

Reader's
Digest

THE
Omega-3
Advantage



TAPPING NATURE'S ANSWER TO
Heart Disease, Skin Conditions,
Asthma, Arthritis, and More

THE Omega-3 Advantage

Reader's
Digest

The Reader's Digest Association, Inc.
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Nature's Miracle Nutrients

Amazing discoveries happen in the most unexpected places. Take the discovery of omega-3 fatty acids. Back in the 1950s, scientists working with the Inuit Eskimos in Greenland found that while people in the industrial world were dying early from heart disease, this native population had a startling absence of high blood pressure and other cardiovascular illness, despite consuming boatloads of fat. After further investigation, the medical experts determined that it was *because* the Inuit ate so much fat, specifically fat from fish, seal, and whale meats, that their hearts were among the healthiest in the world.

Equally intriguing are the residents of Okinawa, a collection of palm-shaded islands between mainland Japan and Taiwan. There, living to be 100 is expected rather than exceptional. Their secret? A diet rich in fruits and vegetables, low in saturated fats, and brimming in omega-3 fatty acids from the salmon, tuna, and mackerel they eat several times a week.

Clearly omega-3 fatty acids have an amazing power to keep the body free of heart disease. But that's only the beginning. Medical experts have recently identified a raft of other potential therapeutic benefits. If you consume enough of these nutrients (which as you'll soon see, most of us do not), omega-3s may stave off common ills, including arthritis, depression, asthma, psoriasis, PMS, and even certain types of cancer.

In the pages that follow, you'll learn all about omega-3s—what they are, why you need more, where to get them, and how you can get just the right amount to help you live a longer, healthier life.

How They Work

Omega-3s are a type of polyunsaturated fat known as essential fatty acids (EFAs) because they are necessary for human health, but the body can't make them itself. Like vitamins, minerals, and other essential nutrients, we must get them from the foods we eat.

Like all fats, omega-3s make food satisfying and help you feel full sooner, so you're less likely to overeat. But they do much more. In fact, they have a whole host of important roles in the body. For instance:

- They are main components of nerve cells and cell membranes throughout the body.
- They are precursors to substances such as prostaglandins, hormone-like chemicals that affect everything from heart rate and blood clotting to the constriction and dilation of blood vessels.
- They transport oxygen from red blood cells to the body's tissues.
- They lower blood pressure and triglyceride levels.
- They regulate the release of inflammatory chemicals from cells, controlling inflammation that might otherwise contribute to allergies, rheumatoid arthritis, and other conditions.

Omega-3 fatty acids are so important that some researchers think that many of the ills we associate with aging can actually be blamed on an omega-3 deficiency.

Why You Need More

With all the fat most Westerners eat, it seems strange that we should need to eat more fat of any type. But omega-3s have been steadily disappearing from the American diet. Decades ago, when people killed and ate a moose or a deer for dinner, they got all the omega-3s they needed. That's because grass-fed animals have plenty of this fatty acid in their meat. Today, though, very few animals are grass-fed. Most are given processed feed, and the result is that today's meat contains very little in

the way of omega-3s. (Grass-fed beef is available in some high-end grocery stores and organic foods stores, as well as on the Internet, but it costs considerably more.) We could still get plenty of these nutrients from fish—but most of us eat little fish.

What we do eat more than enough of is another type of essential fatty acid known as omega-6, found in meat, eggs, dairy products, margarine, and vegetable oils used in processed and fast foods. These fats aren't quite as good for us as omega-3s. They tend to promote inflammation and contribute to the production of cell-damaging free radicals—unstable molecules that contribute to everything from heart disease to cancer, as well as plain old aging.

Ideally, a healthy diet should contain only one to four times more omega-6s than omega-3s, but the typical North American diet contains 11 to 30 times more. So most of us need to pay special attention to good food sources of omega-3s and make it a point to consume more of them. Turn the page to find out the best food sources of these amazing healing nutrients.

Omega-3 Super Sources

You can find these healing fatty acids in a variety of foods, including **spinach, mustard greens, wheat germ, walnuts, flaxseeds, canola oil, and pumpkin seeds.** Other plant sources are **great northern beans, kidney beans, navy beans, soybeans, and soybean products like tofu.** You can also buy omega-3-fortified **eggs** at most supermarkets. But the best source, by far, is **fish.** See “Go Fish!” at right to discover which types provide the most omega-3s with every bite.

Many studies have centered on the vast health benefits of fish consumption. In the Physicians Health Study, for instance, the men who ate fish at least once a week were 52 percent less likely to die of a heart attack than those who ate fish once a month or less.

Unlike essential vitamins and minerals, there's no daily recommended intake of omega-3s. Most experts recommend eating fish two to three times a week for general health benefits, though you may need to get more omega-3s (perhaps through supplements) if you have a health condition helped by high doses of these nutrients.

