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The Truth About Olive Oil

Separate the Truth from the Hype surrounding Olive Oil.

Of late, America seems in love with all things Italian, from the Sopranos to olive oil. Rarely, for example, does the media miss a chance to report that olive oil is a good fat. The latest study, which hit news wires in September, praised olive oil as heart-healthy – and extra virgin olive oil as especially healthy.(1)

The problem, though, is that many journalists do not fully dissect the scientific studies they're reporting on. Facts get distorted. Qualifiers disappear. Headlines turn sensational. And so does the truth about olive oil.

In this article, Director of Nutrition at the Pritikin Longevity Center, Jeffrey Novick, MS, RD, responds to the hype about olive oil to help you better understand what's true about this so-called healthy fat and what's not.

The Hype: Olive oil will protect you from a heart attack.

The Truth: Olive oil is *not* heart-healthy.

Yes, foods rich in monounsaturated fats like olive oil are healthier than foods full of saturated and trans fats, but just because something is "healthier" does *not* mean it is *good* for you.

A "healthier" cigarette (one with less nicotine and toxic chemicals like benzo(a)pyrenes) still leads to lung cancer. "Healthier" monounsaturated fats like olive oil may still lead to diseased arteries. When scientists fed monounsaturated fats to monkeys in isolated controlled studies for five years, the monkeys developed extensive plaque build-up and coronary artery disease.(2)

Monkey Trouble

In fact, "the monkeys fed monounsaturated fat developed equivalent amounts of coronary artery atherosclerosis as those fed saturated fat, " wrote Dr. Lawrence Rudel and colleagues at Bowman Gray School of Medicine at Wake Forest University in Winston-Salem, North Carolina.

In a review, Dr. Rudel warned that the science supporting claims that monounsaturated fats are heart protective is weak, based largely on population studies, not controlled trials. Moreover, these claims "are questioned by the demonstrated detrimental effects on atherosclerosis in animal models."(3)

Several human studies have also questioned olive oil's heart-health claims. When researchers from the University of Crete recently compared residents of Crete who had heart disease with residents free of the disease, they found that the residents with heart disease ate a diet with significantly higher daily intakes" of monounsaturated fats (principally olive oil) as well as all fats.(4)

Marginal Benefits

"And data from the Nurses Health Study, an on-going study from Harvard Medical School analyzing the habits and health of nearly 90,000 female nurses, found that those who consumed olive oil were only marginally healthier than those eating a typical high-in-saturated-fat American diet, states registered dietitian Jeffrey Novick.

Impaired Dilation

Another study investigated how well peoples' arteries were dilating (expanding) to accommodate blood flow after they had eaten several meals. Each meal emphasized a different component of the Mediterranean diet. After the meal rich in olive oil, dilation in the arteries was impaired. (5) The meal caused severe constrictions, which can injure the endothelium, the inner lining of arteries, contributing to heart disease. No such problems occurred with the other meals.

"The beneficial components of the Mediterranean diet, " concluded Robert Vogel, MD, and colleagues at the University of Maryland School of Medicine, "appear to be antioxidant-rich foods, including vegetables, fruits, and their derivatives such as vinegar, and omega-3-rich fish…" These foods, he continued, "appear to provide some protection against the direct impairment in endothelial function produced by high-fat foods, including olive oil."

"So if you're *not* eating fruits and veggies, you're not getting protection, " points out dietitian Jeffrey Novick. "If you're pouring olive oil on an already bad diet – one devoid of protectors and full of destroyers like cheeseburgers – you've only made that diet *worse*."

Not protective

Research just published in the *Journal of the American College of Cardiology* also found that "dilation was worse" after 24 people, 12 healthy and 12 with high cholesterol levels, consumed olive oil. Five teaspoons of olive oil swallowed after salami-and-cheese meals did *not* help the arteries relax and expand.(6)

This research and other data indicate that olive oil is *not* heart protective, Dr. Robert Vogel told *Pritikin Perspective*. Vogel, a cardiologist who has studied heart disease for more than 30 years, counsels his patients to "feast on fish" and other rich sources of omega 3 fatty acids instead of olive oil, and to eat plenty of fruits, vegetables, and whole grains every day.

