

EATING FAT TO LOSE FAT – GOOD FAT, THAT IS

Is it true that we should eat fat in order to lose fat?

For over thirty years, fat in our diet has been considered the culprit in obesity, heart disease, and high cholesterol. Unfortunately, the resulting “low fat” foods and diets haven’t resulted in most people controlling their weight or becoming healthier. In fact, the opposite is true.

It’s the *type* of fat that matters in addition to how much you consume. Reducing your intake of some types of fats reduces the risk of several chronic diseases, but other types of fats are absolutely essential to our health and well-being.

What Is Fat?

Fat is one of the three macro nutrients (along with protein and carbohydrates) that supply calories to the body. Fat provides nine calories per gram as compared to carbohydrate or protein grams which each provide four calories per gram.

Healthy fats are essential to good health

The human body uses fatty acids to do everything from building cell membranes to performing key functions in the brain, eyes, and lungs. The functions of fats include:

- **Brain** – Fats compose 60% of the brain and are essential to brain function, including learning abilities, memory retention and moods. Fats are especially important for pregnant women, since they are integral to fetal brain development.
- **Cells** – Fatty acids help your cells stay moveable and flexible, as well as being responsible for building cell membranes.
- **Heart** – 60% of our heart’s energy comes from burning fats. Specific fats are also used to help keep the heart beating in a regular rhythm.
- **Nerves** – Fats compose the material that insulates and protects the nerves, isolating electrical impulses and speeding their transmission.
- **Lungs** – Lung *surfactant*, which requires a high concentration of saturated fats, enables the lungs to work and keeps them from collapsing.
- **Eyes** – Fats are essential to eye function.
- **Digestion** – Fats in a meal slow down the digestion process so the body has more time to absorb nutrients. Fats help provide a constant level of energy and also keep the body satiated for longer periods of time. Fat-soluble vitamins (A, D, E, and K) can only be absorbed if fat is present. Fat helps in the absorption and transport of fat-soluble vitamins.
- **Organs** – Fats cushion and protect your internal organs.
- **Immune System** –Some f ats ease inflammation, helping your metabolism and immune system stay healthy and functioning.
- **Energy source**
- **Insulates the body**
- **Healthy skin and hair**

Essential fatty acids must come from dietary fat. They cannot be manufactured by the body. It is important to eat a healthful diet so you get the right nutrients, including essential fatty acids. You should not lower the fat in your diet to less than 8-10% of calories. It’s good to keep your fat consumption less than 30%.

"Faces" in the Fats Families

To understand good and bad fats, you need to know the names of the players and some information about them: **The Good, The Bad, and The Ugly**

The Good Fat: unsaturated fats

These are two types of unsaturated fats:

- monounsaturated fats: olive and canola oils
- polyunsaturated fats: safflower, sunflower, corn, and soybean oils

Unsaturated fats have a lot of calories, so you still need to limit them.

Monounsaturated fats

- Are liquid at room temperature and turn cloudy when kept in refrigerator.
- Primary sources are plant oils like canola oil, peanut oil, and olive oil. Other good sources are avocados; nuts such as almonds, hazelnuts, and pecans; and seeds such as pumpkin and sesame seeds.
- People following traditional Mediterranean diets, which are very high in foods containing monounsaturated fats like olive oil, tend to have lower risk of cardiovascular disease.

Polyunsaturated fats

- Are liquid at room temperatures as well as at cold temperatures
- Primary sources are sunflower, corn, soybean, and flaxseed oils, and also foods such as walnuts, flax seeds, and fish.
- This fat family includes the Omega-3 group of fatty acids, which are anti-inflammatory and your body can't make. In addition, Omega-3 fats are found in very few foods.

The Bad Fat: Saturated Fats

Fats — especially saturated fat — affect the health of your heart and blood vessels. Saturated fat is often found in foods from animals.

Saturated fat

- Are usually solid at room temperature and have a high melting point
- Primary sources are animal products including red meat and whole milk dairy products. Other sources are tropical vegetable oils such as coconut oil, palm oil and foods made with these oils. Poultry and fish contain saturated fat, but less than red meat.
- Saturated fat raises low-density lipoprotein (LDL or "bad") cholesterol that increases your risk of coronary heart disease (CHD).
- It is unnecessary to eat saturated fat sources since our bodies can produce all the saturated fat that we need when we consume enough of the good fats.

The Ugly Fat: Trans-Fat

Trans-fatty acids are found in fried foods, commercial baked goods (donuts, cookies, crackers), processed foods, and some margarines. Processed foods and oil provide approximately 80% of trans fat in the diet, compared to 20% that occur naturally in food from animal sources. Trans fat content of food is changing as food manufacturers are providing trans free products. Look for these on the store shelves.