Along with eating more fish, add these foods to your diet to maximize your omega-3 intake:

- Ground flaxseed. Grind these sweet, nutty-tasting seeds in a coffee grinder and sprinkle on your cereal, salad, or soup. Use 1 to 2 tablespoons every day.
- Flaxseed oil. It's terrific on salads. Just don't cook with it or you'll destroy the important nutrients.
- Walnuts. Enjoy fresh, flavorful walnuts in your salad or eat an occasional handful.
- Walnut oil. Try it on mixed greens. It's deliciously nutty.

GO FISH!

Cold-water fish, such as salmon, tuna, herring, and sardines, are the richest seafood sources of omega-3s. One cautionary note: Long-lived fish, such as tuna, shark, king mackerel, and swordfish, may accumulate heavy-metal contaminants—especially mercury—which are toxic to the human nervous system and can be dangerous for unborn babies. Because of this potential hazard, women should either avoid these fish completely during pregnancy or eat them no more than once a month. In terms of canned tuna, albacore tends to be higher in mercury than light tuna.

TYPE OF FISH	OMEGA-3S*	TYPE OF FISH	OMEGA-3S*
Mackerel	2.6	Halibut, Pacific	0.5
Trout, lake	2.0	Pollock	0.5
Herring	1.7	Shark	0.5
Tuna, bluefin	1.6	Sturgeon	0.4
Salmon	1.5	Bass, freshwater	0.3
Sardines, canned	1.5	Catfish	0.3
Sturgeon, Atlantic	1.5	Ocean perch	0.3
Tuna, albacore	1.5	Flounder	0.2
Whitefish, lake	1.5	Haddock	0.2
Anchovies	1.4	Snapper, red	0.2
Bluefish	1.2	Swordfish	0.2
Bass, striped	0.8	Sole	0.1
Trout, brook or rainbow	0.6		

*(GRAMS PER 3.5 OUNCES)

Source: *The Health Effects of Polyunsaturated Fatty Acids in Seafoods.*

A Bounty of Benefits

Who would have thought that one single nutrient could help soothe dry skin, ease asthma symptoms, subdue menstrual cramps, fend off heart disease, and even combat cancer? Because omega-3s play critical roles in a wide range of body functions happening inside your cells, their effects are both powerful and amazingly far-reaching. These “good” fats yield benefits throughout the body and even the mind. Read on to discover just some of the common health conditions that omega-3s may help prevent or treat, and how.



How They Help: **Heart Disease**

Heart disease is the number one killer of American adults. Most heart attacks occur when blood clots form in the arteries and block the flow of blood and oxygen to the heart. Study after study has shown that a diet rich in omega-3 fatty acids can significantly reduce the risk of heart attack and also stroke.

Harvard researchers found that men who ate fish weekly were about half as likely to have a fatal heart attack as men who ate fish once a month or less. Research has also shown that these fatty acids can reduce the risk for fatal arrhythmias—abnormal heart rhythms. How do omega-3s provide all this heart help?

- They lower blood pressure by inhibiting the body's production of prostaglandins, leukotrienes, and thromboxane, substances that cause blood vessels to narrow.

- They make blood platelets less likely to clump together and form dangerous clots.
- They reduce levels of triglycerides, blood fats that have been linked to heart disease.
- They decrease the growth rate of artery-narrowing plaque.
- They reduce inflammation in the arteries and also appear to strengthen the heart's pumping rhythm.

EAT ACCORDING TO YOUR RISK

The American Heart Association recognizes the critical role omega-3s play in keeping your heart healthy and urges everyone, especially people with existing heart disease, to eat their fill. The following are its guidelines for optimum heart health.

IF YOU ...

THEN EAT ...

Do not have documented heart disease

A variety of fish (preferably fatty) at least twice a week. Include oils and foods rich in alpha-linolenic acid (ALA), such as flaxseed, canola and soybean oils, and flaxseeds and walnuts.

Have documented coronary heart disease

About 1 gram of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) daily, preferably from fatty fish. EPA and DHA supplements could be considered with a physician's recommendation.

Have high triglycerides 2 to 4 grams of EPA and DHA per day from supplements, under a doctor's guidance.

Source: American Heart Association's Summary of Recommendations for Omega-3 Fatty Acid Intake.

Omega-3s clearly play an important role in heart-disease prevention. There's also good evidence that they provide a valuable treatment option for people who already have heart disease. When taken in large amounts, they help prevent restenosis, the reblockage of arteries that often occurs after a person has undergone angioplasty to open up a blocked blood vessel.

If you already have heart disease or want to make sure you never get it, doctors advise having at least two—and preferably three or four—servings of fish, especially fatty cold-water fish like salmon, mackerel, and tuna each week, as well as including ground flaxseed in your diet. Or you can take a fish-oil supplement daily (see “Buying and Using Supplements,” page 21).



How They Help: Arthritis

Plagued by swollen, achy joints? You have a lot of company. About one in seven North Americans suffer from some type of arthritis, disorders characterized by joint inflammation, stiffness, swelling, and pain. The most common types are osteoarthritis, a painful condition in which joint cartilage gradually breaks down, and rheumatoid arthritis, a disease caused by an overactive immune system in which the body attacks tissue in the joints, leading to inflammation, pain, and crippling.

