

MEDIUM CHAIN TRIGLYCERIDES:

WHY MCTs, WHY NOW?



Bioriginal
Anticipate • Innovate • Grow

WHY MCTs, WHY NOW?

Kombucha. Bone broth. Turmeric. Things that are not new but have found interest from new markets. These items are no longer considered niche and have been bridging into mass acceptance - much like MCTs.

MCTs, or medium chain triglycerides, have also been around for decades - used both as nutritional therapy, and as supplementation by bodybuilders. Today, MCTs are also crossing into use among other groups.

What has made MCTs 'hot' right now?

First things first. What are MCTs?

MCTs = Medium Chain Triglycerides. They are naturally occurring fatty acids found in coconut and palm oils. What makes them unique, is the way they are digested in the body compared to other fatty acids.

- MCTs are absorbed directly into the bloodstream and bypass typical digestion of longer chain fatty acids, going directly to the liver to be metabolized
- In the liver, they are converted directly to ketones, which are considered (and used as) fuel by the body
- This is why the body does not often store MCTs as fat, but instead treats MCTs as a quick energy source

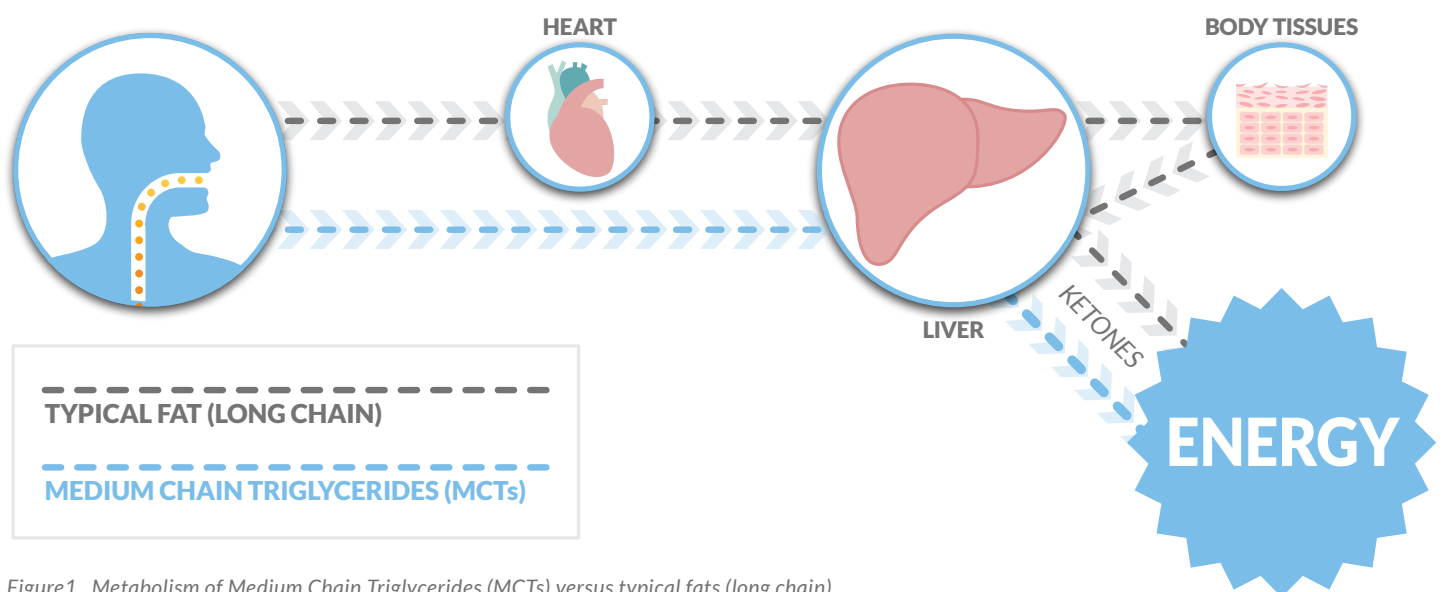


Figure1 . Metabolism of Medium Chain Triglycerides (MCTs) versus typical fats (long chain)

What is fuelling the growth & popularity of MCTs?

Several key consumer trends are driving the popularity of MCTs. They include:

1. The desire for clean and stable energy sources in our diets;
2. A focus on plant-based foods, beverages or alternatives; and
3. Those following, or inspired by, the paleo and ketogenic diets and lifestyles

trend 1

Energy

According to the Institute of Food Technologists “Top Ten Functional Food Trends for 2016”, consumers - women and young adults especially - are looking for food and beverages that provide energy throughout the day.

Of this segment, reasons for the need to increase energy include: mental energy (26%), morning energy (14%), and a boost later in the day (7%).

A survey of 1,616 US coffee drinkers highlights that Millennial men, in particular, are looking for - and willing to pay more for - added health functionality in coffee, according to market research group, Mintel.¹

This speaks to the demand for MCTs which have been touted by consumer experts as an energy-supportive boost that can be blended into coffee and other drinks like smoothies.

