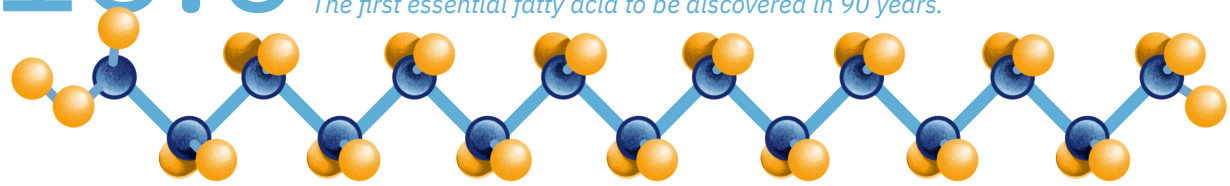
C15:0 (Pentadecanoic Acid)

The first essential fatty acid to be discovered in 90 years.



Fact sheet for healthcare providers

What is C15:0 (pentadecanoic acid)?

C15:0 is an odd-chain saturated fatty acid and nutrient. Mounting evidence supports that C15:0 is the first essential fatty acid to be discovered since omega-3 and omega-6, which was over 90 years ago.

C15:0 as an essential fatty acid

Essential fatty acids are nutrients that our bodies need to maintain physiological health. Because our bodies don't make enough of these molecules on their own, we must get certain amounts routinely from our diet or supplements.

There are now three known essential fatty acids:

1. Alpha-linolenic acid, an omega-3 fatty acid
2. Linoleic acid, an omega-6 fatty acid
3. Pentadecanoic acid (C15:0)

Human population studies

Numerous population health studies, including large prospective cohort studies, consistently show that people with higher circulating C15:0 concentrations have a *lower risk* of developing:

- Type 2 diabetes
- Cardiovascular disease, including heart failure
- Nonalcoholic fatty liver disease and NASH

Food sources & dosing

The primary dietary source of C15:0 is whole fat dairy. Because more people are avoiding cow's milk, population-wide C15:0 levels have been decreasing. C15:0 is available as a supplement.

Based on pharmacokinetic and activity studies, people should get between 100 to 200 mg of C15:0 daily.

Learn more at DiscoverC15.com

How does C15:0 work?

C15:0 is a pleiotropic compound with the following demonstrated activities:

- PPAR-α/δ agonist to regulate metabolism and immune responses.
- AMPK activator to regulate glucose uptake.
- JAK-STAT inhibitor to regulate immune responses.
- HDAC-6 inhibitor to repair DNA.

In animal studies, daily oral C15:0 supplementation for 12 weeks has been shown to safely:

- Lower glucose
- Lower total and LDL-cholesterol
- Lower triglycerides
- Lower body weight gain on high fat diet
- Attenuate hemolytic anemia
- Lower pro-inflammatory cytokines IL-6, MCP-1 and TNF-α
- Lower severity of NASH-related liver fibrosis
- Lower NASH-related damaging liver iron deposition

C15:0 safely lowered clinically-relevant biomarkers in human cell systems relevant to the following conditions:

- Autoimmune diseases
- Cancer
- Cardiovascular disease
- Chronic inflammation
- Lung and liver fibrosis
- Osteoarthritis