Does COVID-19 Make Us Age Faster?

October 9, 2022

Welcome to Issue 20 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.

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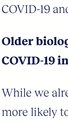

What Dr. Nik Schork, our Lead Scientist and author of over 300 peer-reviewed scientific publications, is reading.

HEALTHY AGING

The impact of COVID-19 on aging

Since the COVID-19 pandemic began, more than 98 million cases have been recorded in the U.S. As COVID-19 evolves from a pandemic to an endemic disease (meaning that populations are now co-existing with ongoing but more manageable infections), more research is coming out about COVID-19's potential long-term effects on our health. This includes a study published in Nature Communications, where Cao et al. looked into the relationships between COVID-19 and our biological age.

Older biological age increased the severity of COVID-19 infections.

While we already knew that chronologically older people are more likely to have severe COVID-19, Cao et al. found that people who had accelerated aging had a greater risk of severe COVID-19, too.

Um, what does accelerated aging mean?

Good question. There are two types of aging. The first is chronological age, which is measured by how many years you have been alive. The second is biological age, which measures how much "dust" (referred to as methylation) is attached to your DNA. The more methylated your DNA, the older your biological age.

Because of their findings, Cao et al. suggest that tests for accelerated aging could be used as a way to detect and protect people who have a higher risk of developing severe COVID-19 infections.

COVID-19 infections accelerated aging, too.

Interestingly, Cao et al. demonstrated that COVID-19 infections increased DNA methylation. This means that infections with COVID-19 sped up our biological age. The good news is that DNA methylation reversed in many patients as their infection resolved. The research team proposed that unresolved DNA methylation (aka, ongoing accelerated aging) may be a component of long-haulers syndrome.

As summarized by Johns Hopkins, people with long COVID have persistent symptoms, including shortness of breath, fatigue, headaches, palpitations and impairments in mental health and cognition.

As COVID-19 becomes an ongoing part of our lives, top research and medical teams continue to work hard to help prevent, manage and treat both acute and long-term infections - all of which can help us live longer and healthier.

Based on Cao et al.'s studies, the next question to answer: Can treatments targeting DNA methylation help to support healthy aging and stem the long-term effects of infections?

C15:0 & Biological Aging*

Nature does a darn good job at multitasking, including the many ways C15:0 is put to use at the cellular level to support healthy aging.

- In our cell membranes, C15:0 is a sturdy fatty acid that serves as our cells' armor against age-related breakdown.
- At the mitochondrial level, C15:0 repairs mitochondrial function to keep our cells up and running.
- As an HDAC inhibitor, C15:0 may dust off and demethylate our DNA, thus helping to slow our biological age.

Until there's a time machine, there's not much we can do about our chronological age. More studies support, however, that C15:0 may be able to help turn back our biological clocks.

Have a wonderful week, everyone!

Dive deeper into the science

READ THESE STUDIES

- Accelerated biological aging in COVID-19 patients
- Long-haul COVID
- C15:0 benefits to cell membranes, mitochondria, and cell receptors
- HDAC inhibitors as anti-aging compounds
- C15:0 is an HDAC-6 inhibitor