As the demand grows, forward looking companies have found ways to make consuming MCTs more convenient. For example, emulsified MCTs, like those from Bioriginal, can be mixed into hot or cold beverages without a blender.



trend 2

Plant-based

The desire for plant based products continues to grow in leaps and bounds. According to SPINS, the total market for plant-based food and beverage exceeded \$5 billion in sales in 2016 and is estimated to continue growing at twice the rate as the rest of the food and beverage industry (which reported about 1.7 % growth in 2016).^{2,3}

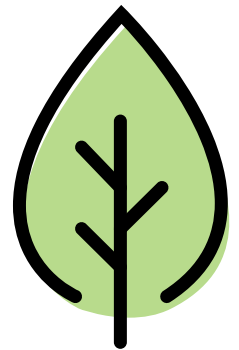
The trend toward plant-based foods is driven by several factors including the growing flexitarian movement (these are people who eat primarily plant based but do sometimes eat meat or fish) and a consumer focus on what is perceived as more sustainable and environmentally friendly foods.

According to a consumer research firm’s report: *Food Formulation and Ingredient Trends: Plant Proteins*, the overall motivator for the move towards plant-based is health: “Consumers notions of what constitutes a good protein source are expanding to include a wider variety of plant-protein ingredients,” in part because they increasingly are associated with better health for people, animals and the planet.⁴

Even companies whose products have mostly depended on animal based protein and inputs are extending their product lines to appeal to these consumers.^{5,6}

Millennials tend to be the demographic most likely to look for what they perceive as healthy, sustainable options. With Boomers also considering plant-based food in the quest to age well.

MCTs are derived from coconut and tend to be a good fit with this trend – particularly with consumers looking for dairy alternatives in their coffee.



Diets like Paleo, Ketogenic & Vegetarian

trend 3

The Paleo diet was once considered niche, however, many people are now aware of it and broad segments saying they plan to try it.⁷

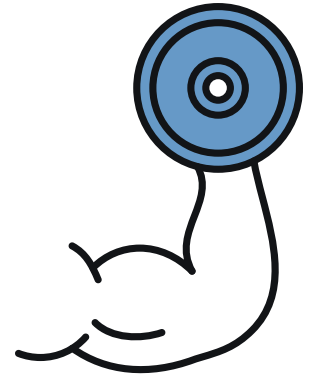
MCT oil benefits from this growing awareness because coconut oil and its derivative MCTs are on the 'paleo approved' list. Additionally, many who adopt a paleo lifestyle also embrace a more active lifestyle that may include weightlifting/CrossFit type activities. Those highly active and performance-driven segments also tend to be open to the benefits of MCT oil.

The Ketogenic diet is still largely unknown among the average consumer. But some analysts are calling it 'the next Paleo' in terms of popularity and its potential bridge into mass.

MCT oil is a favorite among the keto crowd who look to optimize their metabolism by eating very high fat, medium protein and extremely low carbohydrate foods. This is done to kick the body into a fat burning state called ketosis.

Since the body converts MCTs directly into ketones, they are a staple with ketogenic dieters.

Awareness of the ketogenic diet is expected to continue to lift the popularity of MCTs.



Next generation products from Bioriginal

With the strength of these growing trends behind it, the market for MCTs is likely to continue growing.

Today, innovative manufacturers have maintained the benefits of MCT while making it easier to use.

MCT oil will sit on top of drinks (think oil and water) unless the oil is blended into the beverage. To make it more convenient to add MCTs to any liquid, Bioriginal developed Coconut MCT Boost. Coconut MCT Boost are emulsified MCTs that are 100% coconut derived, and mix effortlessly into hot or cold beverages without needing a blender. Available in original and flavors such as vanilla, this next generation MCT format is only increasing in its popularity.

Bioriginal also recently launched a convenient and easy-to-use coconut MCT powder. Our coconut MCT powder was formulated to have the highest MCT oil load on the market, is maltodextrin-free, has zero net carbs and mixes well into hot beverages.

As the popularity of clean energy and plant based sources grow, MCT oil - in all its forms - is well-poised to fill that market potential.



ABOUT BIORIGINAL

Bioriginal is a global leader in delivering complete nutritional solutions to the food and nutraceutical industries. Bioriginal has over 20 years of global expertise with a wide portfolio including plant and marine-based oils, seeds & grains, protein products and botanical ingredients. Bioriginal has carved out a niche by combining ingredients from all over the world, directly from the source, to create innovative and efficacious solutions. Developing proprietary methods and systems, Bioriginal provides customized turnkey solutions for our customers that help them compete and win in a highly competitive space. Bioriginal is headquartered in Saskatoon, Canada with facilities throughout the USA and Europe. Bioriginal is the Human Nutrition Division of Omega Protein Corporation.

For more information, please visit www.bioriginal.com.

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