# Sports Pharmacy

DECODING THE SCIENCE OF ELITE HUMAN PERFORMANCE

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# MENTAL HEALTH

How Sports Pharmacists Can Improve Mental Health in Athletes

How to Build a Community Culture of Mental Wellness

Mental Well-Being and Peak Performance

# MESSAGE FROM THE EDITOR

For decades, athlete health was largely been viewed through a physical lens. While strength, endurance, recovery, and nutrition remain essential, we now recognize that mental well-being plays an equally important role in performance, recovery, and long-term success.

Athletes face unique pressures that extend far beyond competition. Injuries, burnout, anxiety, depression, and the constant pursuit of excellence can all affect mental health. Yet many athletes still struggle in silence, often viewing these challenges as a sign of weakness rather than a normal part of the human experience.

In this issue, we explore the critical connection between **mental health** and athletic performance. Our contributors examine how physical health influences mental health, strategies for building cultures of wellness, and the growing role of healthcare professionals in supporting athletes throughout their careers.

The success of this year's **Sports Pharmacy Summit** reinforced the importance of collaboration across the athlete care team. As our profession continues to evolve, I am encouraged by the growing commitment to supporting athletes not only physically, but mentally and emotionally as well.

Thank you for being part of this important conversation. I hope this issue provides valuable insights and inspires continued efforts to prioritize mental well-being in sport.

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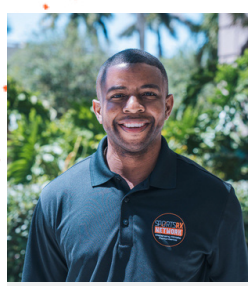

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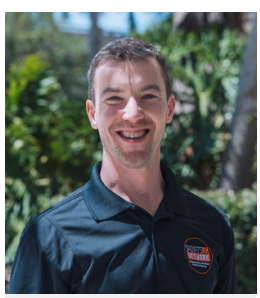

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# Contents

# PROTECT
## Your Athletes

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# 5 Ways Physical Health Impacts Mental Health

*By* TrueSport

***Content Warning:*** *This article contains mentions of eating disorders and trauma.*

**AUTHOR BIO:**

The TrueSport mission is simple and bold: to change the culture of youth sport by providing powerful educational tools to equip young athletes with the resources to build life skills and core values for success on and off the field. TrueSport is founded on three cornerstones: sportsmanship, Character Building & Life Skills, and Clean & Healthy Performance. We're powered by the experience and values of USADA (U.S. Anti-Doping Agency) – the country's most trusted guardian of sport dedicated to preserving the integrity of competition at every level – and entrusted by the United States Congress to promote a positive youth sports experience through the provision of educational materials that reflect the TrueSport cornerstones.

Physical and mental health are closely linked, and the relationship between them goes both ways. Whether an athlete is dealing with acute or chronic injury or illness, it's important for coaches and caregivers to pay close attention to an athlete's mental state as they cope with physical issues.

"If an athlete is optimal physically, that is going to enable them to optimize their mental health as well," says Michele LaBotz, TrueSport Expert and sports medicine physician. "If they're sick, injured, or otherwise not well physically, then mental health often suffers too."

Here, LaBotz shares five ways physical health issues can give rise to struggles with mental health for athletes.

## 1. Injury

"When you're injured, the risk for depression or anxiety is higher," says LaBotz. "Being physically well isn't just the absence of illness, it's being able to pursue those things that enhance your overall well-being. Activities that enhance physical health, like exercise and good nutrition, generally benefit mental health as well." Athletes with injuries that prevent them from participating in sport and/or conditioning activities place them at risk for mental or emotional difficulty. LaBotz states, "Most athletes will have some degree of sadness after injury, but for some athletes an injury can precipitate more severe mental or emotional effects, including depression, anxiety and a loss of self-confidence." LaBotz has even seen athletes experience post-traumatic stress disorder (PTSD) after injuries like ACL tears or severe concussions that can make it hard for them to return to sport.

*Mitigate it:* Keep an open line of communication with athletes and their families, and "check in" with how athletes are coping with their injury. Encourage athletes to stick with their rehabilitation plan. Many athletes benefit from staying engaged with team activity and should be encouraged to check with their health care provider for any exercise or conditioning they can do during the recovery period. If you suspect an athlete is dealing with a more serious issue like PTSD or depression, encourage them to seek professional help.

## 2. Illness

"We know that depression and anxiety are eased by spending time in nature and with exercise," LaBotz says. "Illness often takes away those capabilities temporarily." Whether your athlete is dealing with a long-term illness like mononucleosis or long COVID, or a short-term illness like a severe stomach bug or flu, it can have an impact on their mental well-being. Short-term illnesses are less likely to be an issue, but if an athlete is out for weeks or months with something more chronic, they're at higher risk for depression or anxiety.

*Mitigate it:* Even if an athlete is ill and can't take part in practice, they can still likely enjoy nature to some extent—and even images of nature have been found to be beneficial for mental well-being. Urge athletes, especially those with more long-term illness, to find ways to get outside and develop a conditioning plan that is doctor-approved and feels good for them.

## 3. Underfueling

It's a cliche, but we do know that hunger can lead to stress and anger. Anyone who's been on the team bus with hungry teen athletes can attest to this. Research has found that chronic underfueling in and around workouts can lead to 'increased emotional distress due to hunger, fatigue, and stress related to following an energy-restricted diet.' And when done for intentional weight loss and body image-based reasons, underfueling may be an indicator of disordered eating patterns or even a more severe eating disorder.

*Mitigate it:* If you suspect an athlete's mental well-being is suffering due to underfueling, whether intentionally or unintentionally, ensure that they have access to the help and information that they need. A registered dietitian and/or a counselor or mental health expert can help an athlete work through potential food-related issues and make a plan that optimizes physical health and energy.

## 4. Overtraining

As LaBotz points out, overtraining can lead to an increase in the stress hormone cortisol, which can have adverse effects on mental health as well as physical health. "When athletes "overtrain" for brief periods, they will often feel fatigued but can recover quite quickly after backing off," LaBotz says, but warns that "when overtraining persists for longer periods athletes can develop a true 'overtraining syndrome' which can lead to all sorts of emotional and psychological symptoms." Research has found that overtraining syndrome can lead to various mental health side effects, including fatigue, depression, low motivation, insomnia, irritability, and agitation.

*Mitigate it:* Recovery from overtraining syndrome can take many months, so prevention is the best strategy. As a coach, you may not be able to dictate exactly how much an athlete trains on their own, but you can make sure that your athletes have a rough understanding of what an ideal week of training should look like for them. Particularly during periods of high intensity training, focus on the importance of high-quality recovery. For athletes in multiple sports and activities, or those who are balancing school, sport, and work, help them optimize their training in a way that prioritizes a balanced lifestyle to prevent burnout.

Mental and physical health are interrelated and each one affects the other. If an athlete is dealing with a physical health problem stemming from illness, injury, concussion,

## 5. Concussions

When an athlete sustains a head injury that causes a concussion, they are at a much higher risk of developing a mental disorder. In fact, a recent study found that one in five people who sustained even a mild head injury would develop a disorder like depression, anxiety, or PTSD.

LaBotz states, "There is a tight link between long-term concussion symptoms and anxiety and depression, and it's important for coaches and families to be aware of that."

*Mitigate it:* First, start by ensuring that if an athlete sustains any head injury during competition or practice, concussion protocols are observed, even if the athlete has no immediate symptoms. If an athlete does have a concussion, follow the most up-to-date concussion protocols around return to play, and ensure that your athlete has access to help if they do notice signs and symptoms of a more serious mental or physical issue stemming from the injury.

