

NORTH AMERICAN OLIVE OIL ASSOCIATION

OLIVE OIL FROM TREE TO TABLE

How it's made, how to enjoy it and all your questions answered



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In a world that's constantly asking you to make tradeoffs, olive oil is a choice that has it all and does it all. It's one of the healthiest and most delicious foods to eat. It works for every kind of cooking, every kind of cuisine, every kind of diet. **There's an olive oil for every taste and budget.** It's also simple, natural food, never extracted using chemical solvents, unlike most other cooking oils. And with so many different flavor profiles to choose from, olive oil is a fun and exciting universe to explore. Look for the <u>NAOOA Certified Seal</u> or <u>Extra Virgin</u> <u>Alliance</u> seal, and start trying new olive oils today!

In this document, you can learn more about:

- <u>Categories, Grades and Types of Olive Oil</u>
- <u>Health Benefits of Olive Oil</u>
- How Olive Oil is Made
- Olive Oil Affordability and Versatility
- Cooking with Olive Oil
- Olive Oil Sustainability
- <u>Frequently Asked Questions</u>

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What Type of Olive Oil Should I Choose?

- There are two basic **categories** of olive oil: virgin and refined.
- Within the virgin olive oil category, there are two **grades** for consumption: "extra virgin," which is commonly available, and "virgin," which is not generally sold at retail in North America.
- Oils in the refined olive oil category are typically sold simply as "olive oil" (without the word "virgin" in the name). "Olive oil" is itself a grade, defined as a mixture of refined (predominantly) and virgin olive oils (which can be extra virgin or virgin). The enrichment with virgin olive oil adds some flavor and color to the otherwise completely neutral refined olive oil.
- An olive oil that is labeled as "light" or "light-tasting" is just a different type of olive oil not a separate grade. It is produced with very little virgin olive oil added, so it is a more neutral tasting oil.

	Virgin Olive Oil	Refined Olive Oil			
Common Names	Extra Virgin Olive Oil	Olive Oil and			
Common Mames		Light or Light-Tasting Olive Oil			
		Naturally extracted without			
How It's Made	Naturally extracted without	heat or chemicals, then refined.			
	heat or chemicals.	Refined olive oil is blended with			
		some virgin oil before bottling.			
How It Tastes	Most flavorful, although the	Low/neutral flavor			
	notes and intensity vary	Low/fieutral flavor			
Cold Uses	Drizzling, dipping, dressings,	Dressings, marinades			
	marinades	Dressings, marmades			
Hot Uses	Sauteing, grilling, roasting,	Sauteing, grilling, roasting,			
	baking, pan frying	baking, pan frying, deep frying			
Smoke Point*	350°F - 410°F	390°F - 468°F			
Health Benefits	High in heart-healthy oleic acid	High in heart-healthy oleic acid,			
	and high in naturally occurring	with relatively small amounts			
	antioxidants and phenols	of antioxidants and phenols			
Price Point	Higher price point Lower price point				

• Refined olive oil (without virgin enrichment) is itself a grade, but it's generally not sold at retail in North America.

*Smoke point is not the best indicator of how a cooking oil will perform when heated. Please see the section on <u>cooking</u> below for more information.

Olive oil is one of the healthiest foods you can eat. It supports heart and brain health and protects against a host of diseases.

• Olive oil is made up of good fat, which is why the FDA recognizes it as a great choice for heart health. A <u>recent study</u> by the Harvard School of Public Health found that replacing less healthy fats like butter with olive oil resulted in a 15%



lower risk of cardiovascular disease overall and a 21% lower risk of coronary artery disease specifically.

- Olive oil protects your brain. Independent research has shown that olive oil may protect against <u>memory deficits</u> and Alzheimer's and even slow the decline of Alzheimer's in people with mild cognitive issues. What's more, a recent <u>study</u> found that higher olive oil intake was associated with a lower risk of dementia-related death, regardless of a person's overall diet quality.
- Research suggests that the <u>antioxidants</u> and polyphenols (plant-based compounds) unique to olive oil may protect against a host of chronic diseases like <u>cancer</u>, diabetes and dementia. In fact, <u>recent studies</u> of patients with colon, breast and prostate cancers all saw benefits associated with olive oil consumption.
- Evidence shows that olive oil can support weight loss as part of a healthy diet. For example, <u>a recent study</u> from Harvard found that olive oil consumption is inversely associated with weight gain—meaning, the more olive oil consumption, the more weight you lose—while for other oils and fats (e.g., butter, margarine and seed oils), the opposite is true.

Olive oil is simple, natural food.

- All olive oils (categories, grades and types) start out the same way: the oil is extracted from the fruit without chemical solvents or high heat.
- Extra virgin olive oil is produced by crushing the olive fruit and separating the oil from the pulp—the same way it's been made for millennia. It's the highest grade of virgin olive oil, which is the least processed olive oil option and contains the highest amount of antioxidants and polyphenols.
- Regular and light-tasting olive oil are a blend of virgin and refined olive oil. Refined olive oils have undergone a process that makes them comparable to commonly sold vegetable oils in terms of neutral flavor and color but with the health advantages associated with the heart-healthy oleic acid in olive oil. Importantly, refined olive oil is made without chemical solvents or high heat in the extraction process, unlike most vegetable oils.
- Chemical solvents are never used in the extraction of any type of olive oil. This is different from the most commonly sold cooking oils like soybean, canola and corn, which are extracted using a petroleum-based solvent called hexane (unless they're labeled "expeller pressed").
- There are no genetically modified olive trees, so all olive oil is non-GMO. However, most commonly sold vegetable oils (e.g., canola, corn and soybean oil) come from genetically modified plants.

Olive oil is affordable, delicious and versatile with options for any budget or taste.

• Olive oil can be substituted for less healthy, less sustainable cooking oils in almost any recipe, and it costs less than you think. Bake a cake by swapping healthy extra virgin olive oil for canola, and for just about 10 cents more per slice, you can have your healthier cake and afford it, too. It's also worth noting



the number of servings in a typical bottle, which should give your family weeks of healthy, delicious meals.

