

## THE REASONING



**Student of the Month**  
**Dylan Larson**  
**Masters Student**  
**Clinical Exercise Physiology**

### The New HPL

Hello to everyone from the Human Performance Lab (HPL). As some of you know, St. Cloud State University recently refunded the HPL prior to its closing in 2015. We have tremendous gratitude for past head chair, Dr. John M. Kelly, Kelly's Corner author, David Bacharach, and other HPL executives. Because of you the HPL program is possible for future success. As we rekindle the progression of our curriculum and services, we strive to prepare students for success in their future careers, as well as offer advanced fitness testing and education programs to the surrounding community. The new Director of the HPL is Dr. Kyle Reason. Dr. Reason attained his undergraduate education in 2018 receiving a B.A in Exercise Science from Hope College. In 2019, he pursued a M.S in Clinical Exercise Physiology from Eastern Illinois University. Following his M.S., he achieved a Ph.D in Exercise Science and Health Promotion from the University of North Alabama in 2023. Currently at SCSU he assumes responsibilities as an Assistant Professor, Exercise Science Program Director, Clinical Exercise Physiology Graduate Director, Human Performance Lab Director, and Clinical Director of the Husky PAW. Dr. Reason's main research interests consists of Effects of Home Exercise Modalities on Exercise Adherence, Enjoyment Levels, Body Image, and Perceived Duration. He is a neat meet and greet.



### Dr. Kyle W. Reason, Ph.D., ACSM-EP, EIM

The HPL is in the process of expanding program curriculum and attaining high level testing equipment for educational innovation, staff & administration opportunities, and to enhance athlete performance. We offer in house fitness testing for classroom material, student hands-on experience, and community outreach. The HPL offers Minimum Wrestling Weight, Submaximal Cardiovascular Fitness Testing, Maximal VO2 Fitness Testing, Anaerobic Power Output/Wingate, Resting Metabolic Rate, Lactate Threshold Test, Muscular Fitness Testing, Maximal Muscular Fitness Testing, Pulmonary Function Testing, Flexibility Testing, and Functional Movement Screening. For more information explaining the benefits and procedure for testing, you can visit our website below.

To reduce the amount of audience suspense, expect to see monthly featured students, thesis proposals, current trends in exercise science, regular "behind the scenes of the HPL", new and improved services, upcoming events, and summary stories of past events. If you are interested in scheduling an appointment, like our content, or want to stay updated with the progression of the HPL, please follow us on LinkedIn and visit our SCSU website located at the bottom of this newsletter. We are excited to rekindle the newsletter of the HPL and look forward to connecting with our community, alumni, and professionals around the world. We thank you for your support and strive to promote the health and wellness of everyone.

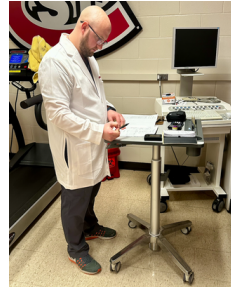
Your friendly neighborhood news writer,  
Cal H.P. James



# THE REASONING

## Ainsley Apel & Hayato Chino Students of the Month

**BE BOLD. BE YOU. BE A HUSKY.**



## First Lactate Threshold Test

Welcome back to the lab. We are excited to announce the first community outreach test was completed to help a triathlete optimize peak training protocols. Our participant recorded excellent data values reaching peak VO<sub>2</sub> and Lactate Threshold. As a reminder, lactate threshold measures the highest exercise intensity one can sustain for a prolonged period of time without lactate substantially building up in the bloodstream. Lactate forms in the body after endurance or strength training exercise, acting as a waste product of glycolysis. Glycolysis is the process in which glucose (sugar) is broken down to produce ATP used as an energy source for our body. This test involves blood sampling, RPE evaluation, interval grade increases, and measurement of oxygen output. In normal people terms, you hop on a treadmill for 20 minutes and see how well you can breath out of a Darth Vader mask. These tests can help the general fitness community and athletes achieve peak performance through scientific review of individual fitness levels.

## Positions, Ambitions, and Conditions

As we transition into the new year we are excited to continue learning and developing our practitioners, physicians, and clinicians. “The stars of tomorrow,” as Dr. Reason would say. Although it was our New Years resolution last year, we are academics, and look to expand the knowledge and push the boundaries of exercise science. The spring semester of 2024 breaths the following classes to life: Introduction to Exercise Science, Exercise Physiology & Lab, Biomechanics, Strength and Conditioning for Sports Performance, Electrocardiography, Clinical Exercise Physiology, Practicums, and continued hard research for student Thesis papers. We pray those students have successful data collection, productive chairperson meetings, and enough coffee to help kick start the research writing mindset. I am currently cataloging Thesis hard copies in the Kinesiology Office dating all the way back to the 1960's. How they did it without computers and Star Wars technology, I just don't know. We are sad we are losing a strong member of our Husky Paw team, Paige Setrum, but happy to announce Paige is embarking on an internship position at the St. Cloud Hospital. She will be assisting with Cardiac Rehab, working in patient care, and learning health care administrative duties. Mr. Kevin Andres will be stepping in to continue her hard work. Kevin wants to provide SCSU students with creating personal exercise training programs, educate students on healthy life styles, and promote the physical health and wellbeing of the community. Mr. Andres hopes to gain experience working with patients directly, performing administrative duties, and learning what it takes to run an Exercise Physiologist Clinic.