## Takeaway

Mental and physical health are interrelated and each one affects the other. If an athlete is dealing with a physical health problem stemming from illness, injury, concussion, overtraining or under-fueling, coaches and caregivers should be on the lookout for signs of mental health issues like depression, anxiety, disordered eating, and even PTSD, and should have a low threshold for seeking professional assistance when symptoms are persistent or creating significant issues for the athlete. And, while physical health impacts mental health, the reverse is also true: concerns related to an athlete's mental health may be the underpinning behind physical symptoms or difficulty with performance during training or competition.

# How Sports Pharmacists Can Improve Mental Health in Athletes

*By* Amin Khudari

**Author Biography**

Amin Khudari, PharmD, is a Clinical Development Manager at Bausch + Lomb, where he specializes in global drug development and clinical site management. He earned his Doctor of Pharmacy from the USC Alfred E. Mann School of Pharmacy and Pharmaceutical Sciences in 2025, providing him with a high-level clinical foundation that informs his strategic approach to the pharmaceutical industry.

We often assume athletes are inherently resilient, but that is a dangerous misconception. Mental health symptoms and disorders are just as common in sports as anywhere else, and they can derail everything from recovery and performance to long-term well-being. The International Olympic Committee has made it clear that elite athletes face a wide range of challenges, including anxiety, depression, sleep issues, substance misuse, and eating disorders, and that these often manifest in sport-specific ways that are easy to overlook if a clinician is only looking at physical stats (Reardon et al., 2019). Addressing these challenges requires more than physicians and psychologists alone; it demands the medication expertise of a sports pharmacist, whose role in safeguarding both performance and well-being has become indispensable.

This landscape is exactly why sports pharmacists need a more prominent seat at the table. An athlete's mental health struggle often surfaces as a medication question long before it reaches a psychiatric clinic. It looks like a question about trouble sleeping, a sudden spike in caffeine use, frequent requests for NSAIDs, or anxiety about how a stimulant might affect their "clean" status. Both sports and mental health pharmacy literature confirm that pharmacists are uniquely accessible, trusted clinicians who can spot medication-related red flags, improve adherence, and bridge the gap in collaborative care (Bomfim, 2020; El-Den et al., 2021; Ho et al., 2024). In the world of high-performance sport, this role is vital because every intervention has to be filtered through the lenses of safety, recovery, and anti-doping compliance (Bomfim, 2020; Hooper et al., 2025). A practical question follows: where does the pharmacist actually engage the athlete? Few athletes seek out a pharmacy consultation on their own, so the encounter has to be embedded in the clinical workflow they already follow. Pre-season physicals offer a structured opportunity for medication reconciliation and supplement screening; the athletic training room provides daily, low-barrier access for triage of sleep, pain, and mood concerns; pre-competition reviews allow for Therapeutic Use Exemption (TUE) verification and prohibited-substance checks; and post-injury rehabilitation is a natural checkpoint for reassessing analgesic, sedative, and psychotropic regimens. Each of these touchpoints converts an otherwise reactive consult into a proactive intervention.

Access, however, remains the rate-limiting step. Sports pharmacy services are still concentrated within Olympic, professional, and select programs, reflecting both the limited integration of sports medicine content into PharmD curricula and the absence of a defined role for pharmacists within most athletic department staffing models (Hooper et al., 2025). Closing this gap will require structured APPE and PGY-1 exposure to sports pharmacy, formal recognition of the pharmacist within the sports medicine care team alongside the team physician and certified athletic trainer, and the deliberate use of telehealth and credentialed community pharmacists to extend services to athletes who fall outside elite care models (Hooper et al., 2025; Voravuth et al., 2022).

A major contribution of the sports pharmacist is early identification. Athletes do not always walk in and say they are depressed; instead, they talk about being "burnt out," unable to focus, over-reliant on

pre-workout supplements, or just not feeling "right" after an injury. This indirect presentation is rarely accidental. Athletes operate in a culture that equates mental health disclosure with weakness, and many fear that an admission of psychiatric symptoms could cost them playing time, a scholarship, or a sponsorship, concerns reinforced by persistent stigma and the underdeveloped mental health literacy of many sport environments (Reardon et al., 2019). Pharmacists are well-positioned to identify these patterns during routine checks. In practice, this means moving beyond "how to take this medication" and asking sharper clinical questions. For example, instead of asking about side effects, the pharmacist might ask how the athlete is sleeping before competition, whether their caffeine or pre-workout use has changed, how their motivation compares to last season, or how they have been coping since their last injury, each question targeting a specific behavioral signal an athlete is more likely to answer honestly than a direct question about depression or anxiety. These conversations can reveal underlying distress or risky coping mechanisms, allowing the pharmacist to facilitate a quick referral to a team physician or psychologist, thereby expediting a solution (El-Den et al., 2021; Ho et al., 2024).

Sports pharmacists also excel at optimizing therapy without compromising performance. Many athletes are terrified of psychiatric medications, fearing side effects such as sedation, weight gain, tremors, or slower reaction times. These are not minor inconveniences in sports; they are deal-breakers. Research in sports psychiatry shows that choosing the right medication for an athlete requires a different thought process than choosing for the general public, often favoring options that are more energizing and less likely to affect body composition (Reardon & Creado, 2016; Reardon et al., 2025). For example, an activating SSRI like fluoxetine or sertraline is typically preferred over more sedating agents such as paroxetine or mirtazapine when treating depression in an athlete, since the latter carry a heavier burden of sedation and weight gain that can directly compromise training and performance (Reardon & Creado, 2016; Reardon et al., 2025). A sports pharmacist strengthens this process by tailoring the dose, timing, and monitoring plan to the athlete's specific training load and competition schedule (Hirschbeck et al., 2022; Reardon & Creado, 2016).

Pharmacists' expertise is even more critical when treatment adherence is in question. Mental health outcomes often fail not because a drug does not work, but because the athlete stops taking it out of fear, takes it inconsistently, or tries to "cycle" it around competitions. We know from psychiatric pharmacy data that pharmacist involvement improves patient outcomes and consistency (Al-Jumah & Qureshi, 2012; Ho et al., 2024). Operationally, this translates to medication therapy management at initiation, refill-pattern monitoring as a continuous adherence signal, and pre- and post-competition consultations timed to periods when athletes are most likely to interrupt therapy. Each contact serves as both an adherence checkpoint and an opportunity to reinforce the rationale behind continuous treatment. For athletes trying to balance symptom management with elite performance, the pharmacist can explain which side effects are temporary, what to expect in the first few weeks, and why abruptly stopping a medication before a big game could backfire on both mental health and performance (Ho et al., 2024).

> The sports pharmacist of the next decade will not be defined by access to elite teams alone, but by the willingness to build the role wherever athletes train, compete, and recover.

Adherence and anti-doping compliance are clinically inseparable in the athlete population, since fear of a positive test is itself a leading driver of self-directed therapy interruption. Athletes may skip necessary treatment because they are scared of a positive test, while others might unknowingly mix a prescription with a "natural" supplement that contains a banned substance. The rules are complex; for instance, first-line ADHD stimulants require rigorous documentation for a TUE (U.S. Anti-Doping Agency [USADA], 2018; World Anti-Doping Agency [WADA], 2021). Sports pharmacists are the go-to experts for checking prohibited lists, interpreting WADA guidelines, and screening supplements to ensure athletes remain eligible while receiving needed care (Smith-Morris et al., 2018; Voravuth et al., 2022; WADA, 2021).