Until recently, doctors generally dismissed dietary treatments for arthritis as quackery; new research shows, however, that for some people, diet can make a difference. Studies have found that people with rheumatoid arthritis can experience a significant reduction in swelling, pain, and redness of joints by adding omega-3 fatty acids to their diet.

How do they work? Think of omega-3s as WD-40 for your joints. They inhibit the effects of inflammatory chemicals, such as prostaglandins,

FIGHT ARTHRITIS WITH FAT AND FLAX

For optimum joint health and fluidity, the Arthritis Foundation recommends maximizing your intake of omega-3 fatty acids while limiting your consumption of omega-6s. Here's what it suggests.

- **Toss out the corn oil** in your kitchen and only use oils rich in beneficial fatty acids, such as olive, canola, flaxseed, and walnut oils.

- **Limit the amount of meat** and other animal products you eat to no more than 4 to 6 ounces a day (about the size of two decks of playing cards).

- **Eat cold-water, fatty fish** two to three times a week.

- **Use flaxseed oil** as salad dressing and cook flaxseed flour into muffins and pancakes.

With your doctor's supervision, you can also consider using omega-3 supplements. The usual dose for arthritis relief is about 3 grams of EPA/DHA per day. Although more research is needed, flaxseed oil has worked as well as fish oil in some studies. Experts recommend 1 to 3 tablespoons per day.

and thereby reduce the stiffness and swelling commonly associated with rheumatoid arthritis. They work so well, in fact, that people who depend on aspirin or other anti-inflammatory pain-fighting medications are often able to lower the dose once they start taking fish-oil supplements.

On the flip side, it's also important to lower your intake of omega-6 fatty acids—which promote inflammation—primarily by eating less meat and processed foods. When our bodies digest omega-6 fats, one of

the byproducts is arachidonic acid, which is known to fuel agents that contribute to inflammation. Researchers blame the out-of-whack balance of polyunsaturated fats (that is, way too many omega-6s and way too few omega-3s) on the increase in inflammatory and autoimmune diseases among people eating a Western diet.



How They Help: **Skin Conditions**

Most of us take care of our skin from the outside, smearing on creams, lotions, and moisturizers. That's good for everyday bouts of dry skin. But when you're suffering with inflamed patches of psoriasis or the scaly rashes of eczema, you also need to attack the problem from the inside out.

Psoriasis rashes occur because, for unknown reasons, skin cells replicate about three times faster than normal. Because these new cells accumulate so quickly, they never have a chance to mature and cannot be shed. As a result, the skin becomes red and inflamed and develops overlapping white scaly patches. Itchy eczema rashes, on the other hand, tend to erupt in response to a sensitivity to foods, chemicals, or environmental conditions, such as dry air.

In both cases, inflammation is a big problem, and omega-3 fatty acids can help. Omega-3s block the action of arachidonic acid, a substance made by the body that causes inflammation. They are also essential in the regulation of prostaglandins, chemicals that can cause inflammation. Low levels of omega-3s are common in people with psoriasis and eczema, so make sure you're getting enough.

A note of caution: While foods rich in omega-3 fatty acids generally provide relief to people suffering with eczema, there are exceptions. Certain foods can trigger the condition, and among them are seafood and walnuts, rich sources of—you guessed it—omega-3s. If you have eczema, it's a good idea to be tested for food allergies by a trained physician.

Supplement Your Diet With These Skin Soothers

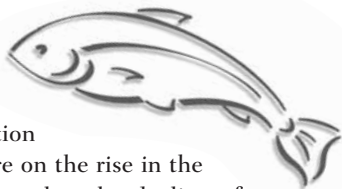
People with psoriasis or eczema should aim to eat fatty fish often—about three times a week. For those with psoriasis, experts recommend taking 1,000 milligrams of fish oils 3 times a day as well as one tablespoon (14 grams) of flaxseed oil each morning. (See “Buying and Using Supplements,” page 21, for precautionary advice.)

How They Help: **Mental Health**

It's no secret that depression and attention deficit/hyperactivity disorder (ADHD) are on the rise in the United States. And some experts suspect that the decline of omega-3 fatty acids in our diets may be partly to blame.

Researchers have known for some time that rates of depression are lower in countries where lots of fish is consumed and higher in countries where little fish is eaten. Recently experts have noted that some people who suffer from depression have markedly lower levels of omega-3 fatty acids, which are normally found in high concentrations in the brain (which is 60 percent fat). Low fish consumption and low levels of a potent form of an omega-3 fatty acid called DHA have both been linked with higher rates of postpartum depression.

Recently a flurry of research studies has supported the notion that consuming more omega-3 fatty acids can help stabilize and improve mood. When researchers fed omega-3 fatty acids to piglets, the fatty acids had the same effect as the antidepressant Prozac—significantly increasing levels of the neurotransmitter serotonin. In human research, when scientists looked at 44 people with bipolar disorder, a severe form



of depression, they found nearly two out of three improved if they were given fish oil. Further connecting omega-3s with good mental health, a preliminary study suggests that omega-3 fatty acids may reduce the severity of schizophrenia by about 25 percent.

