Microscopic Colitis Foundation

MICROSCOPIC COLITIS NEWSLETTER

Volume 9, Issue 9
September, 2023

Previously Associated with Many Health Issues, Now Soy Oil Has Been Linked with IBD

The experts claim that people who are sensitive to soy are not sensitive to soy oil, because it contains no soy proteins. The experts are wrong. Oil extraction and refining is an engineering problem. Earning a degree in mechanical engineering taught me that refining processes are not perfect. Some refining processes are quite good, but none of them are perfect. And as proof of that, our experience has taught us that some of us do indeed react to soy oil.

While many articles regarding protein contamination in soy oil simply wave off the risk of a reaction by stating some form of the phrase "soy oil contains no proteins", more honest articles make statements such as the following quote from the Soy Connection, by U.S. Soy (Messina, n.d.):[1]

"While highly refined soybean oil does contain residual soy protein, the residue levels are extremely low—too low to elicit an allergic response in nearly all cases."

And that's very likely true. It's probably safe in "nearly all" cases. But for those of us whose sensitivity to soy causes us to react to those low residue levels, it's not very comforting.

Soybeans were originally animal feed.

Before the 1970s, soybeans were only used as animal feed in the United States (US). But soybeans contain approximately 40% protein, and that's apparently too tempting for food manufacturers to ignore, so they began developing ways to use soybeans in human food. Today, soy is ubiquitous in manufactured food products.

Soy oil is a byproduct of manufacturing animal feed.

When soy is used as animal feed, it's usually in the form of soy meal, and crushing soybeans to make soy meal results in large amounts of soy oil. Because it's cheaper than most other food grade oils, manufacturers soon discovered that using it for human food was a highly profitable way to make use of it, and it soon became the most common type of vegetable oil on the market.

But soybean oil has a relatively high omega 6 fatty acid content.

As most of us are aware, most vegetable oils contain high amounts of linoleic acid (LA, C18:2 omega 6), and omega 6 fatty acids are generally considered to be far less healthy than omega-3 fatty acids. Soy is not the worst offender in the omega 6 category. Looking at a listing on a News Medical website, a number of other commonly used oils are even worse (Meštrović, 2023, July).[2] For example:

Safflower oil contains 78% linoleic acid
Grapeseed oil contains 73% linoleic acid
Sunflower oil contains 68% linoleic acid
Corn oil contains 59% linoleic acid
Soybean oil contains 51% linoleic acid
Sesame oil contains 45% linoleic acid
Rice bran oil contains 39% linoleic acid
Peanut oil contains 32% linoleic acid
Canola oil contains 21% linoleic acid

Interestingly, note that:

Lard (animal fat), olive oil, and coconut butter contain only 10% linoleic acid.
Butter (dairy), and coconut oil contain only 2% linoleic acid.

Researchers have discovered numerous problems associated with soy oil.

Over the years, researchers have shown that soybean oil is associated with various diseases, such as Alzheimer's disease, anxiety, autism, and depression, for example. And sometimes, it causes other health issues, such as:

Allergies: Soy is one of the top eight food allergens.

Thyroid function: There is some concern that soy consumption, particularly in large amounts, may interfere with thyroid function in individuals with existing thyroid conditions.

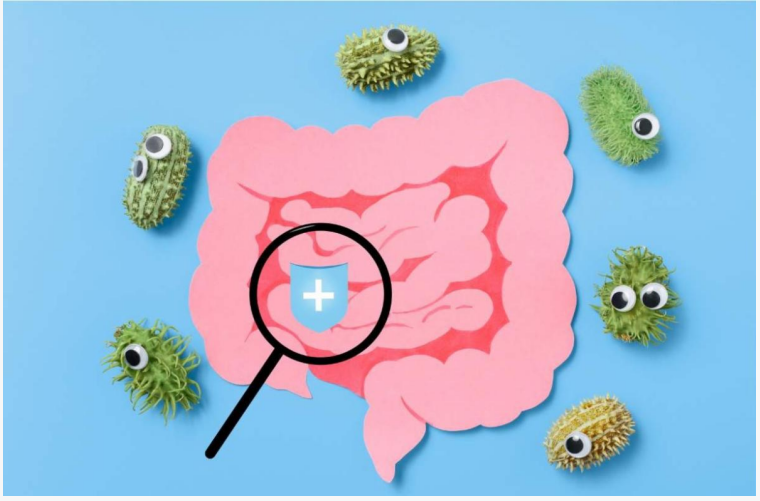
Hormonal effects: Soy contains compounds called phytoestrogens, which are similar in structure to the hormone estrogen. Some studies have suggested that excessive consumption of soy products may have hormonal effects, particularly in individuals with hormonal imbalances or certain types of cancer.

Digestive issues (soy intolerance): Somewhere between 1/2 and 2/3 of microscopic colitis MC patients are sensitive to soy, according to data shared by members of the discussion and support forum associated with our website.

New research findings provide more bad news.

Now, research has shown that soybean oil is associated with the risk of developing IBD (Deol, et al., 2023).[3] Of course this research might also implicate other oils used by food manufacturers that have a relatively high linoleic acid content, although this has not been researched, and no cause and effect has been verified. Also, note that this research was based on the use of mice as subjects. That said, dietary ingredients that are bad for mice, are almost always bad for humans.

In a recent article posted on the Medical Xpress website, the lead author of the original research article pointed out that the findings of this research challenge the decades-old belief that many chronic diseases are caused by the consumption of animal products, and diets that utilize unsaturated fats from plants are more healthful. Maybe our grandparents had much more healthful diets, after all.