This anti-doping work is not a side task; it is core mental health care. Consider an athlete with ADHD or severe insomnia heading into a major championship. Without a pharmacist, they might stop their medication out of panic or

swap it for an unverified supplement. With a pharmacist, they receive a full status review and help with coordinating the TUE process. This ensures treatment remains both clinically sound and competition-safe, preventing relapses or avoidable eligibility problems (Bomfim, 2020; USADA, 2018).

Pharmacists can also move the needle by focusing on sleep and substance use, often the first cracks in an athlete's coping system. Poor sleep wreaks havoc on mood, irritability, and pain perception. In response, athletes often self-medicate with antihistamines, alcohol, cannabis, or escalating doses of melatonin and caffeine. These behaviors are frequently framed by athletes as recovery strategies rather than coping mechanisms. However, each of these agents disrupts the sleep architecture, hormonal recovery, or circadian regulation that athletes are actually trying to optimize. Experts have warned that the use of sleep medication in elite sports requires much closer scrutiny (Taylor et al., 2016). A sports pharmacist can spot these cycles early, reduce the use of medications that contribute to insomnia, and steer the athlete toward safer management and appropriate specialist referrals (Taylor et al., 2016).


There are also high-risk windows where pharmacist involvement should be even more proactive. Injury is a primary example. The psychological fallout from an injury can trigger everything from depression to disordered eating or substance misuse (Putukian, 2016). Retirement or being cut from a team is a similarly vulnerable time. During these shifts, changes in refill behavior or a sudden request for more sedatives or painkillers may be early warning signs. A sports pharmacist who notices these shifts can quickly escalate concerns, turning a routine encounter into a critical mental health checkpoint (Putukian, 2016; Voorheis et al., 2023).

Ultimately, the goal is collaborative care. Mental health in sports works best when the psychologist, psychiatrist, physician, and pharmacist are all speaking the same language. While the psychologist addresses identity or performance anxiety and the physician manages the diagnosis, the pharmacist provides the medication intelligence that holds it all together. They reconcile prescriptions with over-the-counter products, screen supplements, and ensure the treatment plan actually fits the reality of a training day (Bomfim, 2020; Hooper et al., 2025). In many high-performance environments, this pharmacist's perspective is the missing link (Bomfim, 2020).

Finally, there is a significant opportunity for research and drug development. We currently lack enough data on how psychiatric drugs affect specific athletic variables such as reaction time or cardiovascular response (Ekelund et al., 2022; Reardon & Creado, 2016). Evidence is often inconsistent, leading many clinicians to guess at what will be least impairing (Hirschbeck et al., 2022; Reardon et al., 2025). Sports pharmacists can bridge this gap by translating real-world athlete challenges into research questions, identifying which side effects lead athletes to discontinue treatment, and helping to shape safety monitoring for future therapies (Ekelund et al., 2022).

In sum, sports pharmacists improve athletes' mental health because they operate at the point of medication choice, daily counseling, and real-time decision-making. They do not replace the rest of the mental health team; they make the entire team more effective. In a modern sports world where mental health is inextricably linked to sleep, recovery, and anti-doping rules, the sports pharmacist is no longer an optional luxury; they are essential (Bomfim, 2020; Hooper et al., 2025; Reardon et al., 2019). For pharmacists looking to position themselves more deliberately in this space, the path forward involves three things: building technical credibility through residency training, sports pharmacy credentials, and continuous WADA Prohibited List literacy; building relational credibility by embedding alongside athletic trainers, team physicians, and sports psychiatrists at the collegiate, scholastic, and club levels where the role is least developed; and building scholarly credibility by publishing case reports, contributing to psychiatric medication tolerability research, and engaging with professional organizations. The sports pharmacist of the next decade will not be defined by access to elite teams alone, but by the willingness to build the role wherever athletes train, compete, and recover.

## References


- Al-Jumah, K. A., & Qureshi, N. A. (2012). Impact of pharmacist interventions on patients' adherence to antidepressants and patient-reported outcomes: A systematic review. Patient Preference and Adherence, 6, 87–100. https://doi.org/10.2147/PPA.S27436
- Bomfim, J. H. G. G. (2020). Pharmaceutical care in sports. Pharmacy, 8(4), Article 218. https://doi.org/10.3390/pharmacy8040218
- Ekelund, R., Holmström, S., & Stenling, A. (2022). Mental health in athletes: Where are the treatment studies? Frontiers in Psychology, 13, Article 781177. https://doi.org/10.3389/fpsyg.2022.781177
- El-Den, S., Collins, J. C., Chen, T. F., & O'Reilly, C. L. (2021). Pharmacists' roles in mental healthcare: Past, present and future. Pharmacy Practice, 19(3), Article 2545. https://doi.org/10.18549/PharmPract.2021.3.2545
- Ho, J. L., Roberts, J., Payne, G. H., Holzum, D. N., Wilkoff, H., Tran, T. H., Cobb, C. D., Moore, T. D., & Lee, K. C. (2024). Systematic literature review of the impact of psychiatric pharmacists. Mental Health Clinician, 14(1), 33–67. https://doi.org/10.9740/mhc.2024.02.033
- Hooper, A. D., Marquez, J., Bajorek, B., Cooper, J. M., & Newby, D. (2025). Enhancing pharmacists' engagement and collaboration in sport and exercise medicine: An intervention mapping study using the behaviour change wheel. Exploratory Research in Clinical and Social Pharmacy, 19, Article 100619. https://doi.org/10.1016/j.rcsop.2025.100619
- Hirschbeck, A., Leao, D. S., Wagner, E., Hasan, A., & Roeh, A. (2022). Psychiatric medication and physical performance parameters: Are there implications for treatment? Frontiers in Psychiatry, 13, Article 985983. https://doi.org/10.3389/fpsyt.2022.985983
- Putukian, M. (2016). The psychological response to injury in student athletes: A narrative review with a focus on mental health. British Journal of Sports Medicine, 50(3), 145–148. https://doi.org/10.1136/bjsports-2015-095586
- Reardon, C. L., & Creado, S. (2016). Psychiatric medication preferences of sports psychiatrists. The Physician and Sportsmedicine, 44(4), 397–402. https://doi.org/10.1080/00913847.2016.1216719
- Reardon, C. L., Claussen, M. C., Creado, S., Currie, A., & Edwards, C. D. (2025). Psychiatric treatment preferences of sports psychiatrists for athlete-patients across competitive levels: A 2024 update. The Physician and Sportsmedicine. Advance online publication. https://doi.org/10.1080/00913847.2025.2495545
- Reardon, C. L., Hainline, B., Aron, C. M., Baron, D., Baum, A., Bindra, A., Budgett, R., Campriani, N., Castaldelli-Maia, J. M., Currie, A., Derevensky, J., Glick, I., Gorczynski, P., Gouttebarge, V., Grandner, M., Han, D. H., McDuff, D., Mountjoy, M., Polat, A., ... Engebretsen, L. (2019). Mental health in elite athletes: International Olympic Committee consensus statement (2019). British Journal of Sports Medicine, 53(11), 667–699. https://doi.org/10.1136/bjsports-2019-100715
- Smith-Morris, A. D., Lien, K., & Arnold, B. E. (2018). Pharmacist assessment to prevent inadvertent prohibited substance use among competitive strength athletes. Canadian Pharmacists Journal / Revue des Pharmaciens du Canada, 151(6), 372–376. https://doi.org/10.1177/1715163518790990
- Taylor, L., Chrismas, B. C. P., Dascombe, B., Chamari, K., & Fowler, P. M. (2016). Sleep medication and athletic performance: The evidence for practitioners and future research directions. Frontiers in Physiology, 7, Article 83. https://doi.org/10.3389/fphys.2016.00083
- U.S. Anti-Doping Agency. (2018, July 2). What do athletes with ADHD need to know about TUEs? https://www.usada.org/spirit-of-sport/athletes-adhd-know-about-tues/
- Voorheis, P., Silver, M., & Consonni, J. (2023). Adaptation to life after sport for retired athletes: A scoping review of existing reviews and programs. PLOS ONE, 18(9), e0291683. https://doi.org/10.1371/journal.pone.0291683
- Voravuth, N., Chua, E. W., Tuan Mahmood, T. M., Lim, M. C., Wan Puteh, S. E., Safii, N. S., Wong, J. E., Jamil, A. T., Jamal, J. A., & Shamsuddin, A. F. (2022). Engaging community pharmacists to eliminate inadvertent doping in sports: A study of their knowledge on doping. PLOS ONE, 17(6), e0268878. https://doi.org/10.1371/journal.pone.0268878
- World Anti-Doping Agency. (2021). World anti-doping code 2021. https://www.wada-ama.org/sites/default/files/resources/files/2021_wada_code.pdf