Children with ADHD may have low levels of essential fatty acids in their bodies. Research has shown that those children with lower levels of omega-3 fatty acids demonstrate more learning and behavioral problems than those with normal levels. There are at this time no well-controlled studies that look at the effect of omega-3 fatty acid supplements on these symptoms, but a diet high in these fats is a reasonable approach.

Though more research is needed to understand the mechanism by which omega-3s help regulate mental health, experts suspect it's by enhancing the ability of brain-cell receptors to understand mood-related signals from other nerve cells in the brain.

Omega-3 Therapy

Though omega-3 fatty acids can't replace professional mental health care, there's good evidence that including more of these essential nutrients in your diet can help lessen the severity of various mental health disorders. No one knows exactly how much omega-3s you need for mental health benefits, but scientists often suggest about 3 grams a day or 1,000 milligrams taken three times a day. Or take about 1,000 milligrams a day and also include more fatty fish, walnuts, and flaxseed oil in your diet.

How They Help: Cancer

In the fight against cancer, fat has always been a four-letter word, blamed for rising rates of cancer in increasingly overweight populations. But as we've learned, there's bad fat—the artery-stuffing, waist-expanding saturated kind—and the heart-protecting, health-promoting unsaturated variety, such as omega-3 fatty acids. Research shows the latter might actually help fight cancer.



Though they're only recently gaining attention as an important part of an anti-cancer diet, omega-3s caught the attention of researchers back in the 1950s when German scientist Johanna Budwig, Ph.D., discovered the essential fatty acids and claimed that they, along with other nutrients, could reduce tumor growth in people with cancer.

Laboratory studies show that omega-3 fatty acids may stunt tumor development in animals, and now they are being studied in people. A small study from Harvard Medical Center suggested that omega-3 fatty acids could limit the recurrence of colon cancer. Similarly, participants in a study who took 4,400 milligrams of fish oils a day produced much less of one potent carcinogen associated with colon cancer than those who took a placebo. Studies are also taking place in people with breast and prostate cancer.

The most compelling evidence so far is for the prevention of breast cancer. Scientists have found a link between the high intake of omega-3s and a low incidence of the cancer. The balance between omega-3 fats and omega-6 fats in the diet appears to be an important factor: Studies suggest that while omega-3s delay or reduce tumor development, omega-6s actually encourage tumor development. Women with breast cancer have two to five times more omega-6 fatty acids than omega-3 fatty acids in their systems. Exactly how omega-3s might inhibit breast cancer isn't yet well understood.

Fishing for Cancer Prevention

Because research is still inconclusive, the American Cancer Society does not make any recommendations for omega-3 intake at this time. The Stanford Cancer Center, along with other experts, recommends including foods high in omega-3 fatty acids as a regular part of your diet. Specifically, it suggests aiming for three to four servings of cold-water fish—salmon, mackerel, sardines, herring, halibut, striped bass, tuna, or lake trout—every week, and eating more flaxseed oil, soybeans, and kidney, great northern, and navy beans.



How They Help: **Allergies & Asthma**

In Japan, most children are heavily exposed to secondhand smoke and live near urban areas where the air quality is low. Yet Japanese children have a rate of asthma that is a mere 0.7 percent compared to a worldwide average of roughly 5 percent.

Why? Some say fish is the reason. In Japan, the omega-3: omega-6 ratio in the typical diet is about four to one—many times better than here in the United States. What's more, several studies confirm that consuming high amounts of oily fish, which are rich in omega-3 acids, may protect against childhood asthma and improve lung function. In fact, researchers have found that children who eat fish more than once a week have one-third the risk of developing asthma compared with children who eat no fish. Other studies find that adults with asthma who regularly eat oily fish have better lung function, less wheezing and breathlessness, and fewer episodes of waking up with chest tightness.

Additionally, when 29 children with bronchial asthma received either fish-oil capsules or placebos, those receiving the fish oil had fewer asthma symptoms and responded better to medications such as albuterol (Proventil and Ventolin) than those who got the placebos. Similar results have been found in adults. How does fish oil help? A recent study of people with allergic asthma who took daily fish-oil supplements for a month found that participants had reduced levels of leukotrienes, the nasty molecules that are to blame, in part, for the increased mucus production, airway constriction, and inflammation of asthma.

Not surprisingly, the same anti-inflammatory properties that make omega-3 fatty acids effective against asthma can help fend off the runny, stuffy nose of allergies. What's more, omega-3s help maintain the integrity of cell walls, and strong cell membranes help keep out irritants and allergens that can trigger unpleasant inflammatory reactions.

