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Intelligence

Global omega-3 fatty acid shortage puts public health at risk, study warns

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By Responsible Seafood Advocate

Study finds 85% of world's population lacks sufficient amounts of the key nutrient in their diets

A global shortage of omega-3 fatty acids could have “serious and widespread health implications,” concludes new research from Case Western Reserve University.

The shortfall, driven in part by environmental pressures, is alarming because these nutrients are vital to human health. Omega-3s, which are mainly found in fish and plants, help cells in the body function, especially in the eyes and brain. The nutrients also provide the body with energy and support healthy cardiovascular and endocrine systems. But the human body can't produce enough of the nutrients naturally – they must be obtained from food or supplements.

“Our current food systems are not providing enough uncontaminated omega-3,” said Timothy Ciesielski, a research scientist at Case Western Reserve's School of Medicine and lead author of the study. “And our access is expected to decrease in the near future.”

The research team discovered that 85 percent of the world's population doesn't get enough omega-3s in their diets. The shortage is due in part to environmental factors – ocean warming, overfishing and pollution – which make it hard to access these important nutrients, they concluded.



A Case Western Reserve University study finds that 85 percent of the world's population lacks sufficient omega-3 fatty acids in their diets. Photo of fish oil capsules by Odin Mcraig, via Pexels.

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The study, recently published in ***AJPM Focus*** ([https://www.ajpmfocus.org/article/S2773-0654\(25\)00029-X/fulltext](https://www.ajpmfocus.org/article/S2773-0654(25)00029-X/fulltext)), suggests the production of omega-3-rich foods should be increased, while reducing the intake of harmful omega-6 fatty acids, which interfere with omega-3 in our bodies. Doing so can lower the risk of diseases related to chronic inflammation, such as heart disease, cancer, preterm birth and some mental health issues, the researchers said.

Fish-rich diet may cut risk of cancers and rheumatoid arthritis



Three new studies show eating more fish, alongside other healthy foods, may cut the risk of gastrointestinal cancers and rheumatoid arthritis.



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Historically, humans consumed diets with balanced amounts of omega-3 and omega-6 fatty acids. However, today's industrialized diets contain about **20 times more omega-6s** (<https://pmc.ncbi.nlm.nih.gov/articles/PMC8504498/#:~:text=Abstract,1%2C%205>) than omega-3s. This imbalance is concerning for maintaining good health.

The research team noted that about 15 percent of countries worldwide have managed to achieve sufficient omega-3 levels in their food, mainly due to ocean access – suggesting that protecting oceans and managing fisheries more sustainably would help.

“This isn't just a healthcare issue; it's a public health and environmental challenge,” Ciesielski said. “Everyone should have the right to uncontaminated omega-3s in their diet. These are important questions that require our collective attention and action.”

Read the full study ([https://www.ajpmfocus.org/article/S2773-0654\(25\)00029-X/fulltext](https://www.ajpmfocus.org/article/S2773-0654(25)00029-X/fulltext)).

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