These fats are extremely bad for your health and will soon be listed on the nutritional labels on foods.

- Trans fats are created by heating liquid vegetable oils in the presence of hydrogen gas, a process called *hydrogenation*. Partially hydrogenating vegetable oils makes them more stable and less likely to spoil, which is very good for food manufacturers – and very bad for you.
- **Hydrogenated:** refers to oils that have become hardened (such as hard butter and margarine). Foods made with hydrogenated oils should be avoided because they contain high levels of trans fatty acids, which are linked to heart disease. (Look at the ingredients in the food label.) The terms "hydrogenated" and "saturated" are related; an oil becomes saturated when hydrogen is added (i.e., becomes hydrogenated).
- **Partially hydrogenated:** Refers to oils that have become partially hardened. Foods made with partially hydrogenated oils should be avoided because they contain high levels of trans fatty acids, which are linked to heart disease. (Look at the ingredients in the food label.)
- Primary sources of trans fat are vegetable shortenings, some margarines, crackers, candies, cookies, snack foods, fried foods, baked goods, and other processed foods made with partially hydrogenated vegetable oils.
- Trans fat raises low-density lipoprotein (LDL or "bad") cholesterol that increases your risk of coronary heart disease (CHD), as well as lowering HDL, or good cholesterol.

All kinds of fats have the same amount of calories and need to be limited to help you lose weight.

How Much Fat Do You Need?

Two types of fatty acids that are essential for human health are omega-3 and omega-6. Studies suggest that decreasing the ratio of omega-6 (in vegetable oils) to omega-3 fatty acids (in fatty fish and some vegetable oils) is important to reduce risk of cancer and heart disease, inflammatory conditions, and depression.

Most people consume too many omega-6 fatty acids and consume too little omega-3 fatty acids. To reduce your risk of chronic disease, reduce your intake of omega-6 fatty acids and increase your intake of omega-3 fatty acids.

- Avoid vegetable oils such as corn or safflower oil.
- Eliminate highly processed foods.
- Eat high omega-3 fish at least twice per week.

Dietary fat provides essential omega 3 and omega 6 fatty acids. On a 2,000 calorie diet, the average person would need about:

- 1-2 g of omega 3
- 4-8 g of omega 6

These amounts can be found easily in 8-10% of the calories from fat on a healthful diet.

Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep trans fatty acid consumption as low as possible.

Keep total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.

All fatty food contain several “fatty faces”

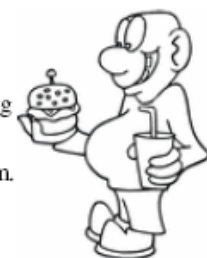
Each type of fat or oil is a mixture of different kinds of fats. The following chart shows how common oils have a balance of different types of fat:

	Monounsaturated	Polyunsaturated	Saturated	Trans
Olive oil	72%	8%	13%	0%
Safflower oil	12%	74%	9%	0%
Butter	26%	5%	60%	5%
Stick margarine	2%	29%	18%	23%



The Top 3 Major Sources of Saturated Fat

1. Cheese! When eating out, leave off the cheese. Wait to add cheese at home when you can add on the low fat version.
2. Beef: Keep beef to once a week or less. Look for the low fat beef products when purchasing them at the store.
3. Milk: switch to low-fat or skim. If you are currently drinking whole, stair-step down to skim. First mix whole and 2%, then switch only to 2%, mix 2% and skim or 1%, and finally only skim or 1%. Your taste buds will adjust to the lower fat milk.



Maximum Daily Amounts of Saturated Fat (to keep Saturated Fat Below 10% of Total Calorie Intake), Daily Trans Fat, and Daily Total Fat

Total Calorie Intake	Limit on Saturated Fat Intake	Limit on Trans Fat Intake (≤1% of caloric intake)	Limit on TOTAL Fat Intake (25-30% fat from total calories)
1600	18g or less	1.8g	44-53g
2000	20g or less	2.2g	56-67g
2200	24g or less	2.4g	61-73g
2500	25g or less	2.8g	69-83g
2800	31g or less	3.1g	77-93g

How do all the fats fit? Saturated fat and Trans fat are part of the Total Fat number so the total fat number includes saturated fat and trans fat.

