



GHOSTS, GOBLINS, & SPORTS SCIENCE

Hey, everyone! I am back after nursing my Psoas injury and training doing road marches with the weighted vest, working out doing squats and curls with the free weights, and killing it with Muay Thai Mondays!

I hope you enjoy this issue because I put a personal touch into this month's article by telling you about a little Sports Science journey that I have been on. Don't worry, it has a happy ending and I hope that it helps everyone who reads it.

Remember to have a HAPPY HALLOWEEN with your friends and families!
ENJOY!!!

Michael Sahno
Owner of Sea & Land Fitness

SPORTS SCIENCE DEFINITIONS

TRANSLATING THE SCIENCE

YOUR MONTHLY DOSE OF FITNESS TERMINOLOGY

EXERCISE PHYSIOLOGY MUSCLE INNERVATION

Muscle Innervation refers to the process of Nerve Impulses, sent from your Brain and/or Spinal Cord, that stimulate the Muscle Fibers in your body.

Your body's Nervous System is connected to each of your Muscles at a point called the Neuromuscular Junction or Motor End Plate. This connection of Neurons (the cells that make up your Nervous System) to your Muscles starts at your Spinal Cord. This whole group of Neurons (from your Spinal Cord to the Muscle) as well as the Muscles that they Innervate are called a Motor Unit.

Nerve Impulses travel through the Motor Unit from the Brain and/or Spinal Cord and eventually lead to a Muscle Contraction.

Every Muscle in the body is Innervated and is part of a Motor Unit that requires Nerve Impulses for them to Contract.

PERFORMANCE PSYCHOLOGY INTRINSIC MOTIVATION

Intrinsic Motivation is the inner drive to participate in sports out of the satisfaction, enjoyment, and fulfillment of the activity itself, rather than for external rewards, such as trophies or praise from others, like a coach or fans. It focuses on skills and their development, personal growth, and the joy of competition, specifically centering on:

Internal Drive - Individuals are motivated by their own interest and enjoyment of the sport and find pleasure in the process of training and competing.
Internal Satisfaction - Motivation that comes from the sense of fun, excitement, and personal accomplishment found in taking part in an activity, rather than from external validation.

A Focus on Personal Goals - It is closely tied to a desire for personal improvement and skill mastery, leading to more discipline and perseverance

SPORTS NUTRITION LACTOSE

Lactose is a Simple Sugar. Simple Sugars are a type of Carbohydrate that includes Monosaccharides (a single molecule of sugar) and Disaccharides (two molecules of sugar).

Lactose, commonly known as Milk sugar, is a Disaccharide that is made up of Glucose (a Simple Sugar that we all rely on for cellular energy) and Galactose (a Simple Sugar that is rarely found alone in nature and is commonly found paired with Glucose), which are both Monosaccharides. This is why milk and other dairy products tend to have a sweet taste.

Some people have an intolerance to Lactose. This is often due to the fact that these individuals lack or have reduced levels of the enzyme that is required for them to digest and absorb Lactose Sugars.

Because of this, they experience gastrointestinal distress after eating dairy products.

MONTHLY EXERCISE BREAKDOWN



STIFF-LEG DEADLIFT

This exercise begins with either a **BARBELL**, **TWO DUMBBELLS**, or a **SANDBAG** on the ground in front of you.

For the purpose of this demonstration, we will be using a **BARBELL**.

To begin, **PLACE YOUR FEET SHOULDER-WIDTH APART AND FLAT ON THE GROUND. SQUAT** down and grab the **BARBELL** with both hands shoulder-width apart.

DO NOT SLOUCH OR ARCH YOUR BACK. KEEP YOUR CHEST UP, YOUR SHOULDERS BACK, AND YOUR FACE FORWARD WITH YOUR CHIN UP.

LIFT THE BARBELL UP TO WAIST HEIGHT BY STRAIGHTENING YOUR KNEES AND EXTENDING YOUR LEGS WHILE PUSHING INTO THE GROUND WITH YOUR HEELS.

This is the **START POSITION**.