- All grades and qualities of olive oil are healthy—loaded with heart-heathy monounsaturated fat—but extra virgin olive oil packs the most flavor and health benefits. It tastes great on its own and enhances the flavors of food you cook with it. Different types of extra virgin olive oil have different flavor profiles, which are fun to explore.
- For people looking for a neutral-flavored oil, regular and light-tasting olive oils are a fantastic alternative to other common neutral-flavored oils like canola, corn and soybean. Regular and light-tasting olive oils have the same heart-healthy good fat as extra virgin olive oil, and they're also less processed than other neutral-flavored oils, which are often extracted using chemical solvents.

Olive oil is great for cooking practically anything. And it makes the food cooked in it more nutritious, too!

- A study published in the journal <u>ACTA Scientific Nutritional Health</u> found that extra virgin olive oil is the most stable and safest cooking oil—even at high temperatures often used in frying and baking. In the study, extra virgin olive oil outperformed all other cooking oils, including some with higher smoke points like canola, avocado, peanut and coconut oils, proving smoke point is not the best indicator of the temperature at which an oil will break down.
- Because all olive oil can withstand heat, let flavor preference and budget be your guide when choosing what to buy. You can use olive oil for everything from dipping and salad dressings to baking, frying, grilling and everywhere in between.
- Research has shown that cooking with extra virgin olive oil actually increases the health benefits of our food. The healthy phenols and antioxidants found in olive oil are <u>transferred</u> to the food it's cooking, making it more nutritious. Olive oil also helps the food it's cooking <u>release its own bioactive compounds</u> and improves their absorption.

Olive oil is not only good for us, it's also good for the planet.

- Olive oil is produced from a permanent crop—in fact, olive trees are the largest non-tropical permanent crop in the world! Many olive trees are hundreds or even thousands of years old. However, most other commonly sold cooking oils are from crops that are harvested and replanted every year, risking damage to the soil from tillage, such as water runoff.
- Global production of olive oil <u>absorbs the carbon emissions of a city of 7 million</u> <u>people</u> each year. That's because as a permanent crop, olive groves are carbon sinks, which gives them an environmental advantage over annual oil crops.
- Olive trees are drought-resistant. At a time when water resources are becoming critically low around the world, the cultivation of olive trees uses much less water per liter than other cooking oil crops; over 70% of all olive groves are rain-fed, not irrigated!



- Annual oil crops like soybeans, corn and rapeseed (canola) deplete the soil of nutrients, especially nitrogen and phosphorus, significantly more than olive trees. As a permanent crop, olive trees also promote biodiversity because ground cover, intercropping and even animal grazing between the trees is an option for the farmers.
- Olive oil is also sustainably made, as neither chemical solvents nor energyintensive high heat are used in the extraction of any type of olive oil, unlike most commonly sold cooking oils, like soybean, canola and corn oils (unless they're labeled "expeller pressed").

Look for the <u>NAOOA Certified Seal</u> or <u>Extra Virgin Alliance</u> seal, and start exploring the healthy, delicious world of olive oil today!



Frequently Asked Questions

Can I cook with olive oil? Doesn't it have a low smoke point?

Olive oil is great for cooking practically anything. And it makes the food cooked in it more nutritious, too! A study published in the journal <u>ACTA Scientific Nutritional Health</u> found that extra virgin olive oil is the most stable and safest cooking oil when heated—even at high temperatures often used in frying and baking. In the study, extra virgin olive oil outperformed all other cooking oils, including canola, avocado, peanut and coconut oils. (Refined and solvent-extracted seed oils—canola, soy, vegetable, etc.—are more likely to break down and form harmful polar compounds when heated because of how they're produced and their fatty acid profile.)

Smoke point isn't the best indicator of how a cooking oil will perform when heated, and cooking oils rarely reach their smoke point in home cooking. *The Washington Post* took on this very issue in an article titled, "<u>What you should know about oil smoke points —</u> and why they're not as scary as you might think," which says:

We've consistently heard from readers chiding us for recommending roasting food with olive oil in the oven at a temperature above the supposed smoke point...but there's more at play here...there are plenty of other things to absorb the heat and energy — the pan, the food, the moisture of the meat or vegetables. Water or a sauce with the food can help, too. **The oil is not taking the brunt of the heat, and it's unlikely that the temperature of the oil will equalize to that of the oven itself.** If it did, your food would probably be dried out and inedible anyway.

To demonstrate *The Washington Post*'s point about olive oil rarely reaching the smoke point, we filmed a video showing an infrared thermometer being used to measure the temperature of food sautéed in extra virgin olive oil. We turned the heat to high on a gas range, and the food never got close to the smoke point. You can check out the video and read the more detailed post <u>here</u>.

Because olive oil is delicious and can withstand heat, you can use it for everything from dipping and salad dressings to baking, frying, grilling and everywhere in between. The U.S. Department of Agriculture (USDA) even includes olive oil on its <u>list of recommended</u> <u>oils to safely fry</u> with.



As a bonus, research has shown that cooking with olive oil actually increases the health benefits of our food. The healthy phenols and antioxidants found in olive oil are <u>transferred</u> to the food it's cooking, making it more nutritious. Olive oil also helps the food it's cooking <u>release its own bioactive compounds</u> and improves their absorption.

Isn't a lot of olive oil fake?

The idea that U.S. supermarkets are rife with adulterated olive oils is an urban legend. You should have every confidence in the authenticity of the olive oil you buy at the store. A study by the U.S. Food and Drug Administration (FDA), whose <u>peer-reviewed</u> <u>research</u> was published in the *Journal of American Oil Chemists' Society*, tested 88 extra virgin olive oil samples off the shelves of Washington, D.C.-area retail outlets and found **no confirmed adulteration in any of the samples tested**. The FDA's findings mirror the results of the NAOOA's robust monitoring efforts, which sampled an average of close to 200 olive oils annually directly from retail shelves for 20 years.

But what about news reports from foreign countries about seizures of adulterated olive oil and related arrests?