# How to Build a Community Culture of Mental Wellness

*By* TrueSport

**AUTHOR BIO:**

The TrueSport mission is simple and bold: to change the culture of youth sport by providing powerful educational tools to equip young athletes with the resources to build life skills and core values for success on and off the field. TrueSport is founded on three cornerstones: sportsmanship, Character Building & Life Skills, and Clean & Healthy Performance. We're powered by the experience and values of USADA (U.S. Anti-Doping Agency) – the country's most trusted guardian of sport dedicated to preserving the integrity of competition at every level – and entrusted by the United States Congress to promote a positive youth sports experience through the provision of educational materials that reflect the TrueSport cornerstones.

It's easy to get into routines as a longtime coach: You likely know exactly what tactics work best, how to best run practices, and who needs to sit where on the bus heading to meets. But in addition to the physical and logistical sides of team sports, you're also in charge of the team culture.

Most coaches want to build a team that has a strong culture of mental wellness, but may be unsure where to start. Here, TrueSport Expert Kevin Chapman, PhD, clinical psychologist and founder of The Kentucky Center for Anxiety and Related Disorders, is sharing a few ways to start prioritizing strong mental wellness for your team. It's not all positive self-talk and mantras, though those can be helpful. Rather, Chapman is a fan of embracing the full range of emotions, and helping athletes understand and acknowledge their feelings.

## Normalize talking about emotions… especially the negative ones

Often, we get caught in the trap of assuming mental wellness means being positive and upbeat at all times. But in reality, mental wellness means acknowledging the full range of emotions and helping athletes to explore them. "It's critical for coaches to create a safe space to talk about emotions. In sports culture, there's often this hyper-masculinity expectation—across genders—where you can't talk about emotions, and that's absurd. Emotions are a part of competition," says Chapman.

"Creating a safe space and normalizing negative emotions is so important. We normalize positive emotions, which is great, but normalizing negative emotions is absolutely critical. Make time to talk about emotions during practice, or after practice, and embed that in conversations with the team."

## Putting names on emotions

Another tactic Chapman likes to use is actually matching specific characteristics to emotions. So many young people struggle to express their emotions or find the language to define how they're feeling. "I encourage coaches to talk about sport-specific examples of how emotions play out," says Chapman. "For example, if an athlete gets a yellow card during play, ask: 'Did you experience frustration or did you experience anger?' An athlete likely won't know the difference, but anger is directed toward someone else, whereas frustration is the result of unmet expectations. Both of those are normal emotions, but they are different from each other. Helping an athlete put words to their feelings makes it easier for them to move through them." And make sure that athletes know that it's a matter of *how* you respond to those emotions, not whether you have a certain emotion.

## Help your team bond by getting them frustrated

Skip the cheesy early season icebreakers and instead, help your team bond in a different way by practicing how to deal with difficult emotions and annoying

situations as a team. "I like using team building exercises to teach the idea of normalizing emotions. For instance, if a coach were to give pairs of players an unsolvable anagram task with 10 minutes to solve it, that's a great exercise in working through the emotion of frustration," Chapman says. That way, on game day when a real frustrating situation arises, your players are familiar with those feelings, and better understand how to work through them. "Let your athletes experiencing frustration and negative emotions in a safe space, and then, have a discussion about it," he adds.

## Avoid body or numbers-focused conversations

Like a focus on outcome goals, pointing out anything around body composition, power-to-weight, leanness, or other metrics that aren't process-oriented is dangerous for a young athlete's mental wellness. Even if you think you're being positive about one athlete's weight loss, you're creating a culture that values weight over actual performance and you're potentially encouraging disordered behavior, since you don't know how that athlete lost the weight. You're also sending a signal to the rest of the team that losing weight will make you acknowledge them. Don't focus on outcomes, like how an athlete looks or what they weigh, says Chapman. Instead, point out positive behaviors that add to overall health and wellbeing, like checking in that athletes are eating something for breakfast the morning of a match.

## Remind athletes to have fun

Yes, even kids occasionally need the reminder that it's important to have fun! "I always say that one of the simplest things a coach can do is to remember to say, 'Have fun,'" Chapman says. "A game or competition should be a fun reward for all the hard work that they put in during practice. This is their chance to show it off!"


> Creating a culture of mental wellness in youth sport requires action and intention by all those involved.

## Model mental health in your own life

"A team culture that values mental health needs to start with you modeling positive mental wellness tactics for your athletes," Chapman says. "Even if it's unintentional, your team culture is being modeled, both implicitly and explicitly, by parents and coaches." That means if you're angry during a game or competition, rather than yelling at the players (or the referee!), you need to model the behavior that you expect from your athletes. You can and should still feel your own emotions, but you can't expect your team to act in healthy ways if you don't.

## Get parents to buy in

Lastly, it's important for coaches to bring parents on board with this mental health-focused culture and value system. Chapman recommends an early season meeting with parents, or even having the team work to design a 'mental wellbeing pledge' that athletes and parents can sign that details team values and core beliefs. "Coaches and parents need to collaborate," Chapman says. "Having the coach and the parents on the same page as it relates to positive mental health and wellness is so important. If both the home environment and the sport environment are saying the same thing, then our young athletes are winning."

## Takeaway

Creating a culture of mental wellness in youth sport requires action and intention by all those involved. These tips will help coaches take action, set expectations, and lay positive foundations for mental health on their teams.

# Mental Well-Being and Peak Performance

Highlights from The Sports Pharmacy Network Podcast

Hosted by Brandon Welch, PharmD

**JULIUS THOMAS BIO:**

As a former NFL athlete and 2x Pro Bowler, Julius Thomas brings a wealth of experience in high-performance environments. However, it is his dedication to helping professionals balance performance and wellbeing that truly sets him apart. Julius has partnered with some of the world's top organizations in sports and business to provide solutions and training for high-performing teams. With a Master's degree in clinical psychology, and as an advisor for some of the world's leading academic and health organizations, Julius is at the forefront of understanding the intricacies of human behavior and performance optimization.

**Dr. Brandon Welch:** Welcome. What's up, JT?

**Julius Thomas:** Big fan of the podcast. Love listening to some of the other people that come on and talk about what they know. And I'm happy to be here to talk about how we take this mind from a performance and a health perspective to its capacity. I'm very focused and driven to figure out what are the limits and what are the performance gains that we can have in this kind of new developing field.

**Brandon:** Hey man, and you said it, we've been talking about this episode for a while. And you know, I'm really excited to get this going is because we know that like when it comes to mental health, I I mean, you've been an expert in this space. We know that I almost consider it like a silent epidemic, right? I I mean, the statistics don't lie. Just to kind of start the discussion off, you know, with me being a scientist and having that clinical background, you know, I always do my research, man. When it comes to stats and facts. And it's crazy, man, when I was reading up on the Bureau of Labor Statistics, and it showed each year over 200 million workdays are lost due to mental health conditions. Can you believe that?