Comparison of Saturated Fat and Calories

Food Category	Portion	Saturated Fat Content (grams)	Calories
Cheese			
• Regular cheddar cheese	1 oz	6.0	114
• Low-fat cheddar cheese	1 oz	1.2	49
Ground Beef			
• Regular ground beef (25% fat)	3 oz (cooked)	6.1	236
• Extra lean ground beef (5% fat)	3oz (cooked)	2.6	148
Milk			
• Whole milk (3.24%)	1 cup	4.6	146
• Low-fat (1%) milk	1 cup	1.5	102
Breads			
• Croissant (medium)	1 medium	6.6	231
• Bagel, oat bran (4")	1 medium	0.2	227
Frozen desserts			
• Regular ice cream	½ cup	4.9	145
• Frozen yogurt, low-fat	½ cup	2.0	110
Table spreads			
• Butter	1 tsp	2.4	34
• Soft margarine with zero trans	1 tsp	0.7	25
Chicken			
• Fried chicken (leg with skin)	3 oz (cooked)	3.3	212
• Roasted chicken (breast no skin)	3 oz (cooked)	0.9	140
Fish			
• Fried fish	3 oz	2.8	195
• Baked fish	3 oz	1.5	129

Source: U.S. Department of Health and Human Services and U.S. Department of Agriculture.
Dietary Guidelines for Americans, 2005. 6th Edition, Washington, DC: U.S. Government Printing Office, January 2005.

Which fats are recommended?

- Emphasize consumption of monounsaturated and omega-3 fatty acids
- Limit consumption of saturated and trans fats (listed as hydrogenated or partially hydrogenated vegetable oils on labels)
- All foods containing fat have a mixture of polyunsaturated, monounsaturated, and saturated fatty acids. It is not feasible or desirable to completely eliminate one type of fatty acid from your diet.

Why choose healthy fats like MUFA and omega-3s?

- They provide antioxidants such as vitamin E and selenium
- Small amounts of healthy fats help the body absorb the vital nutrients from fruits and vegetables
- Including healthy fatty acids in the diet in appropriate quantities can help prevent and treat: diabetes, heart disease, cancer, obesity, musculo-skeletal pain, inflammatory conditions
- Some research suggests that diets including MUFA can have a positive effect on cholesterol, blood pressure, blood clotting and inflammation.
- Omega-3 fatty acids are necessary for proper brain growth and development. They are anti-inflammatory and may be helpful in the prevention and treatment of heart disease, high blood pressure, inflammation, mental health disorders, diabetes, digestive disorders, autoimmune disease and cancer.

Selected food sources of MUFA with serving sizes (listed highest to lowest MUFA content)

Oils (serving size is 1 teaspoon)	Nuts (serving size)	Seeds (serving size)	Butters (serving size)	Other (serving size)
Olive oil	Macadamias (2-3)	Sesame seeds (1 Tbsp)	Almond butter (½ Tbsp)	Avocado (2 Tbsp or 1 oz)
Canola oil	Hazelnuts (5)	Pumpkin seeds (47 seeds)	Cashew butter (½ Tbsp)	Black olives(8)
Peanut oil	Pecans (5 halves)	Ground flaxseed (1 Tbsp)	Peanut butter (½ Tbsp)	Green olives (10)
Sesame oil	Almonds (7)	Sunflower seeds (3 Tbsp)	Tahini/sesame paste (2 tsp)	
Walnut oil	Cashews (6)		Sunflower seed butter (2 tsp)	
Soybean oil	Pistachios (17)			
Flaxseed oil (should be consumed raw and not used in cooking)	Brazil nuts (2)			
Grape seed oil	Peanuts (9)			
	Pine nuts (50)			
	Walnuts (4 halves)			

Selected Plant Sources of Omega-3 Fatty Acids (listed highest to lowest omega-3 content)

Oils (serving size = 1 teaspoon)	Nuts and seeds (serving size)
Flaxseed oil*	Flaxseeds (1 Tbsp)
Walnut oil	Walnuts (4 halves)
Canola oil	Pecans (5 halves)
Soybean oil	Pine nuts (50)

*Should be consumed raw and not used in cooking.