There's a reason why we hear about those problems in Europe but not here. American consumers can take comfort in knowing European Union (EU) member states aggressively monitor and control exports of olive oil to the U.S., which is their most important market. They want to protect the integrity of one of their most important agricultural products. Anyone found trying to export adulterated olive oil will end up in jail. And the vigilance has paid off. So, if a bad actor in an EU country wants to play games with olive oil, it's <u>a lot</u> easier to get away with it if they keep their scheme within the open EU borders.

What specific controls are in place in exporting countries to protect the integrity of oils coming to the United States?

All olive oil produced in EU member states, which includes more than 80% of the olive oil consumed by Americans, is legally required to undergo risk analysis and is subject to controls to check for authenticity and conformity with labeling rules at every stage of marketing, including before they are exported.



For example, Spain and Italy combined account for close to 90% of the olive oil exported from the EU. Spain, which produces more than half of the world's olive oil and is the leading exporter to the United States, takes the following steps:

- All exporting companies must be registered in the EU Economic Operators Registration and Identification (EORI) system to be approved to export goods. To ensure accountability, an entity can't have more than one EORI number, which helps maintain an accurate export history database to track performance over time.
- Spain has three different points of inspection and analysis:
 - There are 17 autonomous communities that make up Spain, and they each conduct inspections of olive oil in the manufacturing facilities where it's produced.
 - Spain's Official Service of Surveillance, Certification and Technical Assistance of Foreign Trade (SOIVRE) samples olive oil to be exported and conducts physico-chemical and sensory testing to ensure authenticity and quality. *Olive oil bound for the United States is specifically targeted for additional testing.* SOIVRE also checks olive oil to ensure labeling requirements are met.
 - Spanish Customs also collects samples and conducts physico-chemical and sensory testing.

In Italy, the National Agricultural Information System (SIAN) tracks every move olive oil makes in the country, whether it's imported or produced domestically. This makes olive oil one of Italy's most verified products. Companies that fail to update the information in SIAN are sanctioned, and every police force across the country has access to the information in the system to aid enforcement against bad actors.

Across the EU, these rigorous processes ensure the integrity of olive oil shipped to the United States – Europe's most important export market.

Other exporting countries outside of the EU also have stringent requirements. For example, Morocco has a rigorous process for inspecting and monitoring each batch of olive oil intended for export. Olive oil can only be released for export once it's met the trade standard of the destination market. Morocco also has a network of internationally accredited labs specializing in olive oil analysis, which test for quality and purity.



Why is there so much written about fake olive oil?

Consumers are passionate about olive oil, and nothing gets them more riled up than to have someone tell them that their beloved olive oil is fake. And that presents an opportunity for people to make money by preying on people's passion and fear of being cheated. So, when you see a claim about fake olive oil, ask yourself, did the source actually perform any laboratory tests or offer any proof? Was the story about fake olive oil something that was discovered in the U.S.? Is the person making the claim selling something like a competing product or a scandalous book, or simply trolling for clicks or views on an article that will bring them ad dollars and followers on social media platforms?

As with wine, beer, coffee and other products, there are good, better and best qualities of olive oil to meet every flavor preference and budget. Shop at retailers you trust and buy brands you know. If you want to try a new brand, as with anything you buy, beware of prices that are too good to be true, and always taste the olive oil as soon as you bring it home. If you don't like it, take it back to the store where you bought it for a refund or exchange it for something you like.

What about olive oil that says it's extra virgin but it's not?

To be clear, adulteration and mislabeling are separate issues. You should have every confidence that your olive oil isn't adulterated, which means mixed with other types of oil. When a bottle labeled extra virgin (the best quality) is found not to live up to that designation, that's a more complex subject. There are a few reasons for this:

- The quality of olive oil changes over time and when it's exposed to light, heat and air. These changes can be outside the producer's control, as they can take place with the retailer or the consumer.
- Taste which is a key factor in determining the extra virgin grade is a subjective determination when done by a single taster. For that reason, official grading requires a panel of at least eight expertly trained and calibrated tasters following strict protocols to minimize the impact of subjectivity. Often, sensational journalists claim a bottle of oil is mislabeled without following this protocol and, as a result, many times these claims are unsubstantiated, misleading and overblown.



For consumers wanting to make sure they get the highest-quality olive oil:

- Look for quality seals like the <u>NAOOA Certified Seal</u> or <u>Extra Virgin Alliance</u> seal, which ensures the olive oil meets rigorous standards.
- At the store, look for oils in dark or opaque containers, and check the best-by date to make sure you've got time to use it.
- Taste the oil! If it doesn't taste right, you can take it back to the store. Over time, the more you taste, the more you start to understand what olive oils you like. And, as a general rule, the more flavor, the more health benefits.
- When you get home, store the oil in a cool, dark place with the lid on tightly, and once opened, use within 2-3 months.

Are olive oils other than extra virgin worth using?

Absolutely! While extra virgin olive oil may have the most flavor and health benefits thanks to its higher polyphenol and antioxidant count, all olive oil, refined or virgin, has the same high content of monounsaturated "good fat," which is recognized by the FDA as a great choice for heart health. Even the most passionate EVOO user may at times prefer for taste or budget reasons to use a neutral-tasting oil, depending on the dish they are preparing. In that case, regular and light-tasting olive oils are excellent choices because when compared to the most commonly purchased types of neutral-tasting oils (canola, soybean, corn), olive oils are the least processed (i.e., not extracted with chemical solvents), have the healthiest fatty acid profile and the lowest trans fats, and are enriched with virgin olive oil, which means they also contain healthy olive polyphenols – not nearly as much as in extra virgin olive oil, but more than other cooking oil alternatives which have none.

Even within the extra virgin category there are different qualities, and all may have appropriate uses, depending on your taste preferences and budget. For raw use (like dipping), to finish dishes, or as a condiment, you want the best quality of extra virgin olive oil you can afford. There are many great options in this category, including those in the NAOOA's <u>Extra Virgin Alliance</u>. When choosing extra virgin olive oil for everyday cooking, you may prefer a less expensive one, since some of the flavor mellows when heated (a full list of NAOOA member brands can be found on our <u>website</u>).

