

Canola Oil Update

By Christine H. Farlow, D.C.

The Canola Oil Controversy

There is a lot of disagreement about the healthfulness of canola oil.

On the one hand, the food industry says it's the healthiest oil on the market and it's especially beneficial for preventing heart disease.

On the other hand, there are those who say that canola oil is dangerous and not fit for human consumption.

In reality, the truth is somewhere in between. Let's look at the facts.

What is Canola Oil?

Canola oil, like olive oil, is a monounsaturated oil. It contains high levels of monounsaturated oleic acid, which is reputed to reduce cholesterol. It also contains a moderate amount of the omega-3 fatty acids commonly believed to be beneficial to the heart and to lower serum triglyceride levels and reduce platelet aggregation. Although monounsaturated oils are being touted as highly beneficial, in excess, or if used exclusively, they can cause an imbalance at the cellular level and have been associated with increased incidence of breast cancer.

Canola oil is low erucic acid rapeseed oil. Canola is a hybridized form of rapeseed which is a member of the mustard family. Cabbage, Brussel sprouts, kale, broccoli and mustard greens also belong to this same family. Canola oil was developed to reduce the toxic levels of erucic acid found in rapeseed oil. The erucic acid content in canola has been bred to a low level and is supposedly nontoxic. However, many people do not believe that all the toxins have been removed and consider canola oil harmful.

History

Rapeseed oil has been used for thousands of years in India, Japan and China. In ancient times, rapeseed oil was pressed from the seeds right before it was purchased, so it was absolutely fresh and was not heated to high temperatures. In healthy diets with adequate saturated fats, this unprocessed, unheated rapeseed oil does not cause a problem. In impoverished areas, without adequate saturated fats and where selenium is deficient, it has been known to cause fibrotic heart lesions, known as Keshan's Disease.

Polyunsaturated oils, especially soybean oil and corn oil, have been linked to a number of health problems, including cancer. When the food industry could no longer extol the virtues of polyunsaturated oils because of the harmful health effects, it needed another oil to promote. They believed they couldn't return to the saturated fats because it would cause an uproar. People had been conditioned to believe, with the promotion of the polyunsaturated oils, that saturated fats were harmful to the health of their hearts.

Studies had shown that monounsaturated oils had a better effect on health than the polyunsaturates. Olive oil became popular as the Mediterranean diet was being promoted as being heart healthy. The problem

was that there was not enough olive oil to meet the needs of the food industry and olive oil was too expensive. There was a need for a more economical monounsaturated oil.

Rapeseed oil, was a monounsaturated oil, but had been linked to Keshan's Disease, a condition which produces fibrotic heart lesions. In the latter part of the 1970's, rapeseed was hybridized to reduce the erucic acid levels. The resulting oil was called low erucic acid rapeseed (LEAR) oil. The industry saw it as a healthy alternative to polyunsaturated oils, but it was not catching on in the U.S. They needed a new name with a healthy image, so they called it canola oil for Canadian oil because it was primarily produced in Canada.

Rapeseed was not Generally Recognized as Safe (GRAS) by the FDA. Canola needed to be GRAS in order to be marketed in the U.S. It is rumored that the Canadian government paid \$50 million for the GRAS status which was granted in 1985.

Canola oil was marketed heavily to health-conscious consumers. The industry marketing was so successful that it has become the preferred oil in health food and specialty markets and is commonly found in regular supermarket items.

The Research

No long-term studies on humans have been done.

Research studies on mice and rats have shown that rats prone to heart disease developed more heart disease when fed canola oil or flax oil than rats fed olive oil or sunflower oil. Rats not prone to heart disease did not show any significant difference when fed these oils. The large amounts of omega-3 fatty acids in canola oil and flax seed oil correlated with the high degree of heart disease. With the addition of saturated fats to the diets of these rats, the incidence of heart disease was reduced.

When canola oil was the only fat fed to rats prone to stroke and high blood pressure, their life-span was shortened.

Studies with pigs showed that piglets fed canola oil developed a vitamin E deficiency, abnormal blood platelets and an increased bleeding time. When saturated fats from coconut oil or cocoa butter were added to their feed, these changes were reversed.

These studies suggest that canola oil is not heart-healthy, causes abnormal changes to blood platelets when used exclusively and causes deficiencies in vitamin E. It appears that the problem is not the level of erucic acid, but the combination of the high omega-3 **and** low saturated fat content.

In addition, in a study where mice were fed a diet of either monounsaturated fat or saturated fat, the mice fed the monounsaturated fats developed more heart disease and atherosclerosis than the mice fed saturated fat.

Why Canola Oil Is Not A Good Choice

Most oils today are extracted at high temperatures and with the use of a toxic solvent, usually hexane, which leaves traces in the oil, even after refining, bleaching and degumming. In addition, canola oil must be deodorized because the omega-3 fatty acids turn rancid and foul-smelling when subjected to high heat. Some say that the deodorizing process converts the majority of the omega-3 fatty acids into trans fatty acids. Others say that trans fats are not made by subjecting oil to high temperatures, but by bubbling hydrogen through the oil at 250 to 400 degree temperatures in the presence of nickel or platinum. However, University of Florida at Gainesville research has shown levels of trans fats as high as 4.6% in commercial oils. In addition to the high-heat processing and toxic solvents, much of the canola oil in processed foods has been hydrogenated with trans fat levels as high as 40%.