Eating for Better Breathing

Since inflammation is your airway's worst enemy and omega-6 fatty acids contribute to it, experts recommend eating limited amounts of omega-6-rich foods such as meat, eggs, dairy products, margarine, and vegetable oils. Animal products can be so inflammatory that in one long-term trial, in which people were put on a vegan diet that eliminated all animal foods, 92 percent of the 25 asthma sufferers improved significantly after a year. But experts agree that you don't have to go to such extremes to reap easy-breathing rewards. Simply replace some foods rich in omega-6s (like meat and corn oil) with omega-3-rich foods (like fish and olive oil) to get the relief you crave.



How They Help: **Women's Health**

Most women in their reproductive years recognize the mild cramps or slight twinge in the lower back as annoying but harmless side effects of menstruation. Some women, however, experience more trouble, either before or during their periods, in the form of severe cramps, nausea, bloating, irritability, breast tenderness, headache, and constipation.

Omega-3s are one way to prevent or lessen these symptoms. The anti-inflammatory fatty acids lower levels of prostaglandins, chemicals known to increase cramps and menstrual discomfort. Population studies show that women who do not get enough omega-3s often have increased menstrual difficulties. In a Danish study that included 181 women, those who ate a lot of fish had milder menstrual cramps than the women who ate very little. You can get your fill by eating more fish, using 1 tablespoon of flaxseed oil daily, or taking omega-3 supplements.

Experts recommend that women with endometriosis, a condition that causes extremely painful periods, supplement their diet with omega-3s to lower the levels of prostaglandins and control inflammation.

What's good for Mom is good for Baby, and that seems especially true in the case of omega-3 fatty acids. Infants born to mothers who had high blood levels of the omega-3 fatty acid DHA at delivery had advanced attention spans well past their first birthday, according to a study of 70 mothers and infants. During their first six months, these babies were two months ahead, in terms of attention span, of babies whose mothers had lower DHA levels. The brain accumulates large amounts of DHA during the first two years of life, and it's known to be important for brain development.

For pregnant women, the dilemma is how to get the omega-3s they need without the toxins they need to avoid. The FDA recommends

eating up to 12 ounces (two to three average meals) a week of a variety of fish and shellfish that are low in mercury, such as salmon, pollock, and shrimp. Other experts recommend that pregnant women include omega-3-fortified eggs in their diet; one to two eggs a day can help provide the recommended 250 mg of DHA pregnant women need. Because of its effect on hormones, pregnant or lactating women should not eat lots of flaxseed.

THE OMEGA-3S WOMEN NEED

Medical experts recognize the special role omega-3 fatty acids play during the menstrual cycle and pregnancy. The following are their guidelines for optimum reproductive health.

IF YOU ...

THEN EAT ...

Are a healthy woman, with normal, sometimes crampy periods

A variety of fish (preferably fatty) at least twice a week. Include other omega-3 fatty acid-rich foods such as walnuts, flaxseed products, and beans.

Have painful periods or endometriosis

1 tablespoon (14 grams) of flaxseed oil in the morning (can mix with food).

Are pregnant

Two to three fish meals of a variety of different fish each week. Include omega-3-fortified eggs in your diet.



How They Help: Digestive Disorders

When taken over the long term, omega-3 fatty acids may be helpful against inflammatory bowel disease (IBD). The two most common types of IBD are ulcerative colitis and Crohn's disease. Ulcerative colitis causes sores on the lining of the colon and rectum. Crohn's disease is more extensive—sometimes affecting the stomach, intestines, esophagus, and mouth—and these tissues can become much more deeply inflamed. Symptoms include diarrhea and abdominal pain. Others experience what's called spastic colon (irritable bowel syndrome, or IBS)—alternating bouts of diarrhea and constipation, as well as abdominal pain, gas, cramps, bloating, gas, and nausea.

A study in the *New England Journal of Medicine* reported that people with ulcerative colitis who took fish oil were able to reduce their doses of prednisone (a prescription steroid) compared to those taking a placebo. Fish oil seems particularly helpful in the case of Crohn's. One Italian study found that fish oil reduced the frequency of intestinal attacks in people with the disease. In a separate year-long study, researchers found that 69 percent of Crohn's sufferers who took fish-oil supplements stayed symptom-free, compared with just 28 percent of those who didn't.

Better Digestion With Omega-3s

Experts suggest one tablespoon of flaxseed oil (take it straight or mix it into salad dressing or cereal—just don't heat it) or 1,500 to 3,000 milligrams of fish oil capsules daily. If you're taking fish oil, to prevent digestive upset (exactly what you're hoping to avoid), break up the dosage and take it throughout the day (one 1,000 milligram capsule three times a day).

Buying and Using Supplements

Provided they eat fish twice a week, healthy people generally have no need to take fish-oil supplements to get healthful doses of omega-3 fatty acids. But if you have an existing health condition that omega-3s can help, you'll likely need to take supplements to get therapeutic amounts. Doctors who recommend fish-oil supplements usually advise people to take anywhere from 3,000 to 5,000 milligrams daily.