It's important to note that research clearly shows that when consumers who were accustomed to using other neutral-flavored, solvent-extracted seed oils like canola, vegetable, corn, soy, etc., switched to regular or light-tasting olive oil, they not only kept using olive oil, but they were also likely to soon graduate to using healthier extra virgin olive oil, as well.



How are refined olive oils made?

Olives are harvested once a year, and the oil is extracted mechanically. The best tasting oil that meets strict quality parameters can be sold as extra virgin olive oil. Oils that don't meet this high standard can be refined through a process that removes flavor and color. The refining process for olive oil is generally like the process that all the common neutral-flavored seed oils like canola and vegetable oil undergo. (Note, although chemical solvents like hexane may be used in extracting seed oils, solvents are not used in the refining process and are never used to extract olive oil.)

You won't find 100% refined olive oil for sale to consumers. The two commonly sold types of olive oil that are made with refined olive oil, regular and light-tasting, are enriched with virgin olive oils to give them flavor and color, so they do contain some naturally occurring antioxidants and olive polyphenols (although less than you would find in extra virgin olive oil). This gives these refined olive oil products an advantage over seed oils that don't have such enrichment.

What are the main differences between extra virgin olive oil, olive oil and other cooking oils?

The words "virgin" or "unrefined" are key terms for consumers to look for on cooking oil labels. If the label doesn't say one of these terms, then the oil has been refined, or in the case of products labeled simply "olive oil," the oil is a combination of refined and virgin olive oil. When it comes to health benefits, the naturally occurring antioxidants and polyphenols in virgin oils are lost in the refining process, but the fatty acid profile (see "Cooking Oil Fat Profiles" chart below) is preserved whether the oil is virgin or refined. If a neutral tasting oil is called for, then refined oils are ideal. For example, in some cases, like making a mayonnaise, a flavorless neutral oil may be important to the recipe. But in many cases, a recipe may indicate a neutral oil due to force of habit when a virgin oil with healthier attributes can be an excellent substitute that functions perfectly well. For example, in many strongly flavored sauces and marinades, a virgin oil will perform as well as a refined oil and may even enhance the flavors in a recipe.

The chart below provides an overview of the main differences among cooking oils:



	Virgin or Unrefined Oils			Refined Oils				
	Extra Virgin Olive Oil	Virgin Avocado Oil	Virgin Coconut Oil	Olive Oil (Regular or Light)	Canola Oil	Vegetabl e Oil	Avocado Oil	Corn Oil
Extracted using chemical solvents	Never	Never	Never	Never	Always*	Always*	Never	Always*
Percent refined oil	0%	0%	0%	85%-95%	100%	100%	100%	100%
Micronutrient Content**	Highest (100%)	High (100%)	High (100%)	Low (7%-22%)	Negligible	Negligible	Negligible	Negligible
Flavor intensity	Full	Full	Full	Low/ Neutral	Neutral	Neutral	Neutral	Neutral
Amount sold at retail	~75% of olive oil	Low % of avocado oil		~25% of olive oil	Nearly 100%*	Nearly 100%*	Majority of avocado oil	Nearly 100%*
Smoke point***	350-410° F	375-400° F	~350° F	390-468° F	435-455° F	400-450° F	~520° F	400-415° F

*Unless label says "expeller pressed"

Percent content of naturally occurring antioxidants, polyphenols and phytonutrients in bottled product *Smoke point is not the best indicator of how a cooking oil will perform when heated. Please see the section on cooking above for more information.

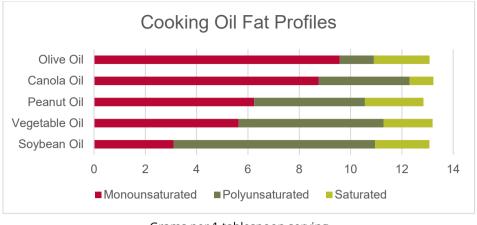
It's worth noting that compared to commonly used seed oils (e.g., canola, vegetable, corn, etc.), regular and light-tasting olive oil are the least processed (i.e., not extracted with chemical solvents), have the healthiest fatty acid profile and the lowest trans fats, and are enriched with virgin olive oil, which means they contain healthy olive polyphenols – not nearly as much as in extra virgin olive oil, but more than other cooking oil alternatives, which have none.

Refined and solvent-extracted seed oils are also more likely to break down and form harmful polar compounds when heated because of how they are produced and their fatty acid profile.

How do the fat profiles of different cooking oils compare?

Dietary fats are divided into three principal types of fatty acids: monounsaturated, polyunsaturated and saturated. Of the most commonly used cooking oils, olive oil has the highest percentage of monounsaturated fat. It's for this reason that olive oil has been recognized by the FDA as a great choice for heart health. All grades of olive oil have the same amount of heart-healthy monounsaturated fat.





Grams per 1 tablespoon serving Source: <u>U.S. Department of Agriculture FoodData Central</u>

Does olive oil contain trans fats?

If you're (wisely) seeking to avoid trans fats, olive oil is your best choice among cooking oils. Extra virgin olive oil contains virtually no trans fats, and refined olive oil has 0.5% or less.

Solvent-extracted oils (e.g., canola, soybean, etc.) must be heated to high temperatures to help the solvent evaporate, a process that creates trans fats. No olive oil is solvent-extracted. As a result, even refined olive oil contains as much as seven times *fewer* trans fats than canola oil and as much as four times *fewer* trans fats than soybean oil.

Oil Type	Trans Fat Content (%)			
Extra Virgin Olive Oil	< 0.1%			
Refined Olive Oil	<u><</u> 0.5%			
Soybean Oil	0.4 - 2.1%			
Sunflower Oil	1.1%			
Canola Oil	1.9 - 3.6%			

Source: The Nutrition Source, Harvard T.H. Chan School of Public Health

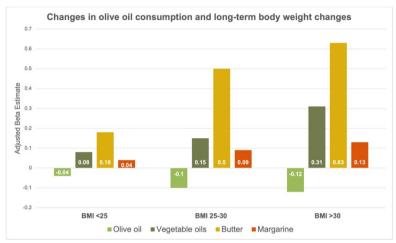
Note: Trans fats do not have to be disclosed on the nutrition facts label of any of the oils listed above because FDA set the threshold at a higher level, allowing all products to declare "0" grams even though trans fats are present in varying amounts in cooking oils.

