



GETTING READY FOR WINTER WEATHER

Hey, everyone! It is starting out to be a COLD holiday season! Is this stopping me from getting myself out there and training? NO IT IS NOT! And it shouldn't be stopping you either. I know. We all want to bake our chestnuts around an open fire and sing sleigh-bell songs from the warmth of our cozy living rooms, but get yourself up and get out there! You'll be happy that you did. I even wrote an article giving you all of the health benefits of going out into the wintry cold. Come to think of it, I think I'm going to get myself some pre-workout and get myself out there right now!

ENJOY!!!

SPORTS SCIENCE DEFINITIONS

Michael Sahno
Owner of Sea & Land Fitness

TRANSLATING THE SCIENCE YOUR MONTHLY DOSE OF FITNESS TERMINOLOGY

EXERCISE PHYSIOLOGY

ACCLIMATION

Acclimation is the process of your body adjusting to a new climate. This adjustment occurs as your body experiences repeated exposure to a hot, cold, or elevated environment. Some of your body's adaptations include an increase in sweating efficiency when it is hot outside (earlier onset of sweating, greater sweat production, and a reduction in electrolyte loss in your sweat), improved metabolic heat production when it is cold outside (more internal body heat created from cellular respiration and muscle activity), and an increase in your total number of red blood cells, as well as an increase in your body's oxygen delivery in a lower oxygen environment (like it would be at a higher altitude). Because of Acclimation, we as humans, are capable of adapting and efficiently operating within a wide range of temperatures and environments.

PERFORMANCE PSYCHOLOGY

Commitment is the strong internal desire to stay involved in a sport or activity. Commitment, at its core, comes from inside of you (intrinsic) and cannot specifically come from others (extrinsic). It is driven by internal elements such as, your enjoyment in what you are doing, your personal investment in the activity (time & money), how much social support you have in your choice to participate, and what social opportunities participation gives to you (what's in it for you?). While these last two influences do appear at first to be external, the choice that you make to continue or quit your Commitment is entirely an internal decision. Commitment is vital for long-term success, for preventing burnout, is key to improving performance, and helps create an overall feeling of personal well-being by creating a strong attachment to your chosen sport or activity.

SPORTS NUTRITION

ANTIOXIDANT

Antioxidant is a general term for any substance or compound that counteracts with (or works against) unstable molecules in your body called Free Radicals. Free Radicals damage DNA, cell membranes, and other parts of cells. Free Radicals lack the full number of the electrons that they need, so they steal electrons from other molecules and damage your cells in the process. Antioxidants are found in some of the foods that we eat, to include Beta-Carotene (from carrots, spinach, sweet potatoes, kale, butternut squash, cantaloupe, and apricots), Lycopene (from tomatoes, watermelon, pink grapefruit, and apricots), Vitamin A (from liver, eggs, dairy, fatty fish), Vitamin C (from oranges, grapefruit, strawberries, kiwi, papaya, mango, and colorful peppers), and Vitamin E (from nuts, seeds, vegetable oils, leafy greens, and avocado).

MONTHLY EXERCISE BREAKDOWN



BENCH PRESS

To begin this exercise, first lie down on the bench with the BARBELL DIRECTLY ABOVE YOUR SHOULDERS.

ENSURE THAT THE BARBELL CAN BE REACHED WITH A SLIGHT BEND IN YOUR ELBOWS.

THIS ENSURES THAT YOU ARE ABLE TO CLEANLY LIFT THE BARBELL UP AND OFF OF HOOKS THAT THE BARBELL IS RESTING ON.

Next, PULL BOTH OF YOUR SHOULDERS TO THE REAR, AS IF YOU ARE PINCHING A QUARTER ON YOUR BACK WITH YOUR SHOULDER BLADES.

THIS POSITION ENSURES THAT YOUR SHOULDERS ARE BRACED FOR THE WEIGHT OF THE BARBELL.

GRAB THE BARBELL WITH A CLOSED GRIP, IN A POSITION THAT ENSURES THAT YOUR WRISTS ARE IN A LINE DIRECTLY ABOVE YOUR ELBOWS.

THIS ENSURES A STEADY BASE FOR YOUR GRIP ON THE BARBELL AND REDUCES THE POSSIBILITY OF INJURY TO YOUR WRISTS AND SHOULDERS.

ONCE YOUR GRIP IS ESTABLISHED, PUSH UP ON THE BARBELL WITH YOUR HANDS AND EXTEND YOUR ELBOWS, WITH THE WEIGHT OF THE BARBELL RESTING ON THE MEATY PORTION OF THE BOTTOM OF YOUR PALMS, DIRECTLY ABOVE YOUR WRISTS, AND YOUR WRISTS DIRECTLY ABOVE YOUR ELBOWS.

WITH YOUR ARMS FULLY EXTENDED, SLIGHTLY MOVE AND ADJUST THE BAR SO THAT THE BARBELL IS SUSPENDED OVER YOUR CHEST.

This is the STARTING or TOP POSITION.

From this position, BEND YOUR ELBOWS AND LOWER THE BARBELL TO YOUR SOLAR PLEXUS, OR JUST BELOW THE CHEST, KEEPING YOUR PALMS, DIRECTLY ABOVE YOUR WRISTS, AND YOUR WRISTS DIRECTLY ABOVE YOUR ELBOWS.

This is the BOTTOM POSITION.

From here, PUSHING YOUR HANDS UP AND INTO THE BARBELL THROUGH THE BOTTOM OF YOUR PALMS, WHILE ALSO KEEPING YOUR WRISTS AND ELBOWS IN LINE, BRING THE BARBELL BACK UP TO THE TOP POSITION BY STRAIGHTENING YOUR ELBOWS AND FULLY EXTENDING YOUR ARMS.