What to Buy

Fish oil is available in health-food stores as softgel capsules. Less commonly, it's also sold as a liquid. Look for a brand with the USP (U.S. Pharmacopeia) label, which ensures that a product meets standards for strength and purity. The two most potent forms of omega-3s, which you'll find in most fish-oil supplements, are eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). Look for a brand that contains both.

Don't try to save money by buying fish-oil supplements in bulk, because they can go rancid very quickly. Always store fish-oil supplements in the refrigerator to maximize their shelf life. Also, don't use cod-liver oil as a replacement for omega-3 supplements. It's very high in vitamins A and D, which can be toxic in large amounts.

Are There Side Effects?

Side effects—mainly belching, flatulence, diarrhea, or a slightly fishy body odor—are relatively common. Dividing the dose into two or three smaller doses and taking them throughout the day can reduce these

effects. You can also try freezing the pills before you take them, and taking them with meals. In some cases, just switching brands will minimize the problem.

Large amounts of fish oil can interfere with blood clotting, so doctors recommend that you don't take more than 6,000 milligrams a day. And get a doctor's advice before taking the supplements if you are taking a blood thinner, such as aspirin, coumadin, or heparin. Fish-oil supplements are off limits if you have a bleeding disorder, uncontrolled high blood pressure, or an allergy to any kind of fish. People with high fasting triglycerides should be careful if they also have high LDL (bad) cholesterol: In some people, therapeutic doses of fish oils can increase LDL.

Another Stellar Source of Omega-3s

Not a fan of fish-oil capsules? Consider flaxseed oil instead. You can purchase flaxseed-oil capsules, but they are much more expensive than the oil itself. More than a dozen capsules are needed to equal 1 tablespoon of the oil. But the capsules may be a convenient alternative to the oil when you're traveling.

Flaxseed oil has a nutty, buttery taste that many people enjoy. Therapeutic amounts range from 1 teaspoon to 1 tablespoon once or twice a day. You can add it to salad dressings or sprinkle it on foods; a tablespoon contains just over 100 calories. But do not cook with it, because heat breaks down its healing nutrients.

Flaxseed oil should be taken with food, which enhances absorption by the body. Don't waste money on "cold-pressed" oil—it's no purer or more healthful than other oils. Flaxseed oil spoils fast, so always check the expiration date, and keep it refrigerated. Don't use oil that has a strong or pungent odor. Flaxseed oil is also called linseed oil—but never ingest the industrial varieties of linseed oil sold at hardware stores; they may contain toxic additives.

Amazing Healing Recipes

It's easy to get all the omega-3s you need to help keep you healthy, soothe your skin and joints, ease allergy symptoms, protect your heart, and so much more. Each of the recipes that follow provides a healthy dose of these healing nutrients in every bite—and they taste delicious. Add them to your menu as often as possible. Remember, experts recommend eating fish rich in omega-3s at least twice a week. Flax is another super source of omega-3s, so bake up a batch of Apple-Flaxseed Muffins as a regular treat. Tofu and walnuts contain more modest but still useful amounts of omega-3s—and nuts even help lower high cholesterol. When you indulge in nutty recipes like Walnut Shortbread, you're doing your heart good. Enjoy!

Open-Faced Sardine, Watercress, and Carrot Sandwich

SERVES 4

- 1 carrot, grated
- 2 cups watercress, roughly chopped
- 2 tablespoons chopped fresh chives
- 5 ounces reduced-fat cream cheese
- Ground pepper
- 8 thick slices rye bread
- 2 cans (7 ounces each) sardines packed in olive oil, drained
- 1 small red onion, thinly sliced
- Garnish: Several whole fresh chives

1. Mix the grated carrot, watercress, and chives into the cream cheese. Season to taste with pepper.
2. Spread the cheese mixture evenly over one side of each slice of rye bread. Halve the sardines lengthwise, then arrange them, skin side up, on top of the cheese.
3. Arrange the red onion slices over the sardines and top with a few long pieces of chives. Sprinkle with pepper and serve.

Per serving: calories 453, fat 20 g, saturated fat 7 g, cholesterol 147 mg, sodium 1021 mg, fiber 5 g, protein 31 g

Seared Tuna and Bean Salad

SERVES 4

1 piece (14 ounces) tuna steak, about 2 inches thick
2 tablespoons extra-virgin olive oil
1 tablespoon lemon juice, or to taste
1 garlic clove, crushed
1 tablespoon Dijon mustard
1 can (15 ounces) cannellini beans, drained and rinsed
1 small red onion, thinly sliced
2 red peppers, seeded and thinly sliced
1/2 cucumber
6 cups watercress
Salt and pepper
Lemon wedges to serve

1. Heat a ridged grill pan (preferably cast iron) coated with cooking spray over medium-high heat. Season the tuna steak on both sides with coarsely ground black pepper.
2. Cook the fish for 4 minutes on each side—the outside should be browned, and the center, light pink. Take care not to overcook. Remove from the pan and set aside.
3. Mix together the oil, lemon juice, garlic, and mustard in a salad bowl. Season with salt and pepper to taste and add more lemon juice, if needed. Add the cannellini beans, onion, and peppers. Cut the cucumber lengthwise into quarters, then cut the quarters across into 1/2-inch slices. Add to the bowl together with the watercress. Toss gently to mix.
4. Cut the tuna into slices about 1/2-inch thick. Arrange on top of the salad and drizzle the dressing over the fish. Serve with lemon wedges.