Finally, and most fundamentally, pouring a lot of olive oil means you're consuming a lot of fat. And eating a lot of *any* kind of fat, including "healthier" ones, means you're eating a lot of calories, which leads to excess weight, which leads to increased risk of diabetes, high blood pressure, stroke, many forms of cancer, and yes, heart disease.

The Hype: Extra virgin olive oil is especially heart-healthy because it's rich in polyphenols.

The Truth: *All* plant foods are rich in polyphenols, and many deliver far more polyphenols (and far fewer calories) than olive oil.

Lets take a look at this new study on extra virgin olive oil. Researchers from Italy and other European countries directed 200 healthy men to use three different olive oils for three weeks apiece. One was an extra virgin olive oil high in antioxidant plant compounds called polyphenols; the other two were more heavily processed "non-virgin" varieties with moderate to low polyphenol levels.

At the end of the study, the scientists found that the virgin olive oil showed better heart-health effects – higher HDL "good" levels as well as greater declines in markers that may indicate oxidative stress. Oxidative stress is a process that inflames the arteries and heightens the risk of plaque rupture and heart attacks. The researchers credited the virgin oil's high polyphenol content for the better results.

But the problem is: If you're relying on olive oil for your polyphenols, you've got to eat a lot of calories to get a decent amount of polyphenols, and eating lots of calories is just what Americans, with our epidemic rates of obesity, do *not* need.

A hefty 120 waist-expanding calories of olive oil delivers 30mg of phytosterols, a group of polyphenols. By contrast, a mere 11 calories of green leafy lettuce gets you the *same number* of polyphenols – 30mg.

And so much more. Look at the chart comparing the nutrients in green leafy lettuce with those in olive oil. Keep in mind, too, what mountains of research over the past several decades have told us. Consistently, the foods linked with healthier, longer, disease-free lives are foods rich in *all kinds of nutrients* – vitamins, minerals, fiber, polyphenols, beta carotene, and so on. Yes, foods like leafy greens. Olive oil, by comparison, tallies up a whole lot of zeros.

"Shop for food the way you shop for a car, suggests dietitian Jeffrey Novick. "Why get the stripped-down (nutrient-poor) model if fully-loaded models like fruits, vegetables, and whole grains are available? And the price you'll pay in terms of calories eaten is far, far less."

Nutrient		Leaf Lettuce	Olive Oil
Calories		120	120
Protein	g	10.8	0
Total Fat	g	1.2	13.5
Carb	g	22	0
Fiber	g	10	0
Calcium	mg	285	0
Iron	mg	6.8	.08
Magnesium	mg	103	0
Phosphorus	mg	230	0
Potassium	mg	1536	0
Sodium	mg	222	0
Zinc	mg	1.4	0
Copper	mg	.230	0
Manganese	mg	1.98	0
Selenium	mcg	4.8	0
Vitamin C	mg	142	0
Thiamin	mg	.55	0
Riboflavin	mg	.634	0

Niacin	mg	2.97	0
Pantothenic Acid	mg	1.06	0
Vitamin B6	mg	.713	0
Folate	mcg	301	0
Vitamin A	IU	58648	0
Vitamin E	mg	2.3	1.94
Vitamin K	mcg	1375	8.1
Saturated Fat	g	.158	1.864
% Saturated Fat		1%	14%
MUFA	g	.048	9.85
PUFA	g	.649	1.421
Omega 6	g	.19	1.318
Omega 3	g	.459	.103
6/3 Ratio		.42	12.8
Phytosterols/Polyphenols	mg	301	30
Beta Carotene	mcg	35189	0
Lutein + Zeaxanthin	mcg	13702	0

The Hype: Olive oil will lower your bad LDL cholesterol.

The Truth: Olive oil, in and of itself, does *not* lower LDL cholesterol.