When oils are processed at high temperatures, free radicals are formed and the health-giving essential fatty acids (EFAs) are destroyed. Even the lightly refined varieties and expeller pressed canola oils may be deodorized at very high temperatures. In addition, producers of canola oil use pesticides heavily. The pesticide residue may not be completely removed before processing and may end up in the finished product. And, to make matters worse, over 50% of canola oil is genetically modified, not the original hybridized rapeseed.

According to Mary Enig, an internationally renowned biochemist, “one problem with canola oil is that it has to be partially hydrogenated or refined before it is used commercially and consequently is a source of trans fatty acids. Another problem is that it is too unsaturated to be used exclusively in the diet. Some of the undesirable effects...can be rectified if the diet is made higher in saturated fatty acids.”

Mary Enig says “Baked goods made with canola oil develop mold very quickly. During the deodorizing process, the omega-3 fatty acids of processed canola oil are transformed into *trans* fatty acids, similar to those in margarine and possibly more dangerous. A recent study indicates that "heart healthy" canola oil actually creates a deficiency of vitamin E, a vitamin required for a healthy cardiovascular system. Other studies indicate that even low-erucic-acid canola oil causes heart lesions, particularly when the diet is low in saturated fat.”

Recommendations

Proponents of canola oil frequently compare it to olive oil because they’re both high in monounsaturated fats. Here is the breakdown of canola oil and some of the more desirable fats:

Oil or Fat	% Saturated Fat	% Mono-unsaturated Fat	% Polyunsaturated Fat	
			Omega 6	Omega 3
Canola Oil	6	62	22	10
Olive Oil	16	71	10	1
Flaxseed Oil	10	21	16	53
Coconut Oil	83	6	2	0
Cocoa Butter	63	32	3	0
Butterfat (cow)	56	29	2	1
Palm Oil	50	40	10	0
Palm Kernel Oil	79	15	2	0
Beef Tallow	46	43	3	1

Extra virgin olive oil, a little bit of flaxseed oil and coconut oil, cocoa butter or raw organic butter will give you a healthy balance of fats in your daily diet. Coconut oil, palm oil and animal tallows are stable for cooking and sautéing

If you must use canola oil, make sure it’s organically grown, cold pressed, has not been deodorized at high temperatures and you do not use it for cooking.

Sauté in water, add oil to the water. Also add some onion and garlic - their sulfur content helps to reduce free radical damage.

Be careful not to burn, over brown your food or heat oil so hot that it smokes. This causes the formation of health-destroying toxins.

Include good quality saturated fats - coconut oil or raw organic butter - in your diet daily. Your body needs saturated fats to properly metabolize and utilize omega-3 fatty acids found in monounsaturated oils like canola oil and olive oil. Without the proper saturated fats, you will not get the health benefits of the omega-3 fatty acids, but will be getting health problems instead.

Mary Enig says “In summary, our choice of fats and oils is one of extreme importance. Most people, especially infants and growing children, benefit from *more* fat in the diet rather than less. But the fats we eat must be chosen with care. Avoid all processed foods containing newfangled hydrogenated fats and polyunsaturated oils. Instead, use traditional vegetable oils like extra virgin olive oil and small amounts of unrefined flax seed oil. Acquaint yourself with the merits of coconut oil for baking and with animal fats for occasional frying. Eat egg yolks and other animal fats with the proteins to which they are attached. And, finally, use as much good quality butter as you like, with the happy assurance that it is a wholesome—indeed, an essential—food for you and your whole family.

Organic butter, extra virgin olive oil, and expeller-expressed flax oil in opaque containers are available in health food stores and gourmet markets. Edible coconut oil can be found in Indian or Caribbean markets.”

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About Dr. Farlow

Dr. Christine H. Farlow is a Doctor of Chiropractic who has helped thousands of people improve their health through nutrition. She teaches patients what to eat, what not to eat and how to develop healthy eating habits that last a lifetime. A veteran at helping people solve their health challenges naturally, without the use of drugs, she has been counseling patients professionally and teaching classes in Nutrition since 1984.

Dr. Farlow is the author of three health and nutrition books:

FOOD ADDITIVES: A Shopper's Guide To What's Safe & What's Not

HEALTHY EATING: For Extremely Busy People Who Don't Have Time For It

DYING TO LOOK GOOD: The Disturbing Truth About What's Really in Your Cosmetics, Toiletries and Personal Care Products

Her books evolved out of her teaching and nutritional counseling. These were the tools she found that people needed most to get started toward eating healthfully, making healthy eating a lifetime habit and ultimately choosing to be healthy. They are available on the web at amazon.com, <http://www.healthyeatingadvisor.com/bookstore.html>, and through KISS For Health Publishing, P.O. Box 462335, Escondido, CA 92046-2335, Telephone (760) 735-8101