The Omega-3 Group: Super Healthy Fats

We should all be increasing our intake of healthy omega-3 fatty acids, which we need for body functions like controlling blood clotting and building cell membranes in the brain. We're still learning about the many benefits of Omega-3, but research has shown this fatty acid can have a positive impact on:

- **Cardiovascular Disease (CVD)** Epidemiologic and clinical trials have shown that omega-3 fatty acids reduce CVD incidence (American Heart Association), by:
 - decreasing risk of arrhythmias, which can lead to sudden cardiac death
 - decreasing triglyceride levels
 - decreasing growth rate of atherosclerotic plaque
 - lowering blood pressure (slightly)
 - **improved circulatory system** – mostly due to increased thinning of the blood and decreased cholesterol and triglycerides
 - **reduction in stickiness of blood platelets** – this helps prevent unnecessary blood clots, and trust me when I say this is a good thing. Coming from a man that has had blood clots twice, I am telling you, you do not want them!
 - **healthy cholesterol levels** – benefit by Omega-3 supplementation by enjoying a healthier ratio of LDL to HDL
 - **healthy triglyceride levels** – in a recent study, patients that supplemented with 2 g of Omega-3s per day, saw decreased triglycerides within the first 2 weeks of the study
 - **normal heart rhythm** – the theory is that Omega-3s decrease heart disease through blood thinning and moderation of the heart rhythm
- **Liver cancer:** omega-3 fatty acids may be an effective therapy for both the treatment and prevention of human liver cancers. (University of Pittsburg study)
- **Depression:** Omega-3 fatty acid DHA reduces symptoms of depression probably because it increases gray matter in the brain. (University of Pittsburg study)
- **Dementia** - Eating fatty fish, high in omega 3, lowers the likelihood of developing “silent” brain lesions that can cause memory loss and dementia (University of Kuopio in Finland)
- **relief from arthritis and chronic inflammation** – supplementing with Omega-3 will help to decrease inflammation in irritated tissue, including muscles and joints
- **reduction of joint aches and pains** – Omega-3 fatty acids help to lubricate your joints, making them function smoothly, with less pain and inflammation

- **healthy brain and memory function** – this is especially important in infants and children. Your brain uses a vast array of nutrients to do what it does. Omega-3 fatty acids are vital to proper brain function and growth. Thus, before your next test, interview, or public speaking event, you should definitely supplement with additional Omega-3s.
- **healthy pregnancy** – a mother's health and optimal development of her child's brain, nerves and eyes during pregnancy and breast feeding are facilitated by supplementing with Omega-3 fatty acids
- **healthy insulin levels** – in a recent study, 3 weeks of Omega-3 supplementation at 1.1 g EPA and .7 g DHA/day, decreased insulin response to increased blood glucose by approximately 40%, with lower glucose oxidation and higher fat oxidation.
- **reduce the risk of becoming obese** and improve the body's ability to respond to insulin by stimulating the secretion of leptin, a hormone that helps regulate food intake, body weight and metabolism, and is expressed primarily by adipocytes (fat cells) Data from the University of Western Ontario shows that fish oil supplementation increases lean body mass (during non-dieting conditions), increases BMR (by up to 400kcal/day), decreases inflammation, and improves the ratio of fat/carb oxidized (sparing carbs, burning fat).
- **help prevent cancer cell growth**

What conditions or symptoms indicate a need for more high-omega-3 foods?

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|--------------------------|----------------------------|
| • Depression | • Dry, itchy skin |
| • Cardiovascular Disease | • Brittle hair and nails |
| • Type 2 Diabetes | • Inability to concentrate |
| • Fatigue | • Joint pain |

Types of Omega 3 fatty acids

The three key members of the Omega -3 family are alpha-linolenic acid (ALA); eicosapentaenoic acid (EPA); and docosahexaenoic acid (DHA). The best sources are fatty fish such as salmon, herring, mackerel, anchovies, or sardines, or some cold-water fish oil supplements. Canned (albacore) tuna and lake trout can also be good sources, depending on how the fish were raised and processed.

You may hear a lot about getting your omega-3's from foods rich in ALA fatty acids. ALA is the most common Omega-3 found in American diets and is found in abundance in flax seeds and flax seed oil, as well as walnuts. While your body may be able to convert ALA into EPA and DHA, you can't be sure – only some people have the ability to do so. Thus, to insure you get enough of these vital nutrients, it's prudent to include fatty fish or fatty fish oil supplements in your diet. But, if you eat no fish or fish oil, getting just ALA is better than nothing - your cardiovascular protection may still go up, though not nearly as much as with fish oils.

Some people avoid seafood because they worry about mercury or other possible toxins in fish. Most experts agree that the benefits of eating two servings a week of these cold water fatty fish outweigh the risks.

The Omega-6 to Omega-3 Ratio

Omega-3 and omega-6 fats are both essential fats (meaning the body can't make them and instead we need to get them from the food we eat). The proper balance of these two fats is extremely important for a number of reasons – one being that omega-6 fats are the precursors for pro-inflammatory molecules (which helps us avoid infections and promotes healing) whereas omega-3 fats are anti-inflammatory and turn off the inflammatory response when it is no longer needed.

