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Putting the *live* back into liver

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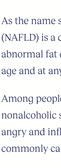
Welcome to Issue 11 of Science Says! Our weekly newsletter where you'll learn the latest healthy aging and C15:0 research news that our team of doctors, scientists, and experts are most excited about—without having to go search for it.

Eric and Steph
Co-Founders, Doctors, Nerds



What Dr. Eric Venn-Watson, our co-founder and Navy physician, is reading.

HEALTHY AGING

Have you heard of nonalcoholic fatty liver disease (NAFLD)?

A bunch of scientific papers this year have been urging for greater awareness of a chronic liver disease, called nonalcoholic fatty liver disease (aka, NAFLD). To help with this effort, we're focusing this week's issue on NAFLD. We're hoping that you'll be inspired to teach others about this liver disease, too.

I'm in. What's NAFLD?

As the name suggests, nonalcoholic fatty liver disease (NAFLD) is a chronic metabolic condition involving abnormal fat deposition in the liver. NAFLD can occur at any age and at any body weight.

Among people with NAFLD, about 1 in 5 progress to having nonalcoholic steatohepatitis (aka, NASH). NASH involves an angry and inflamed liver that can lead to scarring, commonly called cirrhosis.

Today, NASH is the leading cause of liver cancer globally and is one of the most common causes of liver transplants. And while scientific teams are working around the clock to find a cure, there are currently no FDA-approved drugs to treat NAFLD or NASH.

Unfortunately, NAFLD is on the rise.

Just last month, an extensive review published in *The Lancet* concluded that the prevalence of NAFLD is considerably higher than previously estimated - now affecting nearly **1 in 3 adults globally.** Most concerning, is that NAFLD is continuing to increase at an alarming rate. This includes an estimated **1 in 10 children** having NAFLD.

Combined with this rise in cases, is the lack of awareness of and preparation to handle NAFLD. In their recent study in the *Journal of Hepatology*, Lazarus et al. shared that, among 102 countries, none had a national strategy for NAFLD.

Is there good news?

There is. Thanks to a dedicated global community of scientists and physicians, we are understanding more about NAFLD and NASH every day. This includes recognition of different NAFLD types based on one's genetics, environment, and underlying health.

While the complexity of NAFLD and NASH has made finding a single treatment difficult, studies have shown that the following actions can help individuals manage their NAFLD and NASH:

- Dietary changes, including moving toward Mediterranean and carbohydrate-restricted diets
- Weight loss
- Improved glucose control

C15:0 & liver health: An important clue from dolphins*

Interestingly, humans aren't the only long-lived species that get NAFLD. Dr. Stephanie Venn-Watson, our co-founder, published back in 2012 that bottlenose dolphins get NAFLD, too.

Upon reading this paper, Dr. Jeffrey Schwimmer, the world's leader in pediatric NASH, reached out to Steph. Over the past 10 years, they have worked in parallel to search for common links between NASH in humans and dolphins.

A big breakthrough was made when Steph discovered that dolphins with higher C15:0 levels had healthier livers - and that C15:0 could directly decrease the severity of NASH. Meanwhile, Dr. Schwimmer found that children who had higher C15:0 blood levels had less fat in their livers. These studies were published during 2020.

The result? Together, they hypothesize that C15:0 nutritional deficiencies may be driving the global rise in NAFLD.

Today, Dr. Schwimmer is leading a double-blinded and placebo-controlled clinical trial to evaluate potential physiological benefits of C15:0 related to liver, metabolic, immune, and heart health. This Fall, Steph will be speaking about dolphins, NASH, and the liver-supporting benefits of C15:0 at the 6th Obesity & NASH Drug Development Summit.

Stay tuned, as our team continues work with the global community to end the rise in NAFLD and NASH.

Save the dolphins, save the world!

Dive deeper into the science

READ THESE STUDIES

- NAFLD presence in lean and non-lean populations
- Leading cancers leading to years of life lost
- The rising prevalence and incidence of NAFLD worldwide
- Are countries ready to address this silent public health challenge?
- NAFLD - opportunities for personalized treatment
- Dolphins get fatty liver disease
- C15:0 and liver health
- Links between C15:0 and healthy livers in children