

## The 411 of the CVAC Process

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The Cyclic Variations of Adaptive Conditioning (**CVAC**) Process is a unique form of exercise. During the CVAC Process, you sit comfortably in an egg-shaped pod (right) with a large fiberglass window similar to that of a jet airplane. Air is pumped out of the pod, and fresh air is let back in approximately 300 times in a 20 minute session. Pulling air from around the body lowers the pressure around the body. The CVAC system is therefore a “hypobaric” chamber but the low pressure around the body is not static (does not stay the same) but constantly changes encouraging your body to adapt second by second. Initially, small amounts of air are pumped out of the pod and fresh air is let back in. Over time, more and more air is pumped out from around the body in pulses simulating higher and higher altitude. The highest altitude simulated is 22,500 feet. This is higher than Mt’ Everest’s South Base Camp in Nepal at an altitude of 17,598 ft, and North Base Camp in Tibet at 16,900 ft.

However, the CVAC Process is not about altitude; it is about improving the health and fitness of the body similar to exercise but while you sit. Early on in the CVAC Process, the flow of blood and lymph flow is improved. Later when more and more air is pumped out from around the body, not only does air pressure change constantly but temperature changes and oxygen pressure changes. These stressors are similar to what your body experiences during exercise. The body is therefore encouraged to adapt because of these stressors. The CVAC Process creates a properly conditioned environment in the body, therefore the body can function as it was meant to be.



### FAQs

**1. Do I just sit in the pod for 20 minutes?** Yes and no. While you are sitting, the air pressure is constantly changing around the body. You will feel this most in your ears. You need to be able to clear the ears by chewing gum, opening your mouth as in a yawn or holding your nose and blowing. Drinking water also helps. You can also use your cell phone or ipod or other music device to play music or talk on the phone. You also have a walki talki to communicate with the person administrating your CVAC session. Dr. Herbst suggests you focus on you during the CVAC session.

**2. I have a cold; can I still use the CVAC Process?** No. You need to be able to keep your ears clear during the session which can be hindered by a cold or sinus infection. Wait until you can breathe normally before taking a CVAC session.

**3. Is the CVAC Process a Hyperbaric chamber?** No. The CVAC system is similar to a hypobaric chamber which means that air is lowered around the body. In a hyperbaric chamber, pressure is increased around the body and oxygen is forced into tissues by this process.

**4. If the pressure is only lowered a little around the body, how do I get benefit?** According to Dr. Herbst from her experience with the CVAC Process, when air is pumped out of the CVAC pod, blood is encouraged to flow into tissues and the lymphatic vessels are encourage to open allowing cell waste material and excess fluid to flow out. When fresh air is let back in, blood vessels and lymphatics are encouraged to pump. This process improves blood flow to the tissues and lymphatic fluid flow out of tissues. Pumping lymphatic fluid out of tissues is important as it removes garbage from the tissues in our body where the lymphatic system is the sanitation system of the body's tissues. No city can function without the garbage collector and nobody can be healthy without a functioning lymphatic system.

**5. Does the CVAC Process help my brain to function better?** New data has found that the lymphatic system is in the brain (*Nature*, 2015, 523, 337–341). We know from a study of people with a pain disorder, that the CVAC Process improved their mental functioning significantly in just one week (*J Pain Res.* 2010 Aug 20;3:147-53). We can hypothesize that the CVAC Process cleared out the garbage from the brain as well in this study. People in this study also lost a significant amount of weight which was found to be all fluid, supporting the removal of excess fluid from the body's tissues.

**5. Is the CVAC Process a detox?** If detox (detoxification) means cleaning garbage out of tissues then yes! If you have a lot of "garbage" in your tissues, then improving fluid flow into and out of tissues cleans the garbage out of the tissue moving it into the blood stream so it can be eliminated by the liver or the kidneys. If you have a lot of garbage in your tissues, then your body may need to work hard to get rid of the garbage once it has been moved out of the tissues into the blood stream and you may feel a little tired similar to how you feel after a massage. Drinking water during the CVAC Process is important as is keeping hydrated for the remainder of the day and following days after a CVAC session. If you feel tired after the CVAC Process that is actually a good thing because the CVAC Process did its job – it cleaned the garbage out of your tissues. You can think of the CVAC Process as sweeping the tissues clean using flow. Unlike massage, the CVAC Process cleans the garbage from around every cell improving the whole body.

**6. Does the CVAC Process help with pain?** People with a pain disorder called Dercum's disease had improved pain in one week after 40 minutes of CVAC sessions daily (*J Pain Res.* 2010 Aug 20;3:147-53). Fifty percent of the people in the study had fibromyalgia. We know from anecdotal reports that people with fibromyalgia benefit from the CVAC Process as do people with diabetic peripheral neuropathy (DPN).

**7. Do athletes benefit from the CVAC Process?** Yes. Many professional athletes use the CVAC Process to help them recover from intense exercise. Intense exercise generates reactive oxygen species and cell waste material like lactic acid which can damage tissues. Athletes then need to recover from the exercise as well as the tissue damage. It is the opinion of Dr. Herbst that the CVAC Process helps to clean out the tissues reducing the time that the athlete needs to heal increasing their ability to become fit, faster.

**8. I have diabetes. Is it ok for me to use the CVAC Process?** A study out of Stanford demonstrated that men who were in their 40s and were sedentary had improved insulin sensitivity after the CVAC Process (*High Alt Med Biol.* 2013 Sep;14(3):263-72). The CVAC Process would therefore likely to be of benefit in diabetes. You can see more here (<https://www.youtube.com/watch?v=7n8ZgoOvLYA>).