In recent decades the ratio of omega-6 to omega-3 fatty acids has become way out of balance in the western diet. Most people consume far too many omega-6 fatty acids and consume far too little omega-3 fatty acids. This ratio is one of the important factors that can help reduce the risk of heart disease, cancer, inflammatory conditions, and depression.

Tips for helping to balance your intake of the omega fats

- Avoid vegetable oils such as corn or safflower oil.
- Reduce your consumption of meats and dairy products.
- Eliminate highly processed foods.

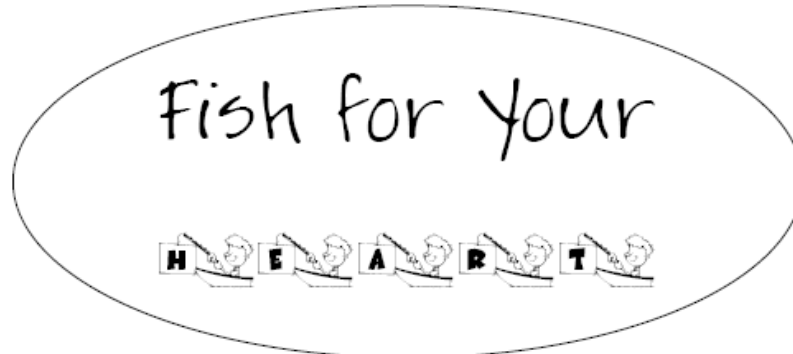
- Increase consumption of omega-3 rich foods such as wild-caught cold-water fish like salmon, flaxseed oil, and walnuts.

Food Sources

What foods provide omega 3 fatty acids?

Salmon, flax seeds and walnuts are excellent sources of omega 3 fatty acids. Very good sources of these healthy fats include scallops, cauliflower, cabbage, cloves and mustard seeds. Good sources of these fats include halibut, shrimp, cod, tuna, soybeans, tofu, kale, collard greens, and Brussels sprouts.

Studies have proven that a relatively small number of omega-3 food sources can have a measurable impact on blood levels of omega-3s, including those two key omega-3 fatty acids, EPA (eicosanoic acid) and DHA (docosahexanoic acid). For example, two weekly servings of a non-fried, omega-3 containing fish (like wild-caught Pacific salmon) is enough to boost your blood levels of omega-3s.



Evidence suggests that consuming approximately two servings of fish per week (approximately 8 ounces total) may reduce the risk of death from coronary heart disease and may reduce the risk of death from cardiovascular disease in people who have already experienced a cardiac event.

The best fish for heart health:

Mackerel

Lake Trout

Herring

Sardines

Albacore Tuna

Salmon



Fish Recommendations for Pregnant Women and Small Children

By following these 3 recommendations for selecting and eating fish or shellfish, women and young children will receive the benefits of eating fish and shellfish and be confident that they have reduced their exposure to the harmful effects of mercury.

1. Do not eat Shark, Swordfish, King Mackerel, or Tilefish because they contain high levels of mercury.
2. Eat up to 12 ounces (2 average meals) a week of a variety of fish and shellfish that are lower in mercury.
 - Five of the most commonly eaten fish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish.
 - Another commonly eaten fish, albacore ("white") tuna has more mercury than canned light tuna. So, when choosing your two meals of fish and shellfish, you may eat up to 6 ounces (one average meal) of albacore tuna per week.
3. Check local advisories about the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas. If no advice is available, eat up to 6 ounces (one average meal) per week of fish you catch from local waters, but don't consume any other fish during that week.



Follow these same recommendations when feeding fish and shellfish to your young child, but serve smaller portions.

Introduction to Nutrient Rating System Chart

In order to better help you identify foods that feature a high concentration of nutrients for the calories they contain, we created a Food Rating System. This system allows us to highlight the foods that are especially rich in particular nutrients. The following chart shows the World's Healthiest Foods that are either an excellent, very good, or good source of omega 3 fatty acids. Next to each food name, you'll find the serving size we used to calculate the food's nutrient composition, the calories contained in the serving, the amount of omega 3 fatty acids contained in one serving size of the food, the percent Daily Value (DV%) that this amount represents, the nutrient density that we calculated for this food and nutrient, and the rating we established in our rating system. For most of our nutrient ratings, we adopted the government standards for food labeling that are found in the U.S. Food and Drug Administration's "Reference Values for Nutrition Labeling." Read more background information and details of our rating system.