Per serving: calories 335, fat 12 g, saturated fat 1 g, cholesterol 37 mg, sodium 225 mg, fiber 7 g, protein 32 g

Piquant Pasta and Tuna Salad

SERVES 4

8 ounces pasta twists or spirals, such as cavatappi, fusilli, or rotini

2 tablespoons olive oil

1 onion, chopped

1 garlic clove, chopped

2 zucchini, thinly sliced

2 teaspoons sugar

2 tablespoons commercially prepared red or green pesto sauce

1 tablespoon white or red wine vinegar

1 tablespoon capers

6 tomatoes, halved and cut into thin wedges

1 can (7 ounces) water-packed solid white tuna, drained and roughly flaked

6 black olives, pitted and halved

Garnish: Fresh flat-leaf parsley

1. Cook the pasta in boiling water 10-12 minutes, or according to package instructions, until al dente. Drain well, rinse with cold water, and drain again.
2. While the pasta is cooking, heat 1 tablespoon of the oil in a saucepan. Add the onion and garlic, and sauté for 3 minutes, stirring often. Add the remaining oil and the zucchini and cook, stirring occasionally, for 3 minutes.
3. Add the sugar, pesto, vinegar, and capers to the onion and zucchini. Heat for a few seconds, stirring until the ingredients have combined to form a dressing. Stir in the tomatoes, then transfer the mixture to a large mixing bowl and set aside to cool.
4. Add the drained pasta to the bowl, then gently mix in the tuna fish and olives. Divide among 4 plates or transfer to a large serving bowl. Serve garnished with flat-leaf parsley leaves, if desired.

Per serving: calories 435, fat 12 g, saturated fat 1 g, cholesterol 13 mg, sodium 400 mg, fiber 6 g, protein 22 g

Salmon With Tarragon Mayonnaise

SERVES 4

4 (4 ounce) salmon steaks or fillets

1/2 cup dry white wine

1 to 2 bay leaves

Strip of pared lemon zest

Tarragon Mayonnaise

4 tablespoons low-fat mayonnaise

1/2 cup plain low-fat yogurt

Finely grated zest of 1 lemon

2 tablespoons chopped fresh tarragon

Couscous

1 cup couscous

4 tomatoes, roughly chopped

3 scallions, chopped

2 cups watercress, roughly chopped

1 tablespoon olive oil

Juice of 1 lemon

Salt and pepper

1. Place the salmon in a deep-sided, nonstick skillet. Pour the wine over it; add the bay leaves, lemon zest, and seasoning to taste. Bring to a boil, then reduce the heat, cover, and poach the salmon until just cooked, about 5-6 minutes.
2. Meanwhile, stir together the mayonnaise, yogurt, lemon zest, and tarragon. Season lightly with salt and pepper and spoon the mixture into a serving bowl.
3. When the fish is cooked, drain off most of the cooking liquid into a measuring cup, and add enough boiling water to make 1 1/2 cups. Cover the pan with a lid to keep the salmon warm, off the heat.
4. Pour the diluted fish broth over the couscous in a bowl and leave 3-4 minutes. Fluff up the couscous with a fork; stir in the tomatoes, scallions, and watercress. Drizzle with olive oil and lemon juice, and stir. Season lightly with salt and pepper.
5. Serve the warm salmon with the couscous salad and the tarragon mayonnaise.

Per serving: calories 463, fat 15 g, saturated fat 3 g, cholesterol 73 mg, sodium 247 mg, fiber 4 g, protein 33 g

Foil-Baked Salmon With Lemon and Dill

SERVES 4

- 4 salmon fillets (6 ounces each)
- 1/2 teaspoon salt
- 1/8 teaspoon pepper
- 1/4 cup finely chopped scallion
- 1/4 cup finely chopped fresh dill or 2 tablespoons dried dill
- 8 thin slices lemon
- 1/4 cup water, fish bouillon, or chicken broth

1. Place a baking sheet on the middle rack in the oven and preheat the oven to 400°F.
2. Tear off 8 sheets of aluminum foil, each 12 x 12 inches. Using double layers of foil, place a salmon fillet in the center of each foil square. Sprinkle evenly with salt and pepper. Combine the scallion and dill in a small cup. Sprinkle evenly over the fillets. Top with lemon slices. Drizzle each fillet with 1 tablespoon of the water, bouillon, or broth.
3. Seal each packet by bringing two opposite sides of the foil up and over the fish. Fold the edges over twice, then fold the side edges twice. Place the packets on the preheated baking sheet.
4. Bake 10-15 minutes, depending on the thickness of the fillets. Before serving, partially open the packet to check that the center of the fish is cooked through.
5. To serve, place each packet on a dinner plate and allow diners to open their own packets. Or transfer the contents of the packets to the plates and serve at once.