From here, with a **SLIGHT BEND IN YOUR KNEES**, lower your **TORSO** forward until it is **HORIZONTAL** or **FLAT** with the ground, **SLIDING THE BARBELL DOWN ALONG THE FRONT OF YOUR LEGS, DOWN TO YOUR SHINS, KEEPING TENSION IN YOUR MUSCLES AS THE WEIGHT PLATES TOUCH THE GROUND.**

While doing this, **KEEP YOUR BACK STRAIGHT, YOUR SHOULDERS BACK** and **YOUR REAR-END STICKING UP.**

You are now in the **BOTTOM POSITION**.

From here, pull the **BARBELL BACK UP ALONG YOUR SHINS UP TO THE FRONT OF THE THIGHS** while **KEEPING YOU KNEES SLIGHTLY BENT.**

You are now back up in the **STARTING POSITION**.

This is **ONE REPETITION** of this exercise.

INSIGHTS INTO SPORTS SCIENCE

ADAPT, OVERCOME, AND CONQUER

BY MICHAEL SAHND,
MS APK, TSAC-F

I am a Pistol Instructor. Certified. I have an Essential Tremor. I shake more than a washing machine on its spin cycle. Those two statements, put together, are hilarious. I can shoot very effectively and compensate for this disability by riding the rhythm of the tremor and timing my shots on what I call the “downward slope of the wave of my tremors”. Which, honestly, is a bull-shitty way of academically explaining that I time my shots in between my shakes. It works, though. I get the job done and, if I do say so myself, I’m a pretty good shot.

When shooting a pistol there are two primary areas of focus that require attention to effectively hit the target. They are your grip and your sight picture. For me, my grip isn’t really an issue. I hold the pistol in my dominant right hand (the one that shakes the most) and I stabilize the pistol with my non-dominant hand (with sort-of a death grip to keep the pistol from shaking off target). Don’t worry, it’s safe. I swear.

In general, this works with the sight picture that I use, which comes from what are called “iron sights”. Iron sights have been around for centuries and are the traditional way of lining up a shot with both a rifle and a pistol. Basically, it is two mechanical visual points of reference (one at the front of the pistol and one at the rear) that are lined up in a specific way and when they are aligned, they should put your shot on target. Simple and easy to use. What is important about this stage of the process though is ensuring that you are maintaining focus. Focus on your front sight as it rests in view of your target and focus on your front sight being aligned with your rear sight.

Now, even with my ability to compensate for my tremors with my specific grip, I still experience some shaking when aiming down the sights of my pistol. But, as I said before, I am able to mitigate or reduce that shaking. I’m also very in-tune with the rhythm of my tremors, so that I can predictively find the right moment to pull the trigger and take the shot. How did I figure this out? Voodoo? Witchcraft? No, just some hilarious moments of me trying to drink from a straw as the tremor pushes the straw from one side of my mouth to the other. I’ve figured out this tremor’s rhythm. I know its crafty ways inside and out. I may not be able to beat it, but I’ll be damned if I ain’t going to make it work for me.

What is interesting about all of this is that as this process is taking place, another process is occurring inside of my brain. Milliseconds before any movement has even taken place. Very, very, very simply put, a Motor Program of my movements is being mapped out in three-dimensional space and will be used as a map or template to guide my physical movements. With my tremor, I can only imagine that my Brain, wearing the wrong prescription of eyeglasses, is reading an upside-down map of Finland for guidance, when it should be reading a map of the area in which where I am actually standing. Go Brain. Good job.

So, why am I telling you all of this? Why am I telling you about shooting and aiming and all of my troubles? Because as a Sports Scientist, I am using the principles of Exercise Science, Sports Psychology, and Neuroscience to work this problem. For me, this issue is no different than any other issue that any other athlete might want to or need to resolve. And, believe you me, I am actively working to resolve this problem.

Last week I had what was the most recent in a number of appointments with the Veterans Administration’s Neurology and Occupational Health (OH) Departments. During my most recent appointment, we decided together that I would start to use a wearable medical device as a potential mitigating treatment that might bring about a reduction in my tremor symptoms. If this works out, all that I will need to do is wear a watch-like device on my wrist and my tremors will diminish for around an hour. Will my tremors fully go away. No. Is it a cure? No. But it is definitely worth trying. We are working the problem.

That is why I am telling you all of this. What ever you have going on that is standing in front of you as an obstacle to the things that you want to or need to do, try to work the problem. Try to at least get to a point where whatever was stopping you moves aside, just enough to let you through. You owe that to yourself. You owe it to yourself to try everything that you can that’s within your power to do, so you can get to where you want to be. And, if you can’t do it alone, then ask for help. I did. It wasn’t easy, but I asked for help because it was more important for me to be able to continue to do something that I love to do. And, I love to shoot.