World's Healthiest Foods ranked as quality sources of: Omega 3 fatty acids						
Food	Serving Size	Cals	Amount (g)	DV (%)	Nutrient Density	World's Healthiest Foods Rating
Flaxseeds	2 tbs	95.3	3.51	146.3	27.6	excellent
Cloves, dried, ground	2 tsp	14.2	0.20	8.3	10.6	very good
Walnuts	0.25 cup	163.5	2.27	94.6	10.4	excellent
Oregano, dried, ground	2 tsp	9.2	0.12	5.0	9.8	very good
Salmon, chinook, baked/broiled	4 oz-wt	261.9	2.09	87.1	6.0	excellent
Cauliflower, boiled	1 cup	28.5	0.21	8.8	5.5	very good
Mustard seeds	2 tsp	35.0	0.20	8.3	4.3	very good
Cabbage, shredded, boiled	1 cup	33.0	0.17	7.1	3.9	very good
Romaine lettuce	2 cup	15.7	0.08	3.3	3.8	good
Broccoli, steamed	1 cup	43.7	0.20	8.3	3.4	very good
Brussel sprouts, boiled	1 cup	60.8	0.26	10.8	3.2	good
Winter squash, baked, cubes	1 cup	80.0	0.34	14.2	3.2	good
Tofu, raw	4 oz-wt	86.2	0.36	15.0	3.1	good
Summer squash, cooked, slices	1 cup	36.0	0.15	6.3	3.1	good
Halibut, baked/broiled	4 oz-wt	158.8	0.62	25.8	2.9	good
Collard greens, boiled	1 cup	49.4	0.18	7.5	2.7	good
Spinach, boiled	1 cup	41.4	0.15	6.3	2.7	good
Kale, boiled	1 cup	36.4	0.13	5.4	2.7	good
Soybeans, cooked	1 cup	297.6	1.03	42.9	2.6	good
Shrimp, steamed/boiled	4 oz-wt	112.3	0.37	15.4	2.5	good
Turnip greens, cooked	1 cup	28.8	0.09	3.8	2.3	good
Cod, baked/broiled	4 oz-wt	119.1	0.32	13.3	2.0	good
Strawberries	1 cup	43.2	0.11	4.6	1.9	good
Green beans, boiled	1 cup	43.8	0.11	4.6	1.9	good
Snapper, baked/broiled	4 oz-wt	145.2	0.36	15.0	1.9	good
Scallops, baked/broiled	4 oz-wt	151.7	0.35	14.6	1.7	good
Tuna, yellowfin, baked/broiled	4 oz-wt	157.6	0.33	13.8	1.6	good
Raspberries	1 cup	60.3	0.12	5.0	1.5	good
Miso	1 oz	70.8	0.14	5.8	1.5	good

World's Healthiest Foods Rating	Rule				
excellent	DV>=75%	OR	Density>=7.6	AND	DV>=10%
very good	DV>=50%	OR	Density>=3.4	AND	DV>=5%
good	DV>=25%	OR	Density>=1.5	AND	DV>=2.5%

Choosing the best Omega-3 Supplements

When choosing an omega-3 supplement, keep the following in mind:

- One 500-mg capsule per day is sufficient – any more than that is extraneous and could even be detrimental to your health. The American Heart Association recommends consuming 1–3 grams per day of EPA and DHA. For certain medical conditions, higher doses of omega-3 might be beneficial, but make sure these are prescribed by a medical professional.
- Choose supplements that are mercury-free, pharmaceutical grade and molecularly distilled. Make sure the supplement contains both DHA and EPA. They may be hard to find, but supplements with higher concentrations of EPA are better. A good ratio to look for is 3:2 (EPA:DHA).
- Check the expiration date!

Why You Want To Supplement with Fish Oil

Simply stated, Omega-3 consumption is directly linked to the reduction of triglycerides and therefore a decrease in risk for developing coronary heart disease.

Being that diabetics have an increased risk of heart disease from elevated levels of triglycerides, this is most important for those individuals, but is still important for the rest of us. In accordance with some concerns, **a recent study shows us** that fish oil does increase low-density lipoprotein (LDL) levels, while also lowering triglycerides. Those studies show that high-density lipoprotein (HDL) levels are also increased, resulting in a zero change to the ever important ratio of LDL/HDL.

In another study, a significant reduction in the levels of very-low-density lipoproteins, triglycerides and very-low-density triglycerides was observed.

In a third study, the average (mean) systolic blood pressure had dropped by 4.4 mm Hg and the diastolic pressure by 3.2 mm Hg in a group consuming fish oil. The average blood pressure in the control group did not change.