**Julius:** And you know, I was actually trying to find a way to visualize the enormity of the mental health crisis. And I was thinking about COVID in particular and how many people unfortunately lost their life due to the COVID. to the COVID virus. what was really interesting is over a million people in the US lost their life to COVID. I was thinking to myself like, man, that's a lot of people. And we have this, you know, really a global response to try to protect as many people we can because the loss of life was that severe. But then I started looking at what the numbers are for mental health conditions. And those numbers make a look very little. the sheer numbers are staggering. You talk about 200, I think you said million work days of loss. It's a lot of But we're talking about 130 plus million people that are going to be diagnosed with anxiety at some point in their life.

**Brandon:** It's wild. Staggering.

**Julius:** Upwards of 60 million people that are going to have a depression diagnosis at some point in their life. And depression is one of the mental health conditions that's really responsible for a lot of that loss of work and productivity that we experience here in our country. So when we talk about mental health, I I mean, we're talking about numbers that continue to grow. I don't quote me on this, but I was reading an article earlier. I should have went back into it, but I believe it said one third of adolescents between ages 12 and 17 have received treatment, medication, or counseling in the last year for mental health challenges. It is a big thing and you know, I think we're right in the cusp of a time when that awareness that people have about mental health, it's growing and now we're have to figure out how we can prevent it.

**Brandon:** Hey, the best way that we can help treat people with this condition is for people like us and then other people with

large platforms to keep being huge advocates for health and providing valuable resources when it comes to people who may be suffering from mental health. And I always say, just like how every single year we go and get our annual physicals and get our blood work, we check to make sure everything's okay, right? Why not do an annual mental health checkup? I mean...

**Julius:** That's something I think a lot about, Because when we start to look at health in general, right, and being in the field of psychology, you really just study human behavior. And we have created...a culture around health that's reactive. And I was in Greece possibly, I think three years ago now. And I'll never forget starting to see, you know, Hippocrates in his life and you know, the father of medicine. I mean, we still have to take a Hippocratic oath as you know, clinicians. And I started thinking that, you know, 400 years BC, people were coming up to Hippocrates and they were saying, you know, it's this or, I'm having this challenge.

And so the beginning of medicine was to be able to treat people that were having symptoms that were too, too severe or too uncomfortable for them to be able to, to want to deal with any longer. And we still have that same system today. Where people are coming in to see you and are coming to see me or the other peers that we have and they're like, hey, this is too much. It's too hard for me to experience. And really would just hit me. And I thought, that's 2 ,500 years of doing that. And in the year 2024, we have to flip people's minds around. We have to get people to understand that, wait, I have to look at my health the way I look at my performance. I have to address it. I have to maintain it. I have to create resiliency in it.

And that's the only way that we're going to start to decrease this really big health epidemic we have here in our country and to be able to educate and encourage people and empower them with the tools to make sure that we stay ahead of health and not getting behind the eight ball because we know what happens at that point.

**Brandon:** You said something very key, is that we're a little bit too reactive and not enough pro -reactive. And the hard truth is that if you're saying that this started 2500 years ago, 2500 BC, then if you think about it, resources have become larger and larger and larger over the years.

I I mean, I feel like we have an abundance of resources that we can go to when it comes to any type of mental health issues that we may be dealing with. But it's now figuring out how do we disseminate this information appropriately to people who may need the actual help. so I wanted to really kick things off with the impact that you're making across multiple organizations speaking on this very important topic of mental wellbeing for peak performance. So if you don't mind telling the audience a little bit about the work you're doing in the field around mental health and why this has been such a huge focus for you.

**Julius:** The name of my company is Optimal Performance, and I really have one goal: to leverage science to help people maximize their performance and their well -being. That could be a period and stop. That's what I love doing and that's what I want to do for rest of my life. And I really got this idea to create this company called Optimal Performance being in graduate school. And as a future health psychologist, I was constantly studying comorbid health challenges, right? Physical and mental. And then I was looking at these numbers and going, these numbers are outrageous. Why is this happening?

An epiphany hit me and you can tell me how you take this, but you know, I always say the clinicians would be the worst goalies ever because there's clinicians. You can see the person dribbling towards the goal, knowing that eventually they're going to come take a shot at goal, but you wouldn't move. You would never leave the line and then they would kick the ball and then you still wouldn't move.

You would watch the ball go into the net and wherever it went into the net, you would describe specifically what this new diagnosis is. And then you'd pick the ball up and say, okay, I'm now I'm here to help. And I thought way too late as clinicians are always treating people that have things, but we're not getting ahead of things. We're not anticipating and preventing. We're not being a good defense. And that's something that I thought a lot about. And I thought I can spend the rest of my life waiting by my phone, waiting for somebody to call me and say, hey, JT, what's happening? You know, I don't feel like being here anymore. Or I'm so sad and life has gotten so hard that, I haven't left my house in 10 days. Or I'm so anxious, I can't do the things that matter to me. And on and on with different clinical disorders. And I thought, no, I'm not waiting.

And I said, the problem is, is we have access to information that only 1 % of the world can understand and 1 % of the world has access to. But the other 99 % of people, they need it. They need someone to come out and to teach them, not at our language, not in our vernacular, but in theirs. And so optimal performance for me was an opportunity to serve people in the high performing community and the high performing community is very broad. I'm talking about business professionals. I'm talking about the person that says, you know, I'm going down there to work at Ernest and Young and I'm just an administrative person. Cool. Guess what?

You're out there and your performance is what it provides for your family. And so my version of performance is really broad, but I want people that are motivated, people that want to have balance and fulfillments in their life. They want to do what they can to prevent illness and disease, to have the information they need to do so.

**Brandon:** And we all deserve that, right? And so when it comes to mental health, it's not innate, it's cultivated. And so like you said, like sometimes as a clinician, can, we have the opportunity to be the last line of defense, meaning we can stop the puck and address the issue before it actually becomes too late, right? We went to school for eight plus years for a reason and people are spending their time to come see us for a reason so that way they can get the high quality information that they need. It's important for us to stop and take the time to address these issues up front. Rather than in your case, someone having to reach out to someone like yourself or someone like me where they say to your exact example, I don't want to be here anymore. And unfortunately, sometimes when people get to that last step, even though that they addressed that issue, sometimes it really is too late.

**Julius:** It is. To be personal here and give people the opportunity to understand how hard this is for me to live with and how bad I want to change it. You know, my uncle, man, my Uncle Keith. I grew up with my uncle Keith. My uncle Keith was the guy that used to come to my house all the time. and my dad are so close. Man, I had so many memories of my uncle Keith. And unfortunately, he passed away this February at the age of 62. And I couldn't believe it when I got the call and they said, hey, just want to let you know uncle Keith passed away. The first thing that came to my mind was from what? What did he pass away from?

And they said, well, we don't know yet. just, we just know that he was dropped off at the hospital. He was there for about three hours and then they called and they pronounced him dead. And as a family member, you're, you're hurt, you're sad, but as a clinical trained person, you're like, what WTF happened? How could that happen? And so I later, I later came to find out that he died of a blood infection, a blood infection.

**Julius:** We can treat blood infections and we can treat them highly successfully if we get them early enough. There's really no reason to die from a blood infection in a Western country unless you get there at the last possible moment.

