Inflammation and supplementation for the SWAT athlete

By Eric Auciello, ACSM, CPT

Optimal job performance should be the goal of every athlete regardless of their chosen sport. Obviously, a SWAT athlete’s focus is vastly different than that of the common athlete. However, all athletes share certain similarities, including the constant quest to gain an edge in or on the field. For the tactical officer, this can be achieved with the use of state-of-the-art equipment or through physical conditioning. But, recently an additional edge has been found with the use of sound dietary supplementation.

Dietary supplementation can play an important role in tactical operations and training. One of the keys to achieving optimal performance lies in an athlete’s ability to maintain a healthy mental and physical state. Special operations soldiers and law enforcement officers who are active in the field cannot afford to have any mental and/or physical setbacks. The presence of localized and systemic inflammation caused by training can represent one such setback. Many factors contribute to an individual’s level of inflammation, such as repetitive movement patterns, diet and stress. The modern tactical athlete is increasingly susceptible to the inflammatory process, due to higher training volumes, abnormal sleep patterns and certain nutritional deficiencies. These factors and many others play a significant role in the body’s ability to regulate levels of inflammation.

Job performance

A team’s operational effectiveness is often dependent upon each individual member’s ability to perform his job effectively. If an operator’s ability to perform his job has been compromised by injury or dysfunction, then the success of the mission is jeopardized. There are litanies of inflammation-based ailments that can negatively affect one’s job performance, including the common cold, tendonitis, depression and DOMS (delayed onset muscle soreness). For example, an athlete’s job capacity may be corrupted by the presence of localized...
inflammation (tendonitis/arthritis). This may lead to limited range of motion, joint weakness and pain, whereas neurological inflammation can negatively affect mood, neuromuscular coordination and vision.

These examples of excessive inflammation can disrupt the mind-body balance and compromise an operator’s ability to perform the task at hand, which ultimately increases the potential for mission failure. When failure is not an option, it becomes imperative to embrace corrective methods to remedy and maintain a sound mental and physical state.

**Alternatives to NSAIDs**

A common method of fighting inflammation is the use of NSAIDs (nonsteroidal anti-inflammatory drugs). The most prominent players in this group of drugs are aspirin, ibuprofen and naproxen, partly because they are readily available over-the-counter in many areas. With the availability of these drugs rising, one would think they are the safest option available. However, research indicates that the overuse of prescription and non-prescription NSAIDs could lead to larger health issues such as the development of ulcers, autoimmune dysfunction, bleeding in the GI tract, congestive heart failure, photosensitivity and renal failure.

The use of NSAIDs other than low-dose aspirin is associated with a doubled risk of symptomatic heart failure in patients without a history of cardiac disease. In patients with cardiac disease, the use of NSAIDs (aside from low-dose aspirin) was associated with more than a tenfold increase in heart failure (Henry 2000). Research has also shown that sustained exercise while using NSAIDs can compromise renal function and potentiate the risk of developing acute renal failure. NSAIDs are widely used in the tactical community, and athletes should be warned of the potential danger of their use when renal function may be compromised (Walker, et al., 1994).

Conservative calculations estimate that approximately 107,000 patients are hospitalized annually for NSAID-related gastrointestinal (GI) complications and at least 16,500 NSAID-related deaths occur each year among arthritis patients alone. The figures for all NSAID users would be overwhelming, yet the scope of this problem is generally underappreciated (Singh 1998). This data provides compelling evidence to support the use of alternative treatment options when battling chronic inflammation-based ailments.

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So, if ibuprofen is a no-no, what is another alternative? Currently omega-3s offer an excellent alternative to NSAIDs. Polyunsaturated fatty acids (PUFA), better known as omega-3s act as a powerful, naturally occurring anti-inflammatory agent. Regular supplementation of omega-3 fatty acids can easily be achieved by oral consumption of a fish oil product. Many well-documented studies have shown that dietary supplementation of fish oil can greatly reduce levels of inflammation. Omega-3 fish oil can be taken in a liquid or capsule form and has been shown to improve brain function, decrease inflammation, reduce the incidence of fatal heart attacks and ischemic strokes, improve the outcome of autoimmune diseases and improve vision (Blaylock 2008).

It should be apparent that fish oil represents a powerful tool for any athlete to help maintain a sound and healthy body and mind. Most importantly, fish oil has greatly improved my tactical athletes’ ability to recover from strenuous physical activity. Our athletes’ anecdotal experiences corroborate with current scientific data showing fish oil as a viable option for combating localized and systemic inflammation.

