

# Cold Thermogenesis 13: The FAQ's

## Readers Summary

### What are the top 25 questions on CT from my forum?

The readers of my forum asked for a FAQ's on CT and I decided it would be a good idea to make a short blog about this. They picked their top 25 questions and I decided to answer them for this blog. If you have any others, just ask in the comments section. I answer them all when I have time.

#### 1. What in the Heck is Factor X? [LisaAPB]



Because of the last extinction event on our planet, the weather was changed in seconds to a cold earth and all life forms that survived that event had to navigate that environment and this survival was wired into the animals who survived and all their descendants epigenetically. Survival occurred by speeding up the reaction time to the environment. 65 million years ago this was an advantage. Today this is killing humans.

#### 2. Isn't CT mainly about activating, recruiting, and using

## **brown adipose tissue (BAT)?**

No, but it is a large part of it. CT also depletes glycogen like exercise does and this stimulates our IGF 1 and sex steroids to improve endotoxin clearance in the portal circulation, lowers FBG, lowers glycation and lipid peroxidation, and destroys elevated inflammatory cytokine arrays.

### **3. How do we know if we have an adequate BAT to properly use CT?**

An adequate BAT is not needed to begin it. CT will force your sympathetic system to induce BAT from WAT.

### **4. Does being cold-adapted make one more intolerant of a hot climate in summer? [healthnut] +1 How will the sunny weather effect me biologically now that I'm cold adapted? +1**

In my experience being cold-adapted makes you more tolerant to the heat of the summer. This has been the experience of the patients who have implemented this in my practice as well.

### **5. Since leptin is sexually dimorphic hormone in humans is cold adaptation different for men and women?**

Yes, Women take longer to cold adapt than men because they generally have higher leptin levels than men. They can, however, offset this by increasing the amount of seafood they eat doing CT. I would not suggest cheating with fish oils and the closer your 06/3 ratio is to 4:1 the better your response will be to the cold.

### **6. Where does the 50-55 degree skin temp specification come from? Is this a specific trigger that has been shown or is it a rule of thumb? Is the energy throughput more important or the skin temperature? It would seem that the body would respond to the energy demand of the pathway as well. If 50-55 degrees is a trigger then we should trigger it many times a**

**day, but possibly would not need to be for the 45-60 minute duration of the ice baths, which could provide a strong energy demand of the pathway at lesser temperatures. Please expand.**

It is quite simple. This is the temperature that the PNS cold receptors begin firing based upon functional MRI data and from direct recordings. This is set by mother nature in eutherian mammals. For humans, the range is 50-55 degrees.

**7. Is CT enhanced if done at temperatures that DON'T result in shivering? ie. Non-shivering Thermogenesis.**

It can be depending on the person's initial condition. Those who are obese usually don't shiver but those with low BF {a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6} shiver quickly and deplete their glycogen stores pretty quick.

**8. What are the signs/indications of hypothermia? If someone pushes themselves too far on the protocol, would mild hypothermia have any effect on the progress of cold adaptation?**

CT should never induce hypothermia as the protocol is written. It is designed to only use the surface cold receptors at 50-55 degrees and does not utilize the deep cold receptors. This is why the protocol is safe. If one chooses to embark on Deep CT all bets are off and you need a spotter and a doctor to help you implement it. That is just not a safe choice for a beginner.

**9. Please talk about how to maximize CT. Is there something to a compression garment or not? would we have to be moving, like in Vasper, to get this lactic acid/HGH benefit?**

At NASA Ames Research Park, scientist Peter Wasowski has developed an alternative exercise machine called Vasper. The user wears compression cuffs on the arms and legs and core-

cooling panels on the chest and head. During exercise, the machine traps large amounts of lactic acid in the body, stimulating the pituitary gland and producing more HGH or human growth hormone. [Lexi] +1

Vasper is a great tool but it cost some serious cash. I love it and it has been tested in deep space and the data behind it show the result is not just pure hormesis. My CT protocol is designed for the common man to do in their home to get results. A compression vest and ice water work too. It will just take more time than Vasper. If you can get access to Vasper, you'd be a fool not to do it.

#### **10. How should you modify exercise while doing CT (donkjellberg).**

Depending upon your issues and goals you might not have to alter anything, .if you're severely limited by disease or illness CT can often replace exercise until you become more healthy. Checking with your doctor serially is a great idea here if you are not healthy and wondering when exercise can begin and what exercise is best.

#### **11. Are saunas, hot tubs and sunbathing unhealthy? +1**

Sauna is fine, Hot tubs without halides are great, and sunbathing for some people is fine, depending on their light diet, inflammation, Vitamin D levels, and Vitamin D binding protein status.