In just about every study showing that people lowered their LDL cholesterol levels after starting to use olive oil, including this latest study on extra virgin olive oil, the people used olive oil *in place of* other dietary fats, often saturated fats like

butter, cheese, and fatty meats. "*Of course* LDL is going to go down. You've gotten rid of the LDL-raising fats," points out Jeff Novick.

The point is: It's not the *addition* of olive oil that's improving LDL cholesterol levels. it's the *subtraction* of artery-clogging fats like saturated fats and trans fats.

That's precisely what the official health claim allowed by the Food and Drug Administration states. Here are the claims exact words (key words underlined by Jeff Novick):

"**Limited** and **not conclusive** scientific evidence suggests that eating about 2 tablespoons (23 grams) of olive oil daily **may** reduce the risk of coronary heart disease due to the monounsaturated fat in olive oil. To achieve this **possible** benefit, olive oil is to **replace** a similar amount of saturated fat and **not increase** the total number of calories you eat in a day."

Unfortunately, what we usually hear in the media and see on olive oil bottles are *only* the words "heart healthy." Gone are the FDA's many qualifiers. Gone, in effect, is the truth.

The Hype: The Mediterranean diet is a heart-healthy diet, and it's rich in olive oil, so olive oil must be heart-healthy.

The Truth: The people on this planet with the longest life expectancy and the least heart disease do *not* eat diets rich in olive oil. They *do* eat a diet rich in whole, natural foods like vegetables, fruits, whole grains, and beans.

Yes, in the 1950s Ancel Keys and fellow scientists observed that people living in the Mediterranean, especially on the isle of Crete, were lean and heart disease-free. And true, their diet consisted of olive oil, but it also had an abundance of fruits, vegetables, herbs and spices, coarse whole-grain breads, beans, and fish. And they walked about nine miles daily, often behind an ox and plow.

But much has changed on Crete – and throughout the Mediterranean – since then. Today, the people of Crete still eat a lot of olive oil, but their intake of whole, natural foods has gone way down, as has their physical activity. The island's new staples are meat, cheese, and T.V. Today, more than 60% of Crete's adult population – and an alarming 50% of its children – are overweight. And has maintaining an olive oil-rich diet saved them from disease? Not at all. In recent years, rates of heart disease, diabetes, and hypertension have skyrocketed.

The point here is that olive oil is *not* the magic bullet that made populations along the Mediterranean in the 1950s so healthy. "Olive oil was simply a bellwether, or marker, for other features of the Mediterranean diet, like plenty of fruits, vegetables, whole grains, and exercise, that were in fact healthful, argues Jeff Novick.

That's what new research is finding. In a recent study in the *New England Journal of Medicine*, scientists followed for years the diets and health of 22,043 adults in Greece.(7) Adherence to the traditional Mediterranean diet was assessed by a 10-point scale that incorporated the key facets of the diet, including an abundance of plant food (fruits, vegetables, whole-grain cereals, nuts, and legumes), olive oil as the main source of fat, and low-to-moderate amounts of fish and poultry.

Though higher adherence to a Mediterranean diet was associated with significantly lower death rates, olive oil itself was "associated with only a small and nonsignificant reduction in mortality," wrote Dr. Frank B. Hu of Harvard Medical School in an editorial accompanying the study.(8)

So don't reward olive oil with the laurels, agreed Dr. Alice Lichtenstein, one of the nation's top nutrition scientists, at the Human Nutrition Research Center on Aging at Tuft University in Boston.
In interviews about this study of Greek adults, she said, "If the main message that Americans get is to just increase their olive or canola oil consumption, that's unfortunate because they will increase their caloric intake and they are already getting too many calories.

"What Americans need to do is eat more fruits, vegetables, and legumes and fewer foods rich in saturated fats."