# Concussion Safety in Strength Training

Volume 2, Issue 30 February, 2024

## FEATURES

*Mark Asonavich - Adjunct Professor in Exercise Training,  
Strength and Conditioning, and Sports Performance*

14-year National Football League (NFL) veteran Strength & Conditioning Coach.



Author and speaker, Simon Sinek says that to inspire action ... “you must first start with the WHY.” As healthcare professionals ... What is our WHY? Have you ever asked yourself that question?

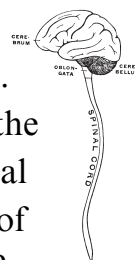
As a Strength & Conditioning Professional, my primary WHY ... above all else ... is to protect my players from the risks of sports. Stop! Please re-read that again. I want to let that sink into your frontal lobe for a while ... because in a multi-billion-dollar, “win-at-all-costs” sports dominated culture ... in my opinion many strength coaches have forgotten our highest calling. I can hear some of you now ... Woah ... Slow down ... Wait a minute Mark ... is not ensuring the health, safety, and welfare of our athletes our obvious and universal WHY? Where is all this “forgetting our highest calling” coming from?

My response ... YES, ensuring the health, safety, and welfare of our athletes is, or should be, our highest calling. But is it? To determine whether this is just shallow “pie in the sky” lip service, when I speak to Strength Coaches, as a litmus test to identify their priorities I often ask them this question:

If that is our WHY, logic dictates that we first start with the most catastrophic of sport risks. What are the most catastrophic risks in sport? Traumatic Brain and Spinal Cord Injury carry the highest catastrophic consequences. I acknowledge that the topic of Traumatic Brain and Spinal Cord Injury is not pleasant, however, as professionals who oversee the health and well-being of athletes who have entrusted their health to our care, it must be foremost in our minds. Why? Because the neurological health of our athletes, is, or should be ... our highest priority. But is it? Is it your highest priority?

I bet that most of you have never heard it articulated quite like that before. But as a healthcare professional, I hope that it resonates deep within your heart and soul. Strength professionals are the first line of defense when it comes to mitigating these catastrophic injuries. So, if I (or you) only had time to perform one lift with your athletes, the correct answer is ... strengthening the cervical & capital muscles of the head & neck.

Unfortunately, our culture’s obsessive pursuit to WIN has clouded judgements and side-tracked priorities when it comes to resistance exercise priorities. Hence the usual answers I get from most strength coaches ... Bench Press, Squat & Power Cleans. Please don’t get me wrong, these lifts are some of the most common exercises employed; however, they do nothing in the way of mitigating Traumatic Brain and Spinal Cord Injury.





*Mark Asonavich - Adjunct Professor in Exercise Training,  
Strength and Conditioning, and Sports Performance*

 14-year National Football League (NFL) veteran Strength & Conditioning Coach.

Traumatic Brain Injury is a head acceleration injury. Therefore, we must look for ways to decelerate the head at impact.

Since the muscles of the neck control all head movement, science tells us that if the neck is stronger (stiffer), upon impact, the head will not displace as much ... translation ... If we can slow down the head, you slow down the brain.

When you slow down the brain you reduce the mechanism of concussion.

Likewise, when muscle is strengthened, there are collateral adaptations that occur in synch with the muscular adaptations. One of these collateral adaptations is when muscle gets stronger, bones get stronger, ligaments and tendons get thicker and stronger ... the collagen sheathing around the joints become denser and thicker. Therefore, as the cervical muscles are strengthened, the cervical spine (which houses the spinal cord) becomes thicker and denser. If the spinal column is more structurally sound ... the chance of spinal cord injury decreases.

Given the overwhelming prospective evidence, expert consensus, and lack of collateral risk, one would think that this would be a logical practice in training our youth. Unfortunately, when the rubber hits the road across the nations strengthening programs, neck training is very rarely implemented. Why? It simply is not part of the current sport/training culture.

My best analogy to explain this situation is what occurred in the mid-70's with "hydration". At that time, providing water at practice was not part of the sport culture. In fact, if a player asked for water, they were ridiculed for being effeminate. They simply were not tough enough! To change that culture, it took some high-profile professional athletes (i.e. Kori Stringer) and college athletes (i.e. Aaron O'Neal, Dale Lloyd II, Rashidi Wheeler, Ereck Plancher) to die of dehydration on the practice fields ... before something so simple and so logical as providing water to players in hot and humid weather became an acceptable best practice of the sport culture.

My question now relating to traumatic brain injury is this: How many more Junior Seau's, Dave Duerson's, Mike Webster's ... and Zac Easters must die? We must act now. To protect athletes' brains, we must mandate best practices.

Appropriately strengthening the musculature of the neck is so simple and so logical and yet so neglected and misunderstood.

Surprisingly, many coaches have been lukewarm to this message. Perhaps it is because they are resistant to change or are uneducated in the evolving science. However, with the stakes so high ... we can't continue to live in the cognitive dissidence of our past. This information has the power to save lives and ease suffering. It will and can make a difference.

We must act now!



What is your WHY?