Linoleic acid alters the microbiome.

The researchers discovered that E. coli bacteria utilize linoleic acid for nutrition, allowing the bacterium to thrive. By comparison, various species of beneficial bacteria that are normally found in the gut are not able to utilize linoleic acid, so their populations tend to die off. Previous research has shown that E. coli are commonly implicated in the development of IBD.

Linoleic acid can cause leaky gut.

It's the combination of losing beneficial gut bacteria while gaining pathogenic bacteria that raises the risk of intestinal inflammation, and the subsequent development of IBD. Because of the development of inflammation, linoleic acid can lead to increased porosity of the intestinal epithelial barrier, which of course, opens the door to the subsequent development of food sensitivities that can perpetuate the inflammation cycle.

Additionally, the researchers pointed out that the time period during which the consumption of soybean oil increased, in the US, parallels a significant increase in the development of IBD, suggesting that the two issues are associated.

What can we conclude from these research findings?

Both omega-3 and omega 6 fatty acids are essential fatty acids, meaning that they are required for good health, and they cannot be created by the human body. Therefore, they must be a part of the human diet, so we can't just totally avoid linoleic acid. Approximately 1 to 2% of linoleic acid is required in the human diet (Nelson, 2022, July 8).[4]

Unfortunately, these days, most people get 6 to 10% of their calories from linoleic acid, mostly because of the use of vegetable oils. Until additional research determines whether the consumption of excessive amounts of linoleic acid is primarily responsible for the inflammation that increases the risk of developing IBD, or some other component of soy oil is responsible, it behooves anyone in the general population to limit their intake of soy oil.

This is especially important for MC patients,

since so many of us are sensitive to soy because of our disease. Now we have even more reason to steer clear of it, even if we're not sensitive to soy. Most of us find that olive oil and coconut oil, for example work well for us, as does animal fat such as bacon grease, for those of us who are not sensitive to pork, and butter or ghee, for those of us who are not sensitive to casein.

And if we choose to fry foods

(after we've been in remission for a while), extra-virgin olive oil should work fine, because it has a 410° F (210° C) smoke point, and light/refined olive oil has a much higher smoke point of 465° F (240° C). The primary disadvantages associated with olive oil are the fact that it can be expensive, and some brands of imported olive oil have been found to be diluted with cheaper oil, such as soy oil. One way to minimize that risk is to look for the NAOOA certified quality seal of the North American Olive Oil Association (NAOOA).

Coconut oil is another option.

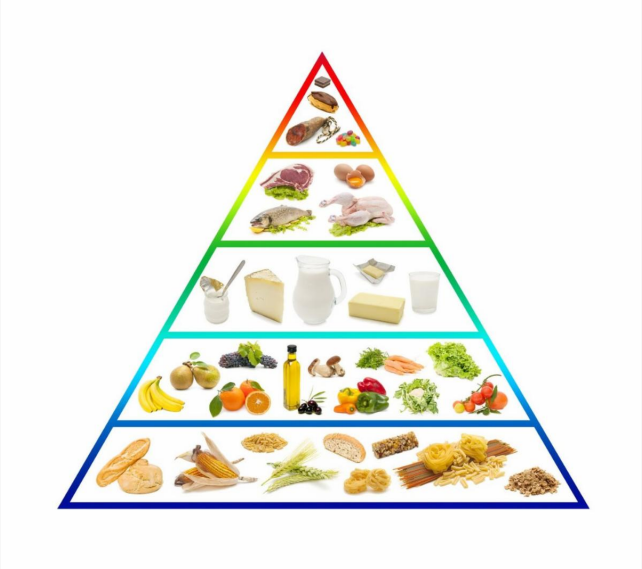
Coconut oil (unrefined) has a smoke point of 350° F (176° C), which may be inadequate for frying, but refined coconut oil has a smoke point of 400° F (204° C), plus the added benefit of not adding any coconut taste to fried foods. The primary disadvantages associated with refined coconut oil, are the fact that it's relatively expensive, and similar to lard, it becomes a semisolid at room temperatures and below.

Another option is canola oil.

Canola oil is relatively inexpensive, and it contains only 21% linoleic acid, with a smoke point of 400-450°F (204-230°C). Although it contains twice as much linoleic acid as olive oil, and about 10 times as much as coconut oil, it's the third best option, when compared with the other oil options.

Research evidence continues to accumulate.

And it continues to suggest that in January 1977, when the McGovern committee (United States Senate Select Committee on Nutrition and Human Needs) issued its new set of nutritional guidelines for Americans, so that USDA (with its food pyramid) began to recommend eating less meat, animal fat, and cholesterol, and more whole grains, citizens who followed the guidelines begin to experience increasing health problems, rather than fewer health problems.



Why are whole grains considered to be healthy?

Humans, and their ancestors, evolved eating meat, bird eggs, and whatever fruits, nuts, and tubers they could forage, whenever they were in season. We did not evolve eating any significant amount of grains, because any wild grains that existed during the Paleolithic period produced only very small amounts of grain. And this happened only when they were in season, so they couldn't have been more than a tiny fraction of our ancestor's diet, prior to the Neolithic period.

Governments are aware that a well-fed population is a contented population.

And abundant cheap food is the key to a well-fed population. So why would the McGovern committee decide that grains are particularly healthful for us? More than that, why would they assume that grains are a more healthful choice than meat and dairy products? Most likely, because grains are cheap and abundant.

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