

## Coconut & Olive Oil: Foods for Thought

**Last month** we discussed how olive oil and coconut oil had the potential to promote **longevity**. This month the focus is on how both oils can reduce the risk of developing **dementia**. (Note: Last month's article on "The **World's Healthiest Oils**" is repeated on page 4).

### I. Olive oil:



Dementia is almost non-existent in places like Ikaria Greece where the population eats a **Mediterranean diet**, which is low in animal fats and processed foods and is high in calories derived from plants. A major source of their calories comes from olive oil.

Multiple scientific studies have confirmed the benefits of extra virgin olive oil consumption in reducing the risk of dementia in humans. In a recent study, mice with genetically induced Alzheimer's disease, were put on two different diets. One group received a standard "chow diet" and the second group was given a similar diet enriched with extra-virgin olive oil.

The mice with the enriched diet performed significantly better on a series of tests designed to evaluate memory and learning ability. At autopsy, the brains of rats on the standard diet showed extensive amyloid plaques and other classic microscopic findings associated with advanced Alzheimer's. In contrast, the brains of the rats who were fed the olive oil enriched diet showed low levels of amyloid and the nerve connections (synapses) were well preserved.

The evidence strongly supports the conclusion that extra virgin olive oil has the potential to lower the risk of developing dementia. One drawback of this oil is that it is not a good cooking oil. Coconut oil is a great choice for cooking and it also has the potential to reduce dementia risks.

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## II. Coconut Oil:



Dementia is rare in populations like the Pacific Islanders who consume high quantities of coconut oil. Pacific Islanders refer to coconut trees as the “Trees of Life”. Much like extra virgin olive oil, coconut oil is simply squeezed out of the coconut fruit at low temperatures, thus it contains no trans fats or added chemicals. It does, however contain high levels of **saturated fats**.

### Not all saturated fats are the same:

The main source of saturated fat in the standard American diet comes from animal and dairy products. It is generally believed that **saturated fats** are unhealthy. High intake of animal and dairy products is associated with increased risk of heart disease and strokes. Although the fat in coconut oil is saturated, it is made up of a type of fat (**medium chained triglycerides or MCT**) that is quickly absorbed and rapidly converted to **ketones**. (*Animal and dairy fats are primarily transferred to fat stores.*)

Ketones, like glucose, can be use as an energy source by the brain. However, unlike glucose, ketones supply energy to the brain **without the need for insulin**. It is for this reason that coconut oil has the potential to reduce the risk of developing dementia.

The standard American diet is high in sugar. When sugar is consumed, it is rapidly absorbed, which leads to a spike in the blood glucose level. In response, the pancreas secretes higher levels of insulin. Over time high sugar intake leads to **insulin resistance**.

As insulin resistance progresses, brain cells are deprived of their primary energy source (glucose) and they can no longer function normally. It is this progressive

starvation of brain cells that is believed to be a critical first step in a process that leads to dementia. This theory has led some researchers to refer to Alzheimer's disease as **diabetes of the brain**.

In contrast to sugar, fats in coconut oil are converted to ketones which supply almost immediate energy to the brain without the need for insulin. In some cases the addition of coconut oil to the diets of patients with Alzheimer's disease causes dramatic improvements in memory and brain function. These findings are not consistent and many Alzheimer's patients fail to respond to coconut oil supplements. Thus, the benefits of treating advanced dementia with coconut oil remain controversial.

Although the benefits of coconut oil in patients with established Alzheimer's are inconsistent, there is evidence that coconut oil has the potential to **reduce the risk of developing dementia**. Support for this concept is based on the observation that insulin resistance can be detected in a high percent of the American population by age 40. The assumption is that evolving insulin resistance increases the risk of developing future dementia. Furthermore, it is assumed that adding coconut oil to the diet has the potential to overcome evolving insulin resistance and provides the brain with a consistent source of energy even as insulin resistance progresses.

There is no proof that this theory is correct and it will undoubtedly take decades for a definitive answer. Thus, the question: Should we add virgin coconut oil to our diets? My answer is a resounding yes! Taste alone makes it a wonderful choice. An added benefit is that it contains no trans fats and almost zero omega-6 fats. Even if it does not reduce the risk of developing dementia, it remains a healthy choice for cooking.

#### **Bottom Line:**

- **Extra virgin olive oil** is the healthiest oil for salads, dripping on bread and other room temperature uses.
- I would **avoid all plant derived partially hydrogenated oils** such as canola oil because they contain high levels of omega 6 oils and most contain high levels of trans fats. An alternative cooking oil is **refined olive oil**, but it lacks the health benefits of extra virgin olive oil. If you want the extra health benefits, consider using **avocado oil**.



- Remember, **dementia is multifactorial**. In addition to a healthy diet it is important to:
  - Exercise
  - Keep the brain active
  - Maintain social bonds
  - Get enough sleep
  - Avoid sugars and trans fats
  - Be happy, smile a lot and be grateful for the gift of life

If you have questions, **contact us** at: [msprouse@beawarefoundation.org](mailto:msprouse@beawarefoundation.org)

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**World's Healthiest Oils: Olive, Coconut, or Other?**

**Introduction:**

Let me start by admitting I believe **extra virgin olive oil** is the best oil when it comes to health and taste. The benefits of olive oil have been documented in multiple studies over the past decades. However, the most convincing evidence of the benefits of olive oil comes from the recently published book “**The Blue Zones Solutions**”\*. This book examines five populations in the world that live the longest. It also looks at populations with the highest percentage of individuals who live to age one hundred while maintaining a vigorous lifestyle.