#### **12. After some point does the law of diminishing returns set in? How much CT would one need a week to maintain what they got if they are happy with it? Will I have to do CT daily for the rest of my life to maintain the pathway? Or once I'm adapted is there a different protocol?[Kpcst/Lexi] +1 CT & Age**

Truthfully, I do not know the answer to this one. I have gone 4 months without CT and jumped back in and got immediate results. I will say that the younger one is the better the results of CT are because the younger one is the more BAT they

have to activate CT.

**13. How does CT reduce/reverse inflammation? [Shijin13] +1**

It does this by demolishing the inflammatory cytokine array or storm from disease or from obesity. This is why it is not just a hormetic effect because it has direct and long-lasting effects on IL-6 and leptin.

**14. How does CT reverse telomeres that are shortened? {Shijin13} +1**

No one knows for sure as yet but based upon Dr. Elizabeth's Blackburn's cutting-edge work (Nobel Prize in 2009) we believe that anything that decreases ROS at the mitochondrial level also improves telomere length and is better for health and longevity in cells and organs with a normal cellular terroir.

**15. The big HCG connection... I feel like 3 of us get it and the rest are trapped by their fear of fat plus HCG... If CT plus HCG will light the world on fire -And CT needs fat -Wouldn't HCG + CT require fat in the absence of the "protocol apples"(ChimpChick)**

Not necessarily true. We do not know what CT and HCG will do long term because it has not been studied.....but several people are in the process of testing it and we will see what they all report back. I personally have zero experience with this.

**16. What are the ranges you look for in the basic lab tests? (Please include differences for gender/age/menopause differences.) If we are tracking progress what other metrics would be useful? [Nonchalant/Garfield] +1**

I am assuming here you are talking about hormones. The answer is simple. I want most people in the top quartile of their reference range. This should be done first without drugs/pills/supplements if possible

**17. Dr. Kruse. Related to this, you have mentioned in your**

**blogs that additional benefits accrue from "steepening the gradient." could you describe some of these benefits along with the specifics of what you mean by "steepening"? Longer? Colder? More often? Your CT protocol mentioned that it was focused mainly on weight loss. What are the other protocols for other benefits (please describe them)? Thanks!  
[randychaps]**

Randy, I can and have talked about it at length on the Webinar on Deep CT, but I can not talk about it on the website because some of those things are on the edge.....they are things that one needs to be very careful with to get cutting-edge results. What is posted about the CT protocol on 2/11/2012 is safe for people to try at home? Deep CT is another animal completely and requires a spotter and access to a healthcare professional for guidance in real time. Changing your water use is key to this.

**18. Immediate perceived side effects of CT for both men and women (donkjellberg).**

The first one most report is better to sleep and better recovery from exercise.

**19. How should diet and CT be adjusted to adapt to seasonal changes? At one extreme, I understand winter should be dark, COLD, and hardcore keto. What about summer and diet, icy tubing, etc? Can/should we ease up on the keto and cold?  
THANKS [Meyoolia] +1**

If you're healthy and fit without disease have a good light environment or issue eat a seasonal ancestral diet. If your sick, obese, or not feeling well use CT and a ketogenic template to reverse your chemical clocks until your hormone panel approaches normal. Then get to a seasonal ancestral diet.

**20. Why is it important to take Bitter Melon before CT and what is the recommended dose? [Marsha] +1**

It helps stimulate BAT from WAT. It is an adjuvant only.

**21. What are good methods of speeding detox? [Glamorama} +1**

I went over this in my first webinar on the site, but the best way is to observe your reactions and your skin for estrogen dumping.....and as soon as you see it use foods first that help lower estrogens and then you can use supplements if you chose to that I have outlined on the forum for you all.

**22. Should Vit D supplementation level track the CT season.(localad)**

Great question. I think it should. I take no Vitamin D supplements during March 15-Sept 15 and I rely on the sun to get mine. I came up with these dates based upon by location on the planet and serial testing. It won't be accurate for everyone. In winter, at high latitudes one can use supplements. I chose to move from Nashville.

**23. How important is calorie restriction in CT?**

Long term, it happens naturally. Short term, it is not important but as you go and use CT CRON becomes natural. It is the easiest form of IFing I know of and requires no training. It happens naturally to most people.

**24. Are there any dietary changes that everyone should make while using CT?**

Yes, avoid all alcohol at all times and eat 3-5 meals per week with seafood as you apply it.

**25. Did you use your protocol to lose your weight or did you do more with CT?**

I began with my protocol and as it worked I steepened the curve and monitored my responses. The steeper you go the more danger you incur.

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