Per serving: calories 192, fat 6 g, saturated fat 1 g, cholesterol 183 mg, sodium 399 mg, fiber 1 g, protein 32 g

Mackerel With Tomatoes, Garlic, and Herbs

SERVES 4

- 1 1/4 pounds mackerel fillets
- 1/4 teaspoon salt
- 3 ripe plum tomatoes, seeded and coarsely chopped
- 2 teaspoons finely chopped garlic
- 1 tablespoon fresh lemon juice
- 1 tablespoon chopped fresh rosemary leaves or 1 teaspoon dried
- 1 tablespoon chopped fresh thyme leaves or 1 teaspoon dried

1. Preheat the oven to 425°F. Place fish in a glass or ceramic baking dish and sprinkle with salt. Top with the tomatoes and garlic. Sprinkle with the lemon juice, rosemary, and thyme.
2. Bake 8-12 minutes, depending on the thickness of the fillets, or until the fish is opaque in the center and flakes easily.

Per serving: calories 252, fat 12 g, saturated fat 3 g, cholesterol 68 mg, sodium 267 mg, fiber 1 g, protein 30 g

Sweet-and-Sour Tofu With Vegetables

SERVES 4

- 2 tablespoons soy sauce
- 2 tablespoons fresh lime juice (1 large lime)
- 1/4 cup hot water
- 2 teaspoons sugar
- 4 scallions, thinly sliced (1/2 cup)
- 1/2 pound Napa cabbage, coarsely chopped (half a head, 4 cups chopped)
- 1 medium zucchini, trimmed, halved lengthwise, and sliced crosswise 1/4 inch thick (1 1/2 cups)
- 1 sweet red pepper, cored, seeded, and diced (1 cup)
- 1 can (16 ounces) pineapple cubes in juice, drained
- 12 ounces firm tofu, cut into 3/4-inch squares
- 1 tablespoon finely chopped fresh ginger
- 1/4 teaspoon salt
- 1/8 teaspoon ground red pepper (cayenne)

1. In a large saucepan, combine the soy sauce, lime juice, hot water, and sugar. Bring to a boil. Add scallions, cabbage, zucchini, and red pepper. Simmer, covered, until the vegetables are almost tender, about 4 minutes.

2. Add the pineapple, tofu, ginger, salt, and cayenne pepper. Cover and simmer, gently stirring from time to time, until heated through, about 3 minutes. Serve warm or at room temperature.

Per serving: calories 164, fat 4 g, saturated fat 1 g, cholesterol 0 mg, sodium 681 mg, fiber 5 g, protein 11 g

Walnut Shortbread

SERVES 8

- 2/3 cup walnuts
- 3/4 cup all-purpose flour
- 1/2 cup whole wheat flour
- 1/2 cup confectioners' sugar
- 1/4 teaspoon salt
- 1/4 cup walnut oil
- 1/4 cup light olive oil
- 1 1/2 teaspoons grated lemon zest
- 1 teaspoon vanilla extract

1. Preheat the oven to 325°F. Toast the walnuts until crisp and fragrant, about 7 minutes. Leave the oven on. Cool the walnuts, then transfer to a food processor with the all-purpose flour and process until the nuts are finely ground.
2. Transfer the flour-walnut mixture to a large bowl. Stir in the whole wheat flour, confectioners' sugar, and salt. Add the walnut oil, olive oil, lemon zest, and vanilla and stir until well combined.
3. Press the dough onto the bottom of a 9-inch tart pan with a removable bottom. With the tines of a fork, prick the dough. With a sharp knife, score the dough into 16 wedges, cutting almost, but not quite through, to the bottom.
4. Bake until crisp and light golden, about 30 minutes. Check the shortbread after 20 minutes; if it is overbrowning, decrease the oven temperature to 300°F. Remove from the oven and, while the shortbread is still warm, cut the wedges through to the bottom. Cool in the pan on a wire rack.

Per serving (2 wedges): calories 273, fat 19 g, saturated fat 2 g, cholesterol 0 mg, sodium 73 mg, fiber 1.7 g, protein 3 g

Apple-Flaxseed Muffins

MAKES 12 MUFFINS

- 1 cup all-purpose flour
- 2/3 cup ground flaxseeds
- 3/4 cup firmly packed brown sugar
- 2 packets (about 1.5 ounces each) apple-cinnamon instant oatmeal
- 2 tablespoons margarine
- 1 teaspoon baking soda
- 1/2 teaspoon apple pie spice
- 1/4 teaspoon salt
- 1 1/4 cups unsweetened applesauce
- 1/4 cup canola oil
- 1/2 cup fat-free egg substitute
- 1 large apple, chopped

1. Preheat oven to 375°F. Line 12-cup muffin tin with paper liners. Combine 1/3 cup flour, 1/4 cup brown sugar, 1 packet oatmeal