This is one repetition of this exercise.

INSIGHTS INTO SPORTS SCIENCE

WORKING OUT IN THE EXTREME COLD

BY MICHAEL SAHNO,
MS APK, TSAC-F

I have said this before, "I HATE THE COLD!" Okay, now that we've gotten THAT out of the way, I have seriously screwed up. Very recently, I have publicly made a commitment to working out this entire winter outside in the gym in my barn out behind my house. Basically, it all goes back to me being cheap and not wanting to spend money on gas driving to the gym. It all sounded reasonable at the time. The temperature wasn't TOO bad and it wasn't any colder than outside than just above freezing. That was until last week. It dropped to the 20's in the day and the teens overnight. What was I thinking?

Well, for the past week I've been doing it. I've been dreading it, but I've been doing it, and I have to say, honestly, I feel great. Sure, it sucks to get myself out there, but when I finally do, the cold just slips away. My muscles warm up, my heart rate goes up, and I slip into a fitness/exercise steady-state. It's kind of cool, actually. Corny, I know, but it works and I'm actually healthier because of it. How do I know this? Because of the science.

According to Dr. Adam Tenforde from the Harvard Medical School in an article published by Harvard Health Publishing, exercising in cold weather has the potential to improve your overall endurance, due to the fact that, "In colder temperatures your heart doesn't have to work as hard, you sweat less, and expend less energy, all of which means you can exercise more efficiently." Additionally, this same article stated that, "Studies also have shown that exercising in cold weather can transform white fat, specifically belly and thigh fat, into calorie-burning brown fat."

Here are a few of the benefits of getting yourself outside this winter:

- Increased Endurance: Your body sweats less in the cold and uses energy more efficiently, which helps prevent overheating and allows you to exercise for longer periods, thus building greater stamina.
- Enhanced Calorie Burn and Metabolism: To maintain internal heat, the body burns more energy (calories). Cold exposure also activates the production of brown fat, a type of fat that burns calories to generate heat, which is linked to improved metabolic health and weight management.
- Stronger Heart: The heart works harder to pump blood to keep the body warm and distribute blood throughout the body, providing an excellent cardiovascular workout that can strengthen the heart muscle over time.
- Improved Mood and Mental Health: Outdoor exercise triggers the release of mood-boosting endorphins and dopamine. Getting exposure to sunlight, even in small doses, helps your body produce Vitamin D.
- Boosted Immune System: Regular, moderate exercise in the cold can stimulate cellular immunity, helping your body to better fight off common colds and other infections.
- Greater Mental Toughness: Pushing past the initial discomfort of a cold environment builds mental resilience and determination that can translate to other areas of life.
- Better Focus and Sleep: Some studies indicate that individuals who work out in the cold experience improvements in decision-making, focus, and memory. The combination of fresh air, physical activity, and daytime light exposure can also contribute to better sleep quality at night

Here are some ESSENTIAL tips to help you stay warm and safe during your winter workout:

- Warm up properly. Cold muscles and joints are more vulnerable to injury, so make sure you incorporate dynamic stretches. Include arm and leg circles and lunges in your warm-up routine.
- Layer your clothing. Wear several layers of lightweight clothing to keep you warm when you begin your workout. You can shed layers as your body temperature rises.
- Stay hydrated. Don't forget that you can get dehydrated in cold weather. Keep a bottle of water on hand throughout your workout.
- Recognize the signs of hypothermia and frostbite. Symptoms of hypothermia include sleepiness, fast heart rate, and rapid breathing. Signs of frostbite include red or purple skin and soreness in the affected area.
- Monitor weather conditions. Postpone your workout or exercise indoors in adverse weather conditions.

As insane as it may sound, I'm going to keep doing this, and I recommend that you get yourself outside to exercise too. You definitely won't be thanking me on your way out there (you'll probably even be cursing me for talking you into it), but you will come out healthier, stronger, and more capable of handling anything. I promise. Now, come on, you got this. Get outside.

REMEMBERING GREATNESS



DONN F. PORTER

Rank: *Sergeant*

Conflict/Era: *Korean War*

Unit/Command: *Company G, 14th Infantry Regiment, 25th Infantry Division*

Military Service Branch: *U.S. Army*

Medal of Honor Action Date: *September 7, 1952*

Medal of Honor Action Place: *Near Mundung-ni, Korea*



MEDAL OF HONOR CITATION

DONN F. PORTER

UNITED STATES ARMY

Sgt. Porter, a member of Company G, distinguished himself by conspicuous gallantry and outstanding courage above and beyond the call of duty in action against the enemy. Advancing under cover of intense mortar and artillery fire, two hostile platoons attacked a combat outpost commanded by Sgt. Porter, destroyed communications, and killed two of his three-man crew. Gallantly maintaining his position, he poured deadly accurate fire into the ranks of the enemy, killing 15 and dispersing the remainder. After falling back under a hail of fire, the determined foe reorganized and stormed forward in an attempt to overrun the outpost. Without hesitation, Sgt. Porter jumped from his position with bayonet fixed and, meeting the onslaught and in close combat, killed six hostile soldiers and routed the attack. While returning to the outpost, he was killed by an artillery burst, but his courageous actions forced the enemy to break off the engagement and thwarted a surprise attack on the main line of resistance. Sgt. Porter's incredible display of valor, gallant self-sacrifice, and consummate devotion to duty reflect the highest credit upon himself and uphold the noble traditions of the military service.

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