loss!

Not so fast.

The problem is, this so-called “treatment” hasn’t been proven to do any of these things.

And despite claims by many spas and wellness centers to the contrary, the U.S. Food and Drug Administration (FDA) does not have evidence that WBC effectively treats diseases or conditions like Alzheimer’s, fibromyalgia, migraines, rheumatoid arthritis, multiple sclerosis, stress, anxiety or chronic pain.

“Based on purported health benefits seen in many promotions for cryotherapy spas, consumers may incorrectly believe that the FDA has cleared or approved WBC devices as safe and effective to treat medical conditions,” says Aron Yustein, M.D.,



a medical officer in the FDA’s Center for Devices and Radiological Health. “That is not the case.”

In fact, not a single WBC device has been cleared or approved by the agency in support of these claims.

Nevertheless, a quick Internet search for the term “whole body cryotherapy” turns up a wealth of websites extolling the praises of WBC for a

number of serious illnesses and conditions, including:

- Asthma
- Alzheimer’s
- Anxiety
- Chronic pain
- Depression
- Fibromyalgia
- Insomnia
- Migraines

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- Multiple sclerosis
- Osteoarthritis
- Rheumatoid Arthritis
- Weight Loss

Those who sell WBC machines and facilities that operate them may also claim that WBC can improve blood circulation, increase metabolism, improve recovery and soreness after workouts, and relieve joint and body pain.

“Given a growing interest from consumers in whole body cryotherapy, the FDA has informally reviewed the medical literature available on this subject,” Yustein says. “We found very little evidence about its safety or effectiveness in treating the conditions for which it is being promoted.”

### What is Whole Body Cryotherapy?

Simply put, cryotherapy, is “super-cooling” of the body for therapeutic purposes. Cryotherapy can include the use of products such as ice packs on a localized portion of the body, such as the lower back. Whole body cryotherapy involves exposing the body to vapors that reach ultra-low temperatures ranging from minus 200 to minus 300 degrees Fahrenheit. Those who choose to have a WBC treatment are enclosed in relatively confined spaces, typically for two to four minutes, in one of two ways:

- A person stands alone in an individual-size can-like enclosure that is open at the top. A person’s torso and legs are enclosed in the device and exposed to frigid temperatures while the head remains above the enclosure at room temperature.
- Several people sit or stand in a totally enclosed chamber for two to four minutes. The entire body including the head is exposed to freezing temperatures, generated by liquid nitrogen. Some cryotherapy devices work by way of cooling the air in a circuit.

What actually happens physiologically to the body when a person stays within these chambers for two to four minutes? What effects do such cold temperatures have on the blood pressure, heart rate, and metabolism?

“We simply don’t know,” says FDA scientific reviewer Anna Ghambaryan, M.D., Ph.D. “At this time, there’s insufficient publicly available information to help us answer these questions.”

However, she notes that while the healing benefits of cryotherapy remain unconfirmed, the potential risks are readily apparent.

“Potential hazards include asphyxiation, especially when liquid nitrogen is used for cooling,” says Ghambaryan. The addition of nitrogen vapors to a

closed room lowers the amount of oxygen in the room and can result in hypoxia, or oxygen deficiency, which could lead the user to lose consciousness. Moreover, subjects run the risk of frostbite, burns, and eye injury from the extreme temperatures.

### Talk to Your Doctor First

If you decide to try WBC, know that the FDA has not cleared or approved any of these devices for medical treatment of any specific medical conditions.

The FDA is also concerned that patients who opt for WBC treatment—especially in place of treatment options with established safety and effectiveness—may experience a lack of improvement or a worsening of their medical conditions.

Yustein says it’s a good idea to discuss using WBC with your physician before you try it or if you’re using it already.

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