One of the 5 blue zones is Ikaria Greece where the population consumed a “Mediterranean” style diet. A large percentage of calories in this diet come from olive oil. Individuals who consumed more than 4 tablespoons of olive oil daily experienced a 50% mortality reduction.

Admittedly, just adding 4 tablespoons of olive oil a day to your diet is no guarantee you will experience similar health benefits. The Blue Zone study indicated many lifestyle factors are associated with longevity. However, I am convinced that a Mediterranean diet with a high intake of olive oil has the potential to reduce heart disease and dementia and to increase longevity.

### **Reservations about olive oil:**

A recent event caused me to curb my enthusiasm for olive oil. I was sautéing mushrooms, when I was distracted by a phone call. A couple of minutes later I returned to the mushrooms only to see plumes of dark smoke emanating from the frying pan. I immediately turned off the heat, but noted a persistent foul smell. The mushrooms had an unsavory flavor.

A Google search provided a quick explanation. Extra-virgin olive oil has a low **smoke point**, which is defined as the temperature at which oils produce a continuous bluish smoke. The smoke contains **trans fats** and other toxic chemicals that predispose to heart disease and cancer. This experience prompted me to do an extensive review to identify the “**world’s best cooking oil**”.

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As it turned out, the review proved to be more challenging than expected. There were so many conflicting opinions that I had to rely on my best judgment to form my conclusions. To me, the final choice was simple: The best oil for cooking (frying, sautéing or baking) is **cold pressed, virgin, coconut oil**. The following provides a brief review as to how I came to that conclusion.

## **Historical Review:**

Over a century ago, our ancestors relied on lard (example: pig fat) and butter for cooking. In an attempt to come up with a lower priced cooking oil a new product was introduced in the early 1900's called **Crisco**. It was derived from cottonseeds, which were plentiful and inexpensive. The seeds were processed at high temperatures and chemicals were used to create the final product. It was a huge economic success.

By the 1950's, rates of heart attacks and strokes in the USA reached epidemic proportions. Researchers identified trans fats that were found in high levels in Crisco as a major contributor to the rising rate of heart disease.

## **Manufacturers were quick to respond:**

Manufacturers noted that Crisco was not just high in trans fats, but it was also high in **saturated fats**. This led them to create a new source of oils. A process was developed to extract **unsaturated fat from plant sources**. The new products had a short shelf life and soon became rancid. They also had a low smoke point. These problems were solved through a process called **partial hydrogenation**, in which hydrogen is bubbled through the oils at high temperatures. These new oils proved to be an economic windfall.

Despite the introduction of the partially hydrogenated plant based oils, rates of heart disease, stroke and dementia continued to rise. Analysis of the plant oils indicated that they still contained high level of trans fats and chemicals.

In response to these health concerns, attempts were made to modify cooking oils by processing them at lower temperatures and reducing exposure to toxic chemicals. An example of this trend is **Canola oil**. It is derived from a genetically modified rapeseed, which is an inexpensive seed that was initially developed to feed cattle. Canola oil is now available that is "expeller pressed" which means lower temperatures are used to squeeze the oil from the seed. This process is more expensive because the pressing is not as efficient as chemical in extracting oil from the rapeseed.

One of the major selling points for Canola oil is that it contains the highest level of mono-unsaturated fats of any oil on the market. **Mono-unsaturated fat** is a "**good fat**" that protects against heart disease. Canola oil has been label by some experts as the world's healthiest oil, but I remain skeptical.

## **The case for olive and coconut oil:**

Both olive and coconut oils have been used for centuries. Populations who consume these oils have low levels of heart disease and dementia. Both oils are "**cold pressed**" which means they are processed at even lower temperatures than with expeller pressing.

Olive oil has almost as high a percentage of mono-unsaturated fat as does Canola Oil. However, Canola, like all plant-based oils is high in **Omega-6 oils**. Many scientists today believe the main culprit behind the high incidences of chronic illness such as cardiovascular disease, diabetes, arthritis, obesity and cancer is the standard American diet is that it contains an excess of omega-6 oils and a relative deficiency in omega 3 oils. Plant based oils and junk foods are the two major sources in the average American diet.

### **Coconut oil: A Saturated Fat**

How could I possibly recommend **coconut oil** as a healthy choice when composed of **saturated fats**? This fascinating question is one that will be reviewed in more detail in next month's article. The quick answer is that coconut is composed of **medium chained triglycerides**. These fats are quickly absorbed in the intestine and readily converted to ketones by the liver. They serve as an energy source for both muscle and the **brain**. They are rapidly metabolized and do not stimulate the production of insulin. In contrast, **long chained triglycerides**, which are primarily derived from animal and dairy sources, are slowly absorbed and for the most part transferred to fat stores.

**Cold pressed virgin coconut oil** has a high smoke point and a wonderful taste. It is my cooking oil of choice. I am convinced that it has the potential to facilitate weight loss, and to reduce the risks of developing heart disease, Diabetes II and **dementia**. Next month's issue of Ask the Doctor will explain the health benefits of coconut oil in more detail.

### **Caveat:**

If you have heart disease or other medical conditions that require a special diet, I suggest you review my recommendation with your physician. Also, some people experience intestinal distress (nausea, and or bloating) when adding coconut oil to their diet. These symptoms can usually be eliminated by slowly introducing coconut oil into your diet.

### **Reference:**

\* The Blue Zones Solution: by Dan Buettner: (published by National Geographic) 2015.

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