The researchers also found that plasma triglyceride and VLDL levels in the fish oil group decreased significantly (by about 9 per cent) while they increased significantly (by about 12 per cent) in the control group.

An editorial accompanying this third study concluded that **fish oil is useful in the prevention of vascular disease in diabetics**.

Patients with diabetes should eat fish two to three times a week or, as an alternative, supplement with two to three, 1 gram capsules of fish oil per day.

Conclusion

We can therefore conclude that fish oil supplementation is effective in lowering triglyceride levels and blood pressure in diabetics, and has no adverse effects on glycemic control or overall cholesterol levels. Furthermore, a dosage as small as 3 grams per day of fish oil is enough to realize the benefits of Omega-3 supplementation.

Ideas to balance your fat consumption

1. Dress your own salad. Commercial salad dressings are often high in saturated fat, unhealthy chemicals, and made with inferior, overly-processed, damaged oils. Create your own dressings with high-quality, cold-pressed olive oil, flaxseed oil, canola or sesame oil and your favorite herbs.
2. Add avocados, nuts, or olives to salads instead of high saturated fat animal foods like cheese, butter and meat.
3. For a snack, opt for a small handful of nuts/seeds each day in place of highly processed and high fat choices including chips, pastries, and cookies.
4. Use olive and canola oils for most cooking.
5. To increase plant sources of omega-3s, choose walnuts, ground flaxseed and uncooked flaxseed oil.
6. Never use oils, seeds or nuts after they begin to smell or taste rank or bitter. This is a sign that the oil has begun to turn rancid through a harmful oxidation process.
7. For high temperature sautéing or frying, use oils with high smoke point, like canola or grapeseed oils.
8. Limit/avoid consuming:

- Polyunsaturated vegetable oils like safflower, sunflower and corn oil
 - Margarine, vegetable shortening, and all products made with partially hydrogenated oils
 - Saturated vegetable oils such as coconut, palm kernel and palm oil
9. Use high-quality cold-pressed olive oil, flaxseed oil or sesame oil as an addition to cooked foods or salads before eating.
 10. Add a tablespoon or two of ground flax seeds or flax meal to smoothies, muffins, bread or any other home-made baked item.
 11. Choose white meat; in general, red meat (fatty beef, lamb, pork, ham, duck, and goose) has more saturated fat than white meat (turkey or chicken without skin) or fish
 12. Ask what type of oil your food is cooked in. When eating out, ask your server or counter person what type of oil they use in their cooking. If it's partially-hydrogenated oil, run the other way. Otherwise, see if you can request your food to be prepared using olive oil, which most restaurants have in stock. Be aware of any foods deep fried in restaurants. Deep fried foods may say "fried in vegetable oil", but it is often hydrogenated vegetable oil.
 13. *Eat real, natural fat and cholesterol every day as part of every meal.* But do so safely and within reason. Put real butter or cold-pressed olive oil on your potato — it will fill you up and help slow your digestion of carbohydrates. (Better yet, have a sweet potato instead — it has a lower glycemic index and higher nutritional value.) Dip your bread in olive oil. Snack on nuts, nut butters, olives, and sardines. Have a moderate amount of protein at every meal — it's usually a great source of real, natural fat.
 14. Read the food label and ingredients list on all packaged foods. If it has partially hydrogenated or hydrogenated oil, throw it away. Look for packaging that guarantees no trans fats — most manufacturers are complying with the new regulation. Be wary of low-fat substitutes for comfort food; many have artificial ingredients to make up for the loss of fat. Pay attention to serving sizes — some manufacturers use an impossibly small serving size to mislead you into thinking the nutritional content is healthy.
 15. Shop at natural foods stores or in the natural foods section of your supermarket. Many natural grocery stores will not stock food products that contains trans fats. Organic meat, chicken and eggs contain fewer inflammatory factors like growth hormones and pesticides.
 16. Eat real, whole foods that you cook yourself. Besides being healthier and less expensive, this ensures that you know what's in the food you're eating. Restaurants, especially fast food restaurants — still use trans fats, or cook with polyunsaturated oils, because they are cheap and widely available. Most processed foods are loaded with trans fats. Cooking at home can be just as convenient as fast food, particularly if you make a large batch and reheat the leftovers for another meal.
 17. Be wary of overly processed dairy products. There's a lot of controversy about pasteurization and homogenization. While we don't know for sure, it's possible that this processing damages the butterfats. But raw milk can have its own dangers, so we don't recommend it, either. As in all things, try to obtain the best quality dairy products from reliable, organic sources.
 18. Favor cooking methods that use moderate heat, and avoid cooking with unstable vegetable oils. Very high heat methods, such as grilling, can turn even good fat into trans fat. Don't use any vegetable oil for cooking unless it has enough saturated fat to be stable. Olive oil is the best example, but it should not be used for frying. Some experts recommend using coconut oil when cooking at high temperatures because of its saturated fat content, but be aware that some varieties flavor everything. Grapeseed oil is another option. Both of these oils cost more.
 19. Store all cooking oils in the refrigerator to avoid rancidity.
 20. Take a daily nutritional supplement with omega-3 fatty acids. A supplement high in omega-3's is important for fighting inflammation, maintaining brain and digestive function, and balancing out the ratio to omega-6's, which are more readily available in our diet. A daily supplement with folic acid and several B vitamins also helps balance and lower homocysteine levels, while vitamin C fights free radical damage and the oxidation of cholesterol in the arteries. (We've created our own nutritional supplements that we can recommend to our patients with confidence.