There's also no need to be concerned about producing trans fats when cooking with olive oil. A study published in the *International Journal of Fats and Oils* involved frying potatoes in olive oil eight times at 356°F for 15 minutes. The oil was sampled after every use, and even after eight uses, fewer than 0.002% trans fatty acids were formed.



Will olive oil make me gain weight?

The opposite is true. While many of us were taught a "calories in, calories out" approach to weight management, increasing evidence suggests that <u>approach is antiquated</u> and not all calories are created equal. For example, <u>recently published research</u> indicates that olive oil consumption is inversely associated with weight gain—meaning, the more olive oil consumption, the more weight you lose—while for other oils and fats (e.g., butter, margarine and seed oils), the opposite is true.



Source: Changes in olive oil consumption and long-term body weight changes in 3 United States prospective cohort studies. Guasch-Ferré, Marta et al. The American Journal of Clinical Nutrition.

Additional <u>research</u> from Harvard suggests that weight gain can be reversed by substituting carbohydrates with quality good-fat foods such as olive oil, avocados, nuts and seeds. Olive oil also may help you <u>feel fuller longer</u>, while improving both <u>body</u> <u>composition and blood pressure</u>.

This evidence indicates that when used correctly, olive oil tends to "reduce body fat and waist circumference."

What does the color of olive oil mean?

Color is not a reliable indicator of olive oil flavor or quality. Extra virgin olive oil can range in color from yellow to dark green, depending on variables like the olive variety, where it's grown, climate and harvest timing. Some yellow extra virgin olive oils can be more robust than others that are dark green. So, when it comes to extra virgin olive oil, it's better to taste it and see if you like it! Regular or light-tasting olive oil, however, will typically be pale yellow depending on the amount of virgin oil that is used to enrich the product.



Should I be looking for a harvest date?

The *harvest date* on an olive oil bottle tells you when the olives were picked—but not necessarily when it was bottled. While this date can be useful when available, it doesn't tell the whole story about shelf life.

In contrast, the *"Best if used by"* date, especially from reputable producers, offers more reliable guidance. It accounts for several factors that impact freshness beyond just harvest date, including:

- Olive variety: Some olives, like Coratina, are higher in polyphenols and antioxidants, which extend shelf life. Others, like Arbequina, are more delicate and don't keep as long.
- Milling timing: An olive oil that's milled on the same day it's harvested will likely have a longer shelf life than one that is milled two days later, even if it's the same olive variety.
- Storage and bottling practices: Proper handling from harvest to shelf also influences how long an oil stays at peak quality.

So, while the harvest date is helpful when available, it's not always included—and for good reason. Many olive oils are blends from olives that were harvested from different farms, regions, countries or even continents, each with its own harvest date. This blending is done to provide a consistent flavor profile and price point. Listing several different harvest dates on a label would be confusing and impractical. For this reason, the NAOOA requires that its members include a best if used by date but not a harvest date. You can read more about harvest dates and "best by" dates <u>here</u>.

Is it important to look for "first cold-pressed" on an extra virgin olive oil label?

It may surprise you, but the answer is no! *That's because all extra virgin olive oil is, by definition, "first cold-pressed."* The phrase "first cold-pressed" may distinguish extra virgin olive oil from seed oils (e.g., canola, vegetable, corn, soy, etc.) that are extracted with high heat and/or chemical solvents, but it can't be used to distinguish one extra virgin olive oil from another. Extra virgin olive oil is produced at temperatures below 80.6°F, which is "cold" compared to high-heat extraction. Similarly, with all extra virgin olive oils, there's only one extraction ("pressing"), so the word "first" is redundant. Olive oils produced at higher temperatures or from a second pressing will fail to meet the exacting standards for extra virgin olive oil.



It's also worth noting that the term "pressed" is outdated. It was coined at a time when olive oil was extracted using a hydraulic press. Today, the vast majority of olive oil is extracted using a centrifuge. Click <u>here</u> to check out a video about how olive oil is made.

What does "product of," "packed in," or "imported from" mean on olive oil labels?

Olive oils have strict country-of-origin labeling requirements that are enforced by U.S. Customs and Border Protection. "Product of XX" refers to the origin of the oils in the bottle, meaning the olive oil was extracted from the olives in that country. "Imported from XX" or "Packed in XX" refers to where the oil was shipped or bottled; it does not mean the olive oil was produced in that country. All labels must include a "Product of" declaration to comply with the law, whether they include a "bottled in" or "packed in" statement or not; if olive oils from several countries are blended in the product, then each of the countries must be listed on the label as the countries of origin. (NOTE: NAOOA's labeling guide recommends that where an "Imported from" or "Packed in" statement is made on the label, it should be in immediate proximity to the country-oforigin statement to avoid confusion.)

All olive oils produced in European Union member states, which includes more than 80% of the olive oil consumed in the U.S., are required to undergo risk analysis and controls to check for authenticity and conformity with labeling rules at every stage of marketing, including before they are exported.

Does the fact that my bottle contains olive oils from different countries mean that it's bad?

Certainly not. There's nothing inherently wrong with blending olive oils from different countries, which is done to maintain a consistent flavor profile and price point. In fact, there's no guarantee that a bottle of oil that comes from a single country will be any better than a multi-country blend. Here are three main points to consider:

1. Olive oil producers can often achieve great-tasting oils with "coupage" or blended combinations—a widespread practice in winemaking. Some famous appellations like Chianti and Rioja are even required by law to blend different regional wines. Like with grapes, olives from different harvests can have different flavor profiles due to a variety of factors. To account for this, winemakers and olive oil producers can use coupage to balance flavor and achieve consistency year after year. Similar to wines, a coupage of olive oils from different origins can be high quality. It's not uncommon to find such olive oil blends among the winners of consumer taste tests.