And that for me is just an example, one that hits close to home, one that I don't want other people to experience. When we wait to the last possible moment, when we can no longer take the symptoms we have for any condition, we've really tied the hands of the medical community, of the doctors, of the professionals that are there to help. And I have to try to find a way to get people to understand how to be proactive and how to be early when it comes to their health.

**Brandon:** It's like if I can use the example of pre -diabetes, pre -hypertension, pre -cholesterol, right? If you catch it early enough, we have an opportunity to reverse it rather than once it becomes full -blown type 2 diabetes, full -blown hypercholesterol, right? It becomes harder to manage and treat. And one thing I like to, I want to bring up is, and that I've learned this, is that when it comes to mental health, it does not discriminate. Poor, rich, wealthy, middle class, I mean, some of the poor people are the happiest people in the world and some of the wealthiest people are the most miserable people in the world. And so when you talk about mental health and people trying to use that as a platform and proving that to use it as a platform to improve or enhance their performance, you're absolutely right. It doesn't matter if it's the grocery bagger at Publix. It doesn't matter if it's the CEO of a large Fortune 500 company. Mental health, I can't stress enough, it does not discriminate. And it's a silent killer. And so it's always very important to make surethat we keep stressing, we try to catch it before it's too late. Now, kind of moving on into our next question here.

> Sleep is the time all of that happens. You want healthy hormonal balance, sleep, you name it, on and on, right? So sleep, I'm so committed to getting that seven hours minimum.

So when we talk about being proactive with our health, our mental health in particular, what would you say are kind of like your main pillars or your isms when it comes to mental well -being?

**Julius:** This is a phenomenal question and this is something I thought about a lot. I'm the kind of person that asks myself questions. If somebody asked me what are the things that I should be most focused on if I wanted to prevent developing a mental health disorder? What are those things that are my

early warning signs? What if it's for my kids? You I want to have an early warning sign because I don't want to get to the point where now I'm taking my kid down to a therapist's office and we're doing some intensive work. So one of the first signs that your mental health is being stressed beyond your capacity to handle it individually. And let's make this clear, is we've had this concept that we need to be able to handle everything that happens between our ears on our own.

And that's just a cultural concept that's not true. We should get support when it's beyond our capacity. So the first thing that I tell people to really start to pay attention to is your sleep. You should be able to fall asleep when you lay down in the bed within 30 minutes. That is sleep hygiene 101. If you are unable to sleep, we got something going on here.

We talking about, you know, chronic stress, we're talking about anxiety, we're talking about, you know, maybe abuse of substances. Like there's something happening to your mental health if you're not able to go to sleep in that 30 minutes. Insomnia.

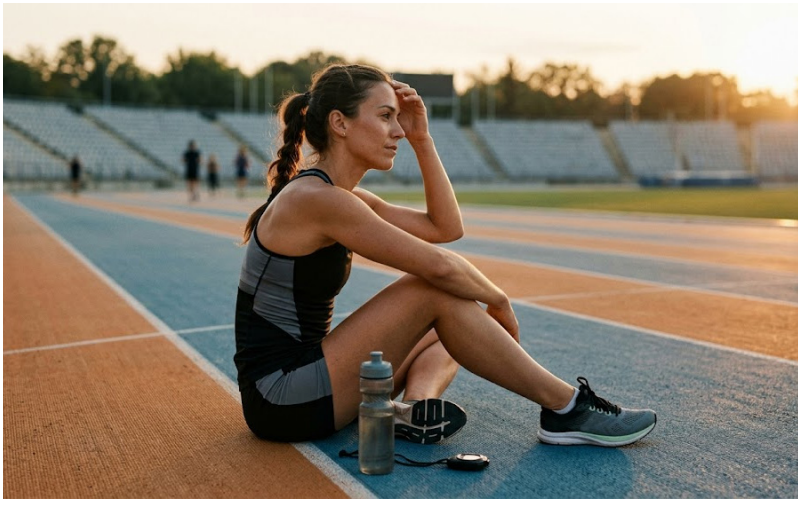
happens to be part of the diagnostic criteria of so many psychological disorders. So if you start to notice like, wait, and I have a lot of trouble falling asleep or I have a lot of trouble staying asleep, being that's your first sign, man, maybe there's something going on with my mental health. The next thing I think of when I talk to people about early warning signs for their mental health is your mood. Most people don't keep a mood journal.

But I have had times in my life where burnout specifically started to really affect my mood. And I caught it one day going, why am I more irritated? Why am I angrier? Why do I feel my emotions swinging more in a day than they usually do? wait. my mental health is being stressed. And so I try to ask the people that I work with, and one of the behind the scenes secrets that I use in optimal performance, is I tell people keep a mood journal. And I want you to write down out of one to 10 what your mood was that day. 10 being the happiest, one being the lowest. And then to take it a next step further, I ask them write down your positive mood minus your negative mood, for example.

I was working with a client and she was successful business owner. The best her year had ever had in business. And she was like, I'm unhappy. So I asked her, said, what's your daily positive mood if you had to rate it between a one to 10? She said a two. Now that's hard to hear. That's extremely hard to hear that somebody is going through that many mood challenges. But then I said, okay, but what's your negative mood? She said an eight. I said, so we're at a negative six. as a value when we take your positive minus your negative mood. That is unsustainable. Anytime your positive minus your negative mood is less than zero, you're at risk. Now, if you were saying I have my positive moods at a four and a negative mood to the three, okay, you would be able to do that chronically. But once you flip and you have a negative number, hey, there's something we need to do.

Another big warning sign when it comes to your mental health is are you starting to isolate yourself? Now I know that there's people that are introverts a little bit like myself. You know, I need to spend time to be able to read. Sometimes I just want to be off on my own watching my YouTube videos, that kind of stuff. But when you start to truly isolate yourself a lot, stop hanging out with your family and friends the way you used to, not the way other people do, the way you used to. That is another reaction. And you and I both know that that's part of the symptoms of sickness and high inflammation, right? And so these are the three things that I say you should really be aware of for yourself and those you love. First, your sleep.

Next is mood, and then the next are you or the people you know and love and care about isolating themselves. If you see these signs, okay, now it's time to go find a mental health professional and really do a little bit of a deep dive.



**Brandon:** No, I think that those are great, great golden nuggets there. And I've always felt that, I've always felt this, and I don't know if you feel this the same way. I feel like sometimes we live in a society where we're overworked and under rested. And it almost tackles on to your point of a lack of sleep insomnia and a lack of sleep having that compound effect of you being in a bad mood. And it becomes a cycle, right?

**Julius:** 100 % and I talk about this a lot when I do my work with corporate clients, right? When we have a couple hundred people in a meeting room and I'm teaching them and I'm talking about how they can maintain their mental health and well -being. CNBC did a poll, maybe it's early 2024, late 2023, sometime within the last year. And that poll showed that 48 % of people say that they feel burnt out.

Full stop, one in two Americans say "I'm burnt out and I can feel the irritability." I feel myself getting frustrated just going and driving to work.

I don't have the energy that I need. I know I haven't been sleeping well. I know I'm not taking care of myself, right? When you have one out of two working people in a country that feel burnt out, that tells you the kind of challenge that we are going through psychologically. And the craziest part about burnout is the symptoms of burnout are very similar to the symptoms of depression. Now we have a bunch of people that have conditions that are so hard or lack the information that they need to a degree where they feel like they can't control their mood. They feel like they have a lack of motivation and drive. They're having trouble sleeping, right? Like what? This is the stuff that I love working on and I love teaching people about because we can't have one in two people feeling burnt out. just can't.

**Brandon:** The data is unimpeachable. Like one in two, 48 % of Americans feeling burnt out from their work. It almost makes me think too that we need to establish some level of healthy boundaries, understanding when to shut it all. And I think, and I don't know if you'd agree with this too, a leading cause of people's mental health.

