



# POLAR

## CRYOTHERAPY



### What is Whole Body Cryotherapy?

- WBC is a hyper-cold therapy used to treat inflammation, injury and pain.
- Dry nitrogen gas is used to cool the cryosauna down to -250°F to -300°F.
- Athlete enters the cryosauna with neck and head outside the chamber.
- Only socks, gloves & underwear are worn to maximize skin exposure.
- The cryotreatment lasts up to three minutes and is very tolerable.
- Skin surface temperature is lowered from 91°F to about 34°F.
- Cold only reaches skin surface and does not freeze muscles or tissues.
- The body initiates “fight or flight” and “search and repair” modes.

### How does the body react to Whole Body Cryotherapy?

- Skin sensors across the body report to the brain that the body will not survive long in this cold.
- Rapid vasoconstriction of the peripheral blood vessels; mostly the large arteries and small arterioles.
- Blood is enriched and directed into an internal short cycle to protect and vitalize the organs and brain.
- Brain and adrenal glands release pain-blocking endorphins called Noradrenaline or Norepinephrine.
- Body releases anti-inflammatory proteins/hormones: Cytokine Interleukin (IL)-6 and (IL)-10.
- Body suppresses pro-inflammatory cytokine (IL)-2, chemokine (IL)-8 & intercellular adhesion molecule-1 .
- Positive effects on muscular enzymes (CK) creatine kinase and (LDH) lactate dehydrogenase.
- Increased production of collagen, the main component of connective tissue.
- Blood oxygen levels are increased.

### What happens after the Whole Body Cryotherapy treatment?

- Upon exiting the cryosauna, rapid vasodilation occurs as supercharged blood rushes back into peripherals.
- Since muscles and tissue have not been frozen, athlete can return to exercise immediately.
- Athlete will feel euphoric, alert and energized due to the release of endorphins, hormones and enzymes.
- Brown fat has been stimulated which will burn 400 to 800 calories of white fat.
- Blood hemoglobin levels will increase after several treatments.

### When should Whole Body Cryotherapy treatments be scheduled?

- One to two hours prior to a practice or game, allowing for normal warm-up time and exercises.
- Post-practice or game to aid muscle and overall body recovery.
- Post-massage to help flush the toxins released from the muscles.
- Surgical recovery recommendation is at least three sessions per week.
- Regular scheduling should be a minimum of three sessions per week.

### Contact:

Dan Slipkowsky

[chill@polarcryotherapy.com](mailto:chill@polarcryotherapy.com)

(949) 505-9789