2. Multi-country blends make quality olive oil accessible when and where you want it. When we go to the store, we expect our favorite olive oil to be there. The practice of blending olive oils from different regions helps make sure our preferred products are on the shelf, and they taste the way we expect them to—even if certain growing regions have a difficult season due to weather, which can negatively impact both the availability and quality of olive oil.

3. Olive oil blends are transparent about their countries of origin. For many people, olive oil quality is associated with traceability (i.e., where did this olive oil come from?). However, traceability doesn't depend on the olive oil having a "single origin." Olive oil blends are required by law to disclose their olive oils' countries of origin, and that's what producers do. What's more, some producers even use blockchain data and QR codes to help provide additional transparency.

When choosing your oil, the trustworthiness of the producer is a more important factor than the country of origin; small estate producers and companies with positive brand recognition are most likely to take all steps needed to assure the quality of the oil in their bottles, regardless of where the oil comes from. A good rule of thumb is to judge the oil by tasting it as soon as you get it home. If it doesn't meet your approval, take it back to the store for a refund or substitution.

That said, we recognize that origin is an important factor that some consumers consider when choosing olive oil, and we fully respect that. But again, origin by itself is not a guarantee of quality.

What kind of packaging should I look for?

The answer to this question depends in some respects on personal preference. And it doesn't have to be complicated – just remember that light and air are the enemy!

As for the different packaging available, glass, lined tin, stainless steel, aluminum, bagin-box, pouch and PET plastic can all be good options to help store and preserve the oil, as long as they have a secure seal or cap to keep air out.

Exposure to light will degrade olive oil over time, so if you plan to keep your olive oil in a glass or plastic bottle on an open shelf or kitchen counter, you'll want to look for darkercolored or opaque packaging. That said, olive oil in a clear bottle that has outer packaging that protects it from extended light exposure before you get it home could be



excellent. If you store it somewhere dark, the minimal light it will be exposed to isn't going to harm it in any appreciable way, especially if you tend to use olive oil pretty quickly.

If you're concerned about sustainability, you may be interested in r-PET, which are bottles made from recycled plastics. Plastic packaging is also lighter in general, which helps reduce the carbon footprint of shipping. Increasingly, olive oils are being sold in bag-in-box, pouch and light metal packaging, which can be good options with relatively lighter environmental footprints.

Should I store my olive oil in the refrigerator?

It's better to leave olive oil stored in a cool, dark place outside the fridge. Olive oil will form crystals and start to solidify when subjected to cold temperatures. Once the olive oil is brought back to room temperature, it will return to its liquid state. Some research suggests that repeated thawing and cooling – such as storing it in the fridge between uses – puts stress on the oil and can result in condensation inside the bottle that will negatively impact the quality of the oil and its shelf life. It's also inconvenient to bring the olive oil back to room temperature to use it.

It's also worth noting that some people believe you can use the refrigerator to test the authenticity of extra virgin olive oil. This is simply not true. Extra virgin olive oil will crystallize and/or solidify at a wide variety of time and temperature exposures. All this variance is part of what makes extra virgin olive oil truly special. So, forget the fridge, and focus instead on enjoying the wide variety of flavors found among extra virgin olive oils.





Classic Olive Oil Chocolate Chip Cookies

Ingredients

- 1 cup extra virgin olive oil
- 2 large eggs
- 1 tsp vanilla extract
- 1 cup dark brown sugar
- 3 cups all-purpose flour
- 1 1/2 tsp baking powder
- 1/2 tsp salt
- 1 cup dark chocolate chunks

Preparation

- 1. Preheat the oven to 350°F and line a baking sheet with parchment paper.
- 2. In a large bowl, beat together olive oil and brown sugar for about 1 minute until smooth. Add eggs and vanilla, mixing until combined.
- 3. In a separate bowl, whisk together flour, baking powder, and salt.
- 4. Gradually add the dry ingredients to the wet ingredients, mixing until fully combined. Fold in chocolate chunks.
- 5. Chill the dough for at least 1 hour.
- 6. Scoop dough onto prepared baking sheet, spacing 2 inches apart. Bake for 8-10 minutes, until edges turn golden.
- 7. Cool and sprinkle with a touch of salt before serving.

View original recipe: https://olyfo.com/olive-oil-chocolate-chip-cookies/





Creamy Tomato Soup with Coconut Milk

Ingredients

- 1/4 cup olive oil
- 1 cup diced onion
- 2 tsp minced garlic
- 1/4 cup tomato paste
- 2 (28 oz) cans whole peeled tomatoes
- 2 tbsp balsamic vinegar
- 2 cups water
- 1/2 cup canned coconut milk
- Salt and pepper to taste

Preparation

- 1. In a large pot, warm olive oil over medium heat. Add onion, garlic, and tomato paste; cook for 5-10 minutes, stirring often.
- 2. Add tomatoes, vinegar, and water. Bring to a simmer and cook for 30 minutes.
- 3. Remove from heat, stir in coconut milk, salt, and pepper.
- 4. Use an immersion blender to puree until smooth. Serve hot.

Read the full recipe: <u>https://pompeian.com/recipes/creamy-tomato-soup/</u>





Tuscan Seafood Stew

Ingredients

- 3/4 cup olive oil
- 1 red onion, coarsely chopped
- 4 cloves garlic, minced
- 1 1/2 tsp crushed red pepper flakes
- 1 cup dry red wine
- 1 (28 oz) can crushed tomatoes
- 1/2 cup fresh parsley, chopped
- 1 1/2 tsp salt
- 3 cups water
- 24 Manila clams, scrubbed
- 24 large shrimp, uncooked, peeled or unpeeled
- 2 lb halibut fillets, cut into chunks
- 6-8 slices crusty Italian bread, toasted

Preparation

- 1. In a large Dutch oven, heat olive oil over medium heat. Add onion, garlic, and red pepper flakes; cook for 10 minutes.
- 2. Stir in wine and simmer for 5 minutes until reduced slightly. Add tomatoes, parsley, and salt. Bring to a boil, then reduce heat and simmer for 10 minutes.
- 3. Add water, then clams. Cook for 2 minutes until shells start to open.
- 4. Add shrimp and halibut, cooking for 2-3 minutes until opaque.
- 5. Place a slice of bread in each bowl, ladle stew over the top, and garnish with parsley.