So JT, before we go, man, I'm going to make sure you're practicing what you're preaching. What are the things that you do every single day, man, to make sure your mental health is in check?

**Julius:** You know, I love it. And it's good because I tell myself, man, I can't teach this if I don't do this. So I stay on top of it. But I'm going to go with the big three. Really the big two. But I'll throw the third one in there because it it's important as well. But number one, sleep. There's nothing more anabolic than sleeping. You pick the system in your body if you wanted to restore and to heal. Sleep is the time all of that happens. You want healthy hormonal balance, sleep, you name it, on and on, right? So sleep, I'm so committed to getting that seven hours minimum. That's been one of the biggest changes I've made in my life since studying health. The second is trying to exercise daily.

And I don't mean a hard and tense exercise, but something daily. At least that 30 to 60 minutes. One of the things that I've started to do a lot is to walk. I've had the knee surgeries, I've had the ankle injuries, I got the herniated discs in the spine. I can't go hit six miles on the treadmill or go run on concrete pavement for six miles every day. Sometimes it's just walk at a good pace. And sometimes it's just 30 minutes, sometimes it's an hour. you know, making sure I get the sleep and exercise is important.

And then I think that, you know, one of the other big things is that we all forget and we got to do a better job of in our country is what are you doing every day to recover? What is a low? And I started to say like this, because I think that people were not understanding what I meant by recovery. What is the low heart rate thing you do to recover? What is something where you're pretty much not doing anything besides sitting and just breathing to help your body recover? And some of the things that I've really started to do a lot are meditation. I love to do yin yoga, passive stretching, something that's just super slow.

Stretch stretching is amazing, right? Stretching is one of the best things for me. And then the other one I do, it's kind of a pastime I've started to do a lot now is to just sit in the backyard for 25 minutes after I put the kids to bed and just listen to some jazz. Just sit out there, listen to some jazz music. I don't want the words. I just want to sit in the one night.

**Julius:** Throw a little music on that's not stressful, that doesn't raise my heart rate, that doesn't make me think about the story that they're telling. Just instruments. And I just breathe, and notice, and be happy to be giving myself this time. So those are my big three.

**Brandon:** Hey, they sound very therapeutic and I couldn't agree anymore. Now listen, where can people find you if they want to more information? I know that this morning I was checking you out, man. You were talking about making sure you have a vision, which is a very important element when it comes to mental health. But for people to keep following your content, where can people find you?

**Julius:** Yeah, so if you want to learn more about my content or what I do, you can find me pretty much on most of the social media platforms, Instagram, TikTok, Facebook, LinkedIn, at Julius Thomas. It's a variation of Julius Thomas on all those platforms, but I'm pretty hard to miss. You'll recognize the 6"5' guy!

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# Omega-3s, the Omega-3 Index, and Brain Health in Athletes:

## From Protection to Performance

*By* OmegaQuant

**About the author:**

OmegaQuant is an independent, CLIA-certified lab that offers nutritional status testing to researchers, clinicians, and the public. OmegaQuant performs analysis in Sioux Falls, SD, for commercial and academic research collaborators, and for consumers interested in monitoring their nutritional status in both blood and breast milk. Its goal is to offer the highest-quality fatty acid analytical services to researchers and to provide simple nutritional status tests for consumers, with the ultimate purpose of advancing the science and use of certain nutrients to improve health. Internationally, OmegaQuant collaborates with the University of Stirling in Scotland to process blood samples from Europe. Learn more @ www.omegaquant.com

In sports, physical performance often takes center stage, but brain health is just as critical. From decision-making and reaction time to long-term neurological health, the brain plays a central role in athletic success and longevity.

At the same time, athletes face unique neurological stressors, including repetitive head impacts, inflammation, and metabolic strain. As research evolves, one area gaining significant attention is the role of omega-3 fatty acids, particularly eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), in supporting brain health and resilience.

Importantly, the conversation is shifting beyond intake alone toward measuring omega-3 status using the Omega-3 Index, a biomarker that may provide deeper insights into brain health, performance, and protection.

### The Athlete Brain: A High-Demand, High-Risk System

Athletes place extraordinary demands on their bodies, and their brains are no exception. Cognitive functions such as reaction time, focus, and motor coordination are essential for performance, while exposure to repetitive sub-concussive impacts and concussions introduces risk.

Sports-related concussions remain a major concern, particularly in American football, soccer, hockey, and combat sports like rugby.[1] Even in the absence of diagnosed concussions, athletes may experience repetitive head impacts that can contribute to cumulative brain injury over time.[2]

This creates a dual challenge, supporting optimal cognitive performance and protecting against acute and long-term brain injury. And nutrition is increasingly recognized as a modifiable factor in both.

### Why Omega-3s Matter for Brain Health

Omega-3 fatty acids, especially EPA and DHA, are essential components of brain structure and function.

DHA makes up a significant portion of brain cell membranes, supports neuronal membrane fluidity, neurotransmitter signaling, and plays a role in synaptic plasticity and learning.[3]

EPA contributes to brain health through its anti-inflammatory effects and modulation of immune and oxidative stress pathways.[4]

Together, these fatty acids can reduce neuroinflammation, support neuroprotection, and enhance recovery processes following injury, all of which are highly relevant for athletes, whose brains are exposed to mechanical, inflammatory, and metabolic stress.

### Omega-3 Status in Athletes: A Hidden Deficiency

Despite their importance, there are a multitude of reasons why many athletes fail to achieve optimal omega-3 levels. Limited consumption of omega-3-rich foods, inconsistent dietary patterns, travel demands, and potentially higher physiological requirements may all contribute to suboptimal omega-3 status in athletic populations.

Research shows that less than 1% of athletes reach an Omega-3 Index above 8%,

the level considered optimal, while roughly one-third fall below 4%, a high-risk range. Additional data from high-risk groups, including American football players and military personnel, reveal similarly low omega-3 levels, even among individuals with otherwise strong nutrition habits.[5]

This gap is especially important because dietary intake alone does not reliably predict tissue levels and athletes may have higher metabolic demands for omega-3s. Furthermore, training environments often limit regular access to omega-3-rich foods. As a result, many athletes may be unknowingly under-fueled for brain health.[5]

## The Omega-3 Index: Moving from Intake to Insight

The Omega-3 Index measures EPA + DHA as a percentage of red blood cell membrane fatty acids, reflecting long-term omega-3 status.[6]

Key ranges:

- <4% = high risk
- 4–8% = intermediate
- 8–12% = optimal

These risk ranges were originally developed based on cardiovascular disease research. More recent studies have explored potential associations between higher Omega-3 Index levels and other health outcomes, including cognitive health and longevity, although optimal target ranges for these outcomes remain under investigation.

Unlike dietary estimates based on intake, the Omega-3 Index provides:

- A direct measure of blood and tissue status
- A way to track changes over time
- A tool for personalizing nutrition strategies

The Omega-3 Index can be measured using either a traditional blood draw or a finger-stick dried blood spot test, both of which assess EPA and DHA levels in red blood cell membranes. While testing has historically been performed through clinical laboratories and research settings, several direct-to-consumer options are now available, allowing athletes and practitioners to monitor omega-3 status without requiring a physician order. This increased accessibility may make Omega-3 Index testing a practical tool for individualized nutrition strategies in athletic populations.