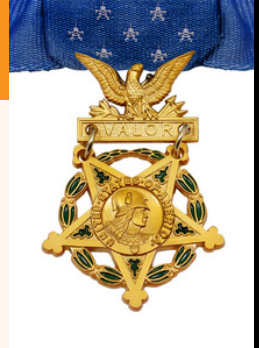
So, I hope this helps. I hope that my story will help give you the drive to overcome whatever you feel is keeping you from doing what makes you happy. You’ve just got to get up and get out there. You’ve got to work the problem. It won’t be easy, but don’t worry. You got this.

REMEMBERING GREATNESS



GORDON DOUGLAS YNTEMA

Rank: *Sergeant*
Conflict/Era: *Vietnam War*
Unit/Command: *Det. A-431, Company D, 5th Special Forces Group (Airborne), 1st Special Forces*
Military Service Branch: *U.S. Army*
Medal of Honor Action Date: *January 16 - 18, 1968*
Medal of Honor Action Place: *Near Thong Binh, Republic of Vietnam*



MEDAL OF HONOR CITATION GORDON DOUGLAS YNTEMA UNITED STATES ARMY

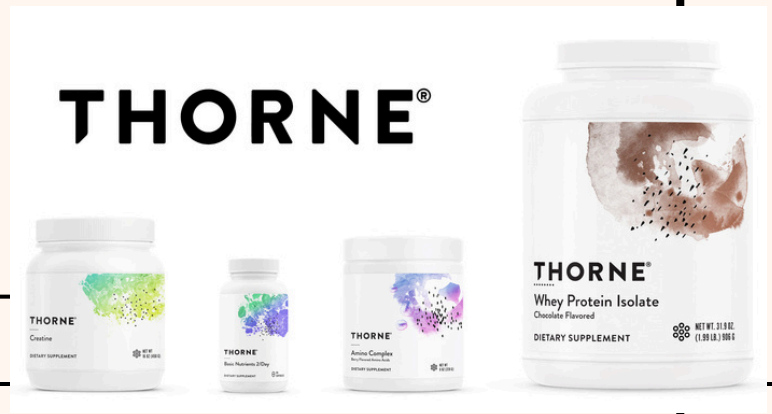
For conspicuous gallantry and intrepidity in action at the risk of his life above and beyond the call of duty. Sgt. Yntema, U.S. Army, distinguished himself while assigned to Detachment A-431, Company D. As part of a larger force of civilian irregulars from Camp Cai Cai, he accompanied two platoons to a blocking position east of the village of Thong Binh, where they became heavily engaged in a small-arms firefight with the Viet Cong. Assuming control of the force when the Vietnamese commander was seriously wounded, he advanced his troops to within 50 meters of the enemy bunkers. After a fierce 30-minute firefight, the enemy forced Sgt. Yntema to withdraw his men to a trench in order to afford them protection and still perform their assigned blocking mission. Under cover of machine-gun fire, approximately one company of Viet Cong maneuvered into a position which pinned down the friendly platoons from three sides. A dwindling ammunition supply, coupled with a Viet Cong mortar barrage which inflicted heavy losses on the exposed friendly troops, caused many of the irregulars to withdraw. Seriously wounded and ordered to withdraw himself, Sgt. Yntema refused to leave his fallen comrades. Under withering small-arms and machine-gun fire, he carried the wounded Vietnamese commander and a mortally wounded American Special Forces adviser to a small gully 50 meters away in order to shield them from the enemy fire. Sgt. Yntema then continued to repulse the attacking Viet Cong attempting to overrun his position until, out of ammunition and surrounded, he was offered the opportunity to surrender. Refusing, Sgt. Yntema stood his ground, using his rifle as a club to fight the approximately 15 Viet Cong attempting his capture. His resistance was so fierce that the Viet Cong were forced to shoot in order to overcome him. Sgt. Yntema's personal bravery in the face of insurmountable odds and supreme self-sacrifice were in keeping with the highest traditions of the military service and reflect the utmost credit upon himself, the 1st Special Forces, and the U.S. Army.

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