Indeed, the people most likely to live 100 robust years and beyond, the citizens of Okinawa, Japan, don't even use olive oil. They *do* eat a lot of fiber-rich, straight-from-the-earth foods,(9) as do the next four communities with the highest percentages of centenarians: the people of Bama, China; Campodimele, Italy; Hunza, Pakistan; and Symi, Greece.(10)

All five communities eat diets with plenty of fruits, vegetables, whole grains, and beans, and low-to-moderate servings of animal protein, usually seafood or lean meat. It is *this* diet, not olive oil that is the common denominator of these five

longevity hot spots."

The Hype: Olive oil raises good HDL cholesterol.

The Truth: Many people with high HDLs have diseased arteries, and many with *low* HDLs have very clean arteries.

One of the "hearty healthy" effects of extra virgin olive oil, wrote the authors of the just published study on olive oil varieties, is that it raised levels of HDL good cholesterol more than the non-virgin oils.

"But HDL is just one number in a risk group of many, and it's not the most important one. LDL is. Ultimately, we should focus on the big picture – on *all* the numbers that contribute to heart health," emphasizes Jeffrey Novick.

And the fact is: the populations who have the lowest incidences of heart disease in the world, the people living in Okinawa and in other rural regions of Japan, have very low levels of HDL – in the 20s.

Conversely, other people, like some Americans, have very high levels of HDL – and high rates of clogged arteries and heart attacks.

What's critical, then, is not the marker (high HDL), but the endpoint. "We've got to ask ourselves, 'What happens to people after years and years? Who actually ends up with less heart disease? ' In every study, the rural Asians – yes, the people with the *low* HDL levels – win. Every time, the rural Asians beat out populations, like those of Crete, Greece, and Italy, with higher HDLs, points out Jeffrey Novick.

"So just raising HDL does not always equate with better health. Remember the study that fed monkeys olive oil for five years? During the study, the monkeys' HDL levels went way up. But their endpoint, after five years, was plaque-ridden, diseased coronary arteries."

The Hype: The new study showed that extra virgin olive oil yielded greater declines in markers of oxidative stress.

The Truth: Markers are not endpoints.

"As with HDL cholesterol let us not confuse markers with endpoints, that is, what actually *happens* years down the line to your coronary arteries. The scientists in this study did not measure the health of the artery walls, only the amounts of oxidative chemicals. We don't know if years of using olive oil produces arteries with less inflammation and less plaque build-up," points out Jeffrey Novick.

Sure, polyphenols may reduce damaging oxidant chemicals, and that could well be a good thing, but as discussed earlier, you can get polyphenols – and many other vitamins, minerals and other nutrients – with foods, like fruits and vegetables that have a lot fewer pound-producing calories compared to olive oil.

The Hype: Certainly, monounsaturated fats are better than saturated fats.

The Truth: "Better than" is not "good in and of itself."

"The human body has *no* essential need to consume monounsaturated fat, " states Pritikin Director of Nutrition Jeffrey Novick. "The only fat our body has an essential need to consume is omega 6 and omega 3 fat. People worry about getting enough omega 3s. Olive oil is a poor source of omega 3s."

You'd have to drink seven ounces of olive oil to get sufficient omega 3s. Seven ounces of olive oil is 1,800 calories and 30 grams of saturated fat (yes, a percentage of the fat that makes up olive oil is saturated.)

Interestingly, the American Heart Association recently lowered the recommended intake of saturated fat to no more than 7% of total calories eaten each day. Olive oil is 14% saturated fat. So if you're using a lot of olive oil on your food, it'd be hard to have a diet that's less than 14% saturated fat, which means your arteries are being subjected to *double* the sat-fat-limit that the AHA recommends.

So, is olive oil better than butter? Yes. But is it good in and of itself? No.

Bottom Line:

Oils are the most calorie-dense foods on earth. Ounce for ounce, oil packs even more calories than butter or bacon. A diet with hefty amounts of oil invariably produces hefty amounts of body fat, which leads to all sorts of devastating diseases, including America's #1 killer: heart disease.

Steer clear of all oils loaded with saturated and trans fatty acids, such as coconut oil, palm oil, and palm kernel oil. And try to limit your consumption of oils rich in polyunsaturated or monounsaturated fats to 1 teaspoon per 1,000 calories daily.

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