**Choosing a quality fish oil**

Unfortunately, all fish oils are not created equal. A quality product has several critical features. It’s important to make sure the fish oil has been refined properly through molecular distillation. Next, check the amounts of the most biologically potent components found in fish oil, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Large disparities in EPA and DHA content can be found throughout different brands. So, it’s wise to review the nutritional information located on the package prior to purchasing; this information will be necessary later when determining your proper dosage.

Unfortunately, there is no FDA recommended dosage for fish oil but the association states that the average healthy person (over age 5) should not take a fish oil dosage of more than 3000 mg per day. However, the average person only consumes the woefully inadequate amount of 120-130 mgs each day (Simopoulos 2009). In my experience, 450-500 mg per day of combined EPA/DHA is a good starting point. The World Health Organization and numerous other authorities recommend 300-500 mg per day, and most current research projects assessing the benefits of omega-3s are based on doses of 1000 mg and up. It is recommended that you slowly ramp up your consumption of fish oil to see what your body feels comfortable with and to make sure you don’t experience any fish oil side effects like allergies, diarrhea, heartburn or nausea.

When should you consult a doctor for fish oil recommended dosage? Individuals who have diabetes, people taking insulin, people at risk for bleeding, people with congestive heart failure (or any other condition where the heart is receiving insufficient blood flow), people with high levels of...
Excessive bleeding concerns

Due to the nature of the tactical athlete’s profession, the potential for excessive bleeding caused by traumatic injury does exist, and there has been a longstanding misconception surrounding the use of fish oil and the potential for excessive bleeding. Supplement labels and doctors alike are prone to warning against exceeding recommended doses or combining fish oil with blood-thinning drugs. The reason is a longstanding assumption that omega-3s thin the blood, making bleeding easier and clotting harder. But when Dr. William S. Harris, a respected expert in omega-3s and cardiovascular health, scrutinized the medical literature, he could find no scientific justification for these concerns. However, Dr. Harris was sure to note that possible interactions between omega-3s and newer anti-platelet drugs (like clopidogrel) have not been examined directly.

Dr. Harris stated that he was “confident” — given the large amount of evidence in hand already — that omega-3 fatty acids do not increase risk for adverse bleeding. However, a few people will always experience uncommon reactions to any given drug or food factor. And with regard to blood chemistry, some people may have very rare adverse responses to omega-3s. If you are taking fish oil and/or blood-thinning drugs like aspirin, coumadin, warfarin or clopidogrel and notice any signs of abnormal bleeding, consult a physician immediately (Weatherby 2008).

Based on these findings, it would certainly seem prudent for the tactical officer/athlete to follow a responsible course of fish oil supplementation. The positive effects of fish oil supplementation clearly outweigh any negative known side effects or reactions present in the mass population.

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I want a new drug…one that won’t make me sick

A durable tactical athlete is an effective operator in the field. In developing our methodology we have sought every possible advantage for our tactical athletes; we’ve found fish oil to be an important supplement to our program. Our tactical athletes have reaped the benefits of fish oil supplementation for many years with little or no ill side effects. Fish oil helps our athletes by improving their sleep patterns and aiding in weight loss, pain management and improved blood chemistry. All of these factors can have a positive physical and psychological effect on the athlete’s ability to handle increasing difficult training and duty demands.

The increased stresses placed upon the modern tactical officer have steered our program’s focus to achieving durability in our athlete in addition to performance. Fish oil has greatly aided in our efforts and has helped our athletes achieve superior physical and mental conditioning. Since we have embraced fish oil supplementation, our athletes have experienced faster recovery times, less overuse injuries and better overall body compositions. These anecdotal findings coupled with the most current scientific literature leads us to believe that fish oil will provide the tactical athlete with a clear advantage in the field. It’s our sincere belief that any advantage, no matter how small, is instrumental in keeping our athletes at the top of their game, safe and high-functioning. We strongly believe fish oil aids in developing the small advantages necessary for success in each and every tactical athlete.

References

About the author
Eric Auciello trains select tactical athletes who are attached to United States Central Command (CENTCOM), Special Operations Command Central (SOCCENT), Tampa Police Department and Hillsborough County Sheriff’s Department. He currently serves as the head coach of Team Florida – Tampa Bay, a USA Weighting and Track and Field club. Mr. Auciello is the owner of Phase Five Fitness and Crossfit Revolution, Inc.