## Omega-3s and Brain Injury in Athletes

One of the most compelling areas of research is the relationship between omega-3 status and brain injury biomarkers such as neurofilament light (Nf-L), which reflects neuronal damage. Elevated levels of Nf-L are associated with head trauma and neurological stress.[7]

Studies in American football players show that athletes supplementing with omega-3s experienced smaller increases in Nf-L across the course of a season, suggesting reduced neuronal stress compared with control groups. By contrast, control athletes showed significant increases in Nf-L.[8]

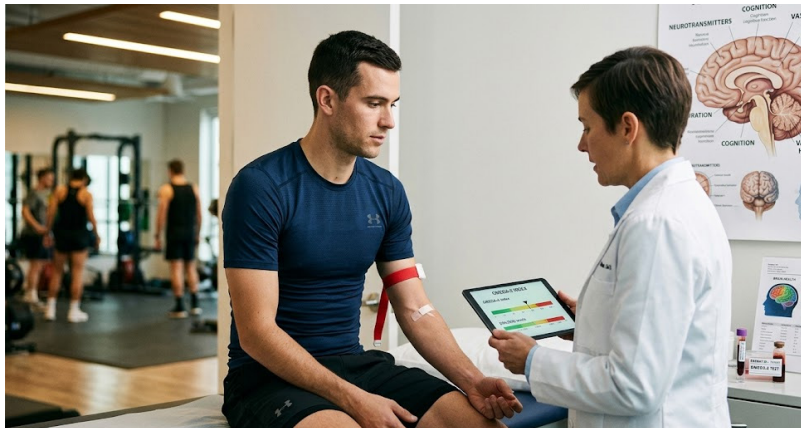
Additional research further suggests that omega-3 supplementation may help reduce biomarkers associated with brain injury in collision sports. At the same time, higher omega-3 status may also be linked with a lower symptom burden following head injury. Together, these findings support the idea that omega-3s may serve both a protective role before exposure and a supportive role during recovery, making them an important consideration in brain health strategies for athletes.[9]

## Cognitive Performance and Omega-3 Status

Beyond injury, omega-3s may influence cognitive performance, which is critical for athletes.

Emerging evidence suggests that higher omega-3 levels are associated with stronger executive function and greater cognitive flexibility, while suboptimal omega-3 levels have been linked to impaired learning and memory. These findings are especially relevant in athletic settings, where brain performance can directly influence outcomes on the field, court, or in competition.[10]

For athletes, this may translate into faster decision-making, improved reaction time, and enhanced focus under pressure—three cognitive advantages that can make a measurable difference in performance.[10]



## Dosing and Supplementation for Athletes

When it comes to dosing and supplementation, athletes often have higher omega-3 needs than the general population. Current recommendations suggest that high-performance athletes may need around 1-3 grams per day of omega-3s EPA and DHA, although higher doses may be necessary depending on their baseline status.[11]

While most recommendations focus on total EPA+DHA intake, emerging research suggests that EPA and DHA may have distinct roles. DHA is a major structural component of neuronal membranes and is often emphasized for brain health, whereas EPA appears to play a more prominent role in modulating inflammation and recovery. However, there is currently insufficient evidence to recommend a specific EPA-to-DHA ratio for athletic performance or brain protection, and most experts emphasize achieving adequate total EPA+DHA intake rather than targeting a particular ratio.

Individual response can vary widely based on factors such as body size, overall diet, absorption efficiency, training load, and genetics. This variability reinforces the importance of a personalized approach to omega-3 optimization rather than relying on a one-size-fits-all dosage strategy.[11]

## Test, Don't Guess

The combination of highly variable omega-3 status, increased physiological demands in athletes, and emerging links to brain health makes a strong case for a test-and-target strategy. This approach begins with measuring an athlete's baseline Omega-3 Index, then adjusting intake through diet and supplementation based on individual needs, followed by re-testing every 3-4 months to ensure target levels are achieved.

This model closely aligns with broader trends in sports nutrition, including personalization, biomarker-driven decision-making, and precision fueling, all of which are reshaping how performance nutrition programs are designed.[5,11]

## Future Directions in Research

While the evidence is highly promising, several important questions remain. Researchers are continuing to explore the optimal Omega-3 Index target for athletes, how omega-3 status may influence long-term neurological outcomes, and what the ideal dosing strategies may be across different sports and levels of contact exposure.[10]

Ongoing work is also examining dose-response relationships, the importance of timing before vs. after injury, and how omega-3s may interact with other nutrients that support brain health and recovery. As this field continues to evolve, omega-3s are increasingly positioned to become a standard component of brain health and performance protocols in all kinds of sports across all levels of competition.[10]

## Practical Takeaways for Practitioners and Athletes

Omega-3s, specifically EPA and DHA, are essential for healthy brain structure and function. Athletes are at a heightened risk of suboptimal omega-3 status due to increased metabolic demands and inconsistent access to omega-3-rich foods.

The Omega-3 Index provides a reliable and actionable measure of omega-3 status, making it a valuable biomarker for sports nutrition programs. Higher omega-3 levels may help support brain resilience, reduce biomarkers associated with injury, and enhance cognitive performance.

Taken together, a test-and-target approach offers the most effective strategy for optimizing omega-3 status and supporting both brain health and athletic performance.

## References


1. Matias-Soto J, Infante-Cano M, García-Muñoz C, Pineda-Escobar S, Martinez-Calderon J. Concussion Incidence by Type of Sport: Differences by Sex, Age Groups, Type of Session, and Level of Play An Overview of Systematic Reviews With Meta-analysis. J Orthop Sports Phys Ther. 2024 Nov;54(11):702-710.
2. Ntikas M, Binkofski F, Shah NJ, Ietswaart M. Repeated sub-concussive impacts and the negative effects of contact sports on cognition and brain integrity. *Int J Environ Res Public Health.* 2022;19(12):7098.
3. Sinclair AJ, Begg D, Mathai M, Weisinger RS. Omega-3 fatty acids and the brain: Review of studies in depression. *Asia Pac J Clin Nutr.* 2007;16(Suppl 1):391–397.
4. Layé S, Nadjar A, Joffre C, Bazinet RP. Anti-inflammatory effects of omega-3 fatty acids in the brain. *Pharmacol Rev.* 2018;70(1):12–38.
5. Heileson JL, Sergi TE, de Souza LC. The Omega-3 Index in athletes: Brief review. *J Exerc Nutr.* 2025;8(1):12.
6. Harris WS, von Schacky C. The Omega-3 Index: A new risk factor for death from coronary heart disease? *Prev Med.* 2004;39(1):212–220.
7. Shahim P, Politis A, van der Merwe A, Moore B, Chou YY, Pham DL, Butman JA, Diaz-Arrastia R, Gill JM, Brody DL, Zetterberg H, Blennow K, Chan L. Neurofilament light as a biomarker in traumatic brain injury. *Neurology.* 2020 Aug 11;95(6):e610-e622.
8. Heileson JL, Anzalone AJ, Carbuhn AF, Askow AT, Stone JD, Turner SM, Hillyer LM, Ma DWL, Luedke JA, Jagim AR, Oliver JM. The effect of omega-3 fatty acids on a biomarker of head trauma in NCAA football athletes: a multi-site, non-randomized study. *J Int Soc Sports Nutr.* 2021 Sep 27;18(1):65.
9. Heileson JL, et al. Nutritional optimization for brain health in contact sports: Systematic review and individual participant data meta-analysis. *Curr Dev Nutr.* 2024.
10. Rittenhouse M, Khurana S, Scholl S, Emerson C. Examining the Influence of Omega-3 Fatty Acids on Performance, Recovery, and Injury Management for Health Optimization: A Systematic Review Focused on Military Service Members. *Nutrients.* 2025 Jan 16;17(2):307.
11. Ritz, Peter P. and Michelle S. Rockwell. Promoting optimal omega-3 fatty acid status in athletes. (2021).

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