5 GREAT Ways to Add GOOD FAT in Your Daily Diet

The major source of these fats is oils; however, they are also found in other foods. Here's a list of foods that have high quantities of these healthful fats.

1. Oils good for cooking and baking

When evaluating your fat intake, first examine the fats you regularly use for cooking and baking. Butter, shortening, and lard are high in saturated fats (a not-so-healthy fat). Margarine can be high in *trans* fats (a bad-for-you fat). An easy way to improve the quality of your fat intake is to switch to a canola or vegetable oil when baking; use olive oil for stove-top cooking. These oils are both high in healthful mono- and poly-unsaturated fats.

2. Avocado: high fat but nutritious

Also known as an "alligator pear," due to its shape and skin texture, this high-fat nutritious food is the perfect addition to salads, salsas, soups and more. Not only does it add great creamy flavor, it can also boost nutrition. Many vegetables are loaded with beneficial *carotenoids* that are great for your health and can aid in disease prevention. Adding avocado to a vegetable dish will enhance your body's ability to absorb these potent carotenoids. Studies have revealed that carotenoids are fat soluble—which means they need a high-fat food, such as an avocado, to be fully absorbed by your body.

Use ripe avocado as a spread on your veggie-filled sandwiches. It can be spread alone or mixed with some plain yogurt and fresh cilantro for a Spanish inspired kick.

3. Nuts are healthy

Once given a bad rap due to their high fat content, nuts are now considered as a health food—ironically because of their fats (the good, heart-healthy kind). They also contain an array of beneficial nutrients, including vitamin E and zinc, and are a good source of fiber.

Nuts are so versatile; they can be used at any meal. They add a great crunch to dishes. Try substituting them for breadcrumbs when coating chicken or fish before cooking. Simply grind some nuts; dip chicken or fish in a beaten egg; coat the meat with the nuts; then, place in a 350-degree oven until cooked through.

4. Fish fat is essential

Fish contain omega-3 fatty acids. Omega-3 fats are termed "essential" because the human body cannot make them on its own. The health benefits of omega-3s run the gamut; they have been said to improve everything from heart health to mental health problems.

Poaching is a quick and easy way to prepare fish. Simply fill a small sauce pan with three inches of water (or white wine), bring to an almost boil and poach fish for eight to ten minutes or until it flakes easily.

5. Olives - the perfect snack

Olives are a good source of healthy monounsaturated fats, but don't let these high-fat little bites fool you. Unlike many other high-fat foods, olives can also be a low-calorie snack all on their own. One serving of 20 small black olives is a great snack with less than 100 calories and will contain a good amount of iron, fiber, vitamin E, and copper.

Rather than munching on olives plain, try making a simple tapenade by combining fresh olives with some garlic and oil in a blender or food processor. This is a great dip for bread, and also works great as a pasta topper.

Even if you've spent the past months dieting yourself into fit form, a few poor food choices each week can quickly add up to a juggernaut of jiggle well before Labor Day. Don't believe us? Consider the caloric damage of typical summer activities—weekly backyard BBQs provide pounds of juicy burgers topped with gobs of high-calorie condiments; ice cream dates offer options of double and triple scoops, smothered in sugar-packed and fat-blasted toppings; and seasonal drink choices (the kind you add umbrellas to and sip from faux-coconuts) guarantee you'll wash it all down with hundreds of extra calories. Not exactly flat-belly fare.

That's why Eat This, Not That! has developed this list of six essential summer foods. The more of these bulge-battlers you eat, the better your chances of keeping those abs flat throughout this skin-baring season.