

# Fish oil may help improve mood in veterans

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Credit: Texas A&M University

Low concentration of fish oil in the blood and lack of physical activity may contribute to the high levels of depressed mood among soldiers returning from combat, according to researchers, including a Texas A&M University professor and his former doctoral student.

In a study titled "Fatty Acid Blood Levels, Vitamin D Status, Physical Performance, Activity and Resiliency: A Novel Potential Screening Tool for Depressed Mood in Active Duty Soldiers," [researchers](#) worked with 100 [soldiers](#) at Fort Hood to identify which factors affected moods in returning soldiers.

The research was conducted by Major Nicholas Barringer when he was a Texas A&M doctoral student under the direction of Health & Kinesiology Professor and Department Head Richard Kreider, in collaboration with several current and former members of the U.S. Army, and colleagues at Texas A&M.

"We looked at how physical activity levels and performance measures were related to mood state and resiliency," Kreider says. "What we found was the decrease in physical activity and the concentration of [fish oil](#) and Omega-3s in the [blood](#) were all associated with resiliency and mood."

Kreider says fish oil contains Omega-3 fatty acids that help to boost brain function. He says studies also show that fish oil acts as an anti-inflammatory within the body—helping athletes and soldiers manage intense training better. Fish oil content is especially important for soldiers due to the consistent training and physical regiments performed in and out of combat and risk to traumatic brain injury.

The study originated from research conducted by Colonel Mike Lewis, M.D. who examined Omega-3 fatty acid levels of soldiers who committed suicide compared to non-suicide control and found lower Omega-3 levels in the blood were associated with increased risk of being in the suicide group.



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Barringer says he believes these findings to be significant toward addressing some of the issues many soldiers face.

"The mental health of our service members is a serious concern and it is exciting to consider that appropriate diet and exercise might have a direct impact on improving resiliency," Barringer notes.

In order to properly measure soldiers physically, Kreider and Barringer developed a formula they say has the potential to assist in effectively screening soldiers with potential PTSD ahead of time. The formula measures a number of factors including: fitness and psychometric assessments, [physical activity](#), and additional analysis.

"By improving resiliency in service members, we can potentially decrease the risk of mental health issues," Barringer says. "Early identification can potentially decrease the risk of negative outcomes for our active service members as well as our separated and retired military veterans."

"The military is using some of our exercise, nutrition, and performance-related work and the findings may help identify soldiers at risk for depression when they return from combat tours," Kreider notes. He says that by working to identify such high-risk issues faced by soldiers, it can set a precedent that will benefit not only military leadership, but also the general public.

"The public must realize that our soldiers need support before, during, and after their service," Kreider explains. "There needs to be a time for soldiers to transition, become re-engaged within a community, and stay engaged in that community." More information regarding fish oil and other exercise and nutrition-related research can be found at the Exercise & Sport Nutrition Lab's website.

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Provided by Texas A&M University

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