

Genetic Lifehacks

Learn. Experiment. Optimize.

Member's Update

Hi everyone,

A recent [study](#) by Vanderbilt University researchers highlighted how carrying just one copy of a cystic fibrosis mutation could put people at a much higher risk for pneumonia with COVID-19.

As many as one in 33 people in some population groups carry a mutation in the CTFR gene. People with two CTFR mutations are likely to have cystic fibrosis -- and you would know this from childhood. But researchers are now finding that carriers of a single copy of genetic disease causing mutations can also have mild changes that affect their health.

A recent article in [The Lancet](#) also points out the people with alpha-1 antitrypsin deficiency may also be at an increased risk of severe COVID-19. Alpha-1 antitrypsin deficiency is another rare disease for which it isn't all that rare to carry one copy of the mutation.

So take just a moment to give your cystic fibrosis and alpha-1 antitrypsin genes a quick look today (links below).

~ Debbie Moon



Members' Article

Cystic Fibrosis: Check to see if you are a carrier

Did you know that up to 3% of the population carries one copy of a mutation for cystic fibrosis? Being a carrier of a cystic fibrosis mutation increases the risk of several diseases including pneumonia from respiratory viruses, pancreatitis, and male infertility.

Learn how to check your genetic raw data to see if you are a carrier for a cystic fibrosis mutation.

[View your genes](#)



Alpha-1 Antitrypsin Deficiency

A genetic mutation in the SERPINA1 gene causes alpha-1 antitrypsin deficiency. Lacking this enzyme increases a person's susceptibility to COPD (chronic obstructive pulmonary disease), decreases lung function, and can cause liver damage.

This is the "don't smoke and don't drink too much" gene mutation.

[View your genes](#)

What I've been reading...

[MOTS-c as an exercise mimetic](#)

A recent study in the journal Nature communications explains the latest research on a fascinating peptide known as MOTS-c.

MOTS-c is a mitochondrial peptide, and researchers are now figuring out that it does a lot... from regulating nuclear gene expression to promoting healthy metabolism. MOTS-c activates AMPK in skeletal muscles and improves whole body energy metabolism.

The Nature study used cells samples from healthy young males to determine what the normal effects of exercise were on MOTS-c production in muscle cells. The results showed that four hours after exercise, levels of MOTS-c were increased substantially.

Next, the researchers used animals to determine the effect of giving the animals additional MOTS-c.

- In young animals, giving MOTS-c at a high enough dose effectively reduced weight gain on a fattening diet.
- In middle-aged and old animals, a two-week treatment with MOTS-c increased physical activity capability by two-fold.
- In old animals, MOTS-c treatment improved healthspan also.

Nature: Sequence three million genomes across Africa

This [article in Nature](#) is an eye-opening look at the disparity between genetic sequencing for different population groups. For example, the author writes that " Less than 2% of human genomes analysed so far have been those of African people¹, despite the fact that Africa, where humans originated, contains more genetic diversity than any other continent." Another startling fact is that "Last year, analyses of whole-genome sequences of just 426 people

across 50 ethnolinguistic groups in Africa revealed more than 3 million variants that were previously unknown."

Do we really need to walk 10,000 steps a day?

The [Big Think](#) tackles the assumption that we need to take 10,000 steps a day for health. Is this idea actually based in research? An intriguing question, and the answer may be that we only need about 4300 steps to get the heart benefits. (Do you hear that, Oura ring? Stop shaming me!)

From the article: "The 10,000 steps a day target seems to have come about from a trade name pedometer sold in 1965 by Yamasa Clock in Japan. The device was called "Manpo-kei", which translates to "10,000 steps meter". "

Genetic Lifehacks

www.GeneticLifehacks.com

You received this email because you signed up on our website or made a purchase from us.

[Unsubscribe](#)