Read the full recipe: <u>https://filippoberio.com/recipes/tuscan-seafood-stew</u>





Chocolate Olive Oil Bundt Cake

Ingredients

- 1³/₄ cups 415ml whole milk
- 2 ¼ cups 320g all-purpose flour (reduce to 2 cups)
- ²/₃ cup 56g unsweetened cocoa powder
- 1 tsp baking soda
- ½ tsp salt
- ²/₃ cup 150ml Extra Virgin Olive Oil
- 1 cup 200g granulated sugar
- ½ cup 110g packed dark brown sugar
- Zest of one large orange
- 1 tsp 5ml pure vanilla extract
- 1 tbsp 15ml freshly squeezed lemon juice
- ¹/₂ cup 85g dark chocolate chips
- ¼ cup 56g mini dark chocolate chips

Ingredients for the chocolate glaze:

- 1 cup 6oz/170g semisweet chocolate chips
- 4 tbsp 60ml water
- 1 tbsp 15ml Extra Virgin Olive Oil
- Pinch of salt.

Preparation

1. Preheat your oven to 350°F. Generously butter and lightly flour a 10-inch round Bundt pan and set aside. Make sure to get in all the crevices to ensure that your cake releases nicely, then dust lightly with flour or cocoa powder.



- 2. In a small saucepan over medium heat, scald the milk so that bubbles just begin to form around the edges and then set it aside.
- 3. In a large bowl, sift together flour, cocoa powder, baking soda and salt. Whisk together to blend evenly and set aside.
- 4. In a medium bowl, beat the olive oil with both sugars and orange zest using an electric hand mixer on medium-high speed until fluffy and it looks like wet sand, about 1 minute. Add about half of the hot milk and beat on medium speed until the sugar is dissolved, about 2 minutes. It will look syrupy. Beat in vanilla extract. Add this mixture to the flour mixture and beat on medium-low speed until mostly combined, about 25 seconds. Slowly beat in remaining milk on medium speed until batter is smooth, about 30 seconds. Mix in lemon juice. Fold in chocolate chips.
- 5. Pour batter evenly into your prepared pan. Bake until the surface is cracked and a toothpick inserted into an area of the cake without melted chocolate comes out clean, about 45 minutes.
- 6. Transfer pan to a wire rack and let cool for about 30 minutes. Gently run a small offset spatula around the inner edges of the cake pan and flex the cake inwards away from the sides to help release it.
- 7. To present it, take your serving plate and place it face down over the cake. With a good firm grip on each end of the plate and the cake pan, invert it so that the plate is now flat on the table.
- 8. Lift off the cake pan and set aside to cool completely.
- To make the chocolate glaze, combine all ingredients in a saucepan and place over very low heat. Stir gently until chocolate starts to melt and then whisk until completely melted smooth and glossy. Let cool for 10 minutes to thicken before pouring over cooled Bundt cake.

View original recipe: <u>https://terradelyssa.com/products/chocolate-olive-oil-bundt-cake</u>





Lemon Cake

Ingredients

- 2 cups all-purpose flour
- 1 cup sugar
- 3/4 cup brown sugar
- 1 1/2 teaspoons kosher salt
- 1/2 teaspoon baking soda
- 1/2 teaspoon baking powder
- 1 1/3 cups Olive Oil
- 1 1/4 cups whole milk
- 3 large eggs
- 1 1/2 tablespoons grated lemon zest
- 1/4 cup fresh lemon juice
- 1/4 cup Limoncello
- Optional garnishes: powdered sugar, lemon zest, dried sweetened lemon rings

Preparation

- 1. Heat the oven to 350 degrees F. Oil an 8" x 12" x 2"-inch pan with Pompeian Light Taste Olive Oil and line the bottom with parchment paper.
- 2. In a bowl, whisk the flour, sugars, salt, baking soda and powder. In another bowl, whisk the olive oil, milk, eggs, Meyer lemon zest, juice, and Limoncello. Add the dry ingredients; whisk until just combined.
- 3. Pour the batter into the prepared pan and bake for 60 75 minutes, until the top is golden and a cake tester comes out clean. Transfer the cake to a rack and let cool for 30 minutes.
- 4. Run a knife around the edge of the pan, invert the cake onto the rack and let cool completely, 2 hours.
- 5. Sprinkle with powdered sugar and lemon zest right before serving.

View original recipe: https://pompeian.com/recipes/lemon-cake/





Coffee With Olive Oil

Ingredients

- 6oz of strong black coffee
- 1.5 teaspoons of extra virgin olive oil

- 1. To make an olive oil "cappuccino", simply blend 6oz of strong black coffee with 1.5 teaspoons of extra virgin olive oil in a blender.
- 2. Please exercise caution when blending hot drinks to avoid being burned with hot coffee.
- 3. Add sweetener if you like, but we like it without.
- 5. Use an immersion blender to puree until smooth. Serve hot.





Extra Virgin Olive Oil Chili Garlic Crisp

Ingredients

- 1 cup extra virgin olive oil
- 4 cloves thinly sliced garlic
- 1/4 cup dehydrated minced onion
- 1 teaspoon sugar
- 1 teaspoon kosher salt
- 1/4 cup red pepper flakes (reduce for less heat)
- 3 tablespoons sesame seeds

- In a dry frying pan, toast the sesame seeds. To do this, add sesame seeds to a pan and stir them with a wooden spoon. Turn off the heat when you hear them crackle or pop. It happens quickly! Do not leave the pan unattended. Remove the seeds from the pan and save them for later.
- 2. Add 1 cup of extra virgin olive oil to the pan and then turn on the heat.
- 3. Add 4 cloves of thinly sliced garlic. When the garlic starts to turn a golden color add the dehydrated minced onion
- 4. Stir for approximately 30 seconds and when the onion is toasted, add the rest of the ingredients.
- 5. Cook for 30 seconds to 1 minute stirring to incorporate the ingredients.
- 6. Remove from heat immediately.
- 7. Store in a jar.
- 8. Refrigerate it and use within 2 weeks.
- 9. In a dry frying pan, toast the sesame seeds. To do this, add sesame seeds to a pan and stir them with a wooden spoon. Turn off the heat when you hear them crackle or pop. It



happens quickly! Do not leave the pan unattended. Remove the seeds from the pan and save them for later.

- 10. Add 1 cup of extra virgin olive oil to the pan and then turn on the heat.
- 11. Add 4 cloves of thinly sliced garlic. When the garlic starts to turn a golden color add the dehydrated minced onion
- 12. Stir for approximately 30 seconds and when the onion is toasted, add the rest of the ingredients.
- 13. Cook for 30 seconds to 1 minute stirring to incorporate the ingredients.
- 14. Remove from heat immediately.
- 15. Store in a jar.
- 16. Refrigerate it and use within 2 weeks.

Variations

- The sauce above is a neutral base that can be tweaked.
- You can substitute sesame seeds for ground peanuts
- To make it less spicy use sweet bell pepper flakes or reduce the amount of red pepper flakes used
- To make it like Mexican "salsa macha" swap red pepper flakes for dried Mexican chile peppers
- To make it smoky add in 1/2 teaspoon of smoked paprika
- To make it more aromatic add in 1 tablespoon of minced ginger or add 1 teaspoon of Chinese 5 spice powder
- For "spicy and numbing" mala flavor add 1 teaspoon of coarsely ground Sichuan peppercorns

How to use it

- Drizzle on eggs, tacos, roast potatoes, avocado toast or grilled meats
- Toss with noodles or add a spoonful to instant ramen
- Mix with peanut butter, sugar, hot water, rice vinegar and soy sauce to make a quick peanut sauce for noodles or chicken
- Mix with cream cheese or sour cream to serve as a dip for chips
- Pack into small jars and give as a holiday gift!





Best Banana Bread with Extra Virgin Olive Oil

Ingredients

- 61/2 cup extra virgin olive oil
- 1 cup granulated sugar
- 2 eggs
- 3 over-ripe bananas
- 1 1/2 cups all-purpose flour
- 1 teaspoon baking soda
- 1/2 teaspoon salt
- 1/2 teaspoon vanilla extract and walnut (optional)

- 1. Preheat oven to 350°F / 180°F (180°C / 85°C)
- 2. Prepare a loaf plan by greasing with olive oil. Optionally, line with parchment paper
- 3. With an electric mixer, beat the eggs
- 4. Beat in the sugar and vanilla extract
- 5. Add the bananas, mix until the banana is incorporated
- 6. Mix in the extra virgin olive oil
- 7. Combine the flour, salt and baking soda and then add to the creamed mixture
- 8. Mix just until combined--do not overmix
- 9. Add walnuts if using
- 10. Pour into prepared loaf pan
- 11. Bake for 55 minutes
- 12. Test with a toothpick or skewer for doneness (e.g., pierce the bread with the skewer, if it comes out clean, the bread is done)
- 13. Cool on a rack before serving





Extra Virgin Olive Oil Cornbread

Equipment

- 10-inch cast iron skillet or 9x8 baking pan
- 2 mixing bowls

Ingredients

- 1 cup of all-purpose flour
- 3/4 cup yellow cornmeal
- 1 teaspoon kosher salt
- 1/2 teaspoon baking soda
- 2 teaspoons baking power
- 1/2 cup extra virgin olive oil
- 1/2 cup honey
- 2 large eggs
- 1 1/4 cups buttermilk

- 1. Preheat the oven to 350°F and line a baking sheet with parchment paper.
- 2. In a large bowl, beat together olive oil and brown sugar for about 1 minute until smooth. Add eggs and vanilla, mixing until combined.
- 3. In a separate bowl, whisk together flour, baking powder, and salt.
- 4. Gradually add the dry ingredients to the wet ingredients, mixing until fully combined. Fold in chocolate chunks.
- 5. Chill the dough for at least 1 hour.
- 6. Scoop dough onto prepared baking sheet, spacing 2 inches apart. Bake for 8-10 minutes, until edges turn golden.
- 7. Cool and sprinkle with a touch of salt before serving.





Japanese Fried Chicken (Karaage)

Ingredients

- 1 teaspoon grated fresh ginger
- 2 teaspoons grated or smashed garlic (from about 3 cloves)
- 2 tablespoons soy sauce (for gluten free, use tamari)
- 2 teaspoons sugar
- 6 boneless skinless chicken thighs (about 2 pounds), cut into 2-inch chunks
- 2 cup potato starch (katakuriko). If you can't find it, you can substitute 1 cup flour and 1 cup corn starch.
- Salt and pepper
- Olive oil for frying

- 1. Combine the ginger, garlic, soy sauce and sugar in a bowl or zip-top bag and mix.
- 2. Add the chicken and massage the sauce into the meat. Marinate for 30 minutes to 1 hour or overnight.
- 3. Prepare a wire rack over a pan
- 4. When ready to fry, combine potato starch, salt and pepper in a bowl.
- 5. One at a time, roll the chicken pieces in the potato starch mixture and place on a wire rack. You don't want the coating to be too thick.
- 6. Heat the oil to 325°F (165°C) and fry the pieces in small batches for about 3 minutes, or until golden brown.
- 7. Drain the chicken on a rack or on a dish lined with paper towels.
- 8. When all the chicken has been fried, increase the temperature to 375°F (190°C) and fry the chicken a second time for 1 minute. The second fry makes the skin crispier!





Sweet Potato Fritters

Ingredients

- 3 sweet potatoes
- 1 small onion
- 2 oz rice flour
- 1.5 oz grated mozzarella
- 2 eggs
- Black pepper
- Salt
- STAR extra-virgin olive oi

- 1. Grate the sweet potatoes (peeled or not) into a bowl. Chop the onion and add to the sweet potato.
- 2. Next add the rice flour, mozzarella and beaten eggs. Mix together and add salt and pepper. Spoon the mixture into portions of the desired size.
- 3. Heat two spoonfuls of extra-virgin olive oil in a frying pan. Fry the portions until they turn golden brown on both sides.
- 4. Serve the fritters hot with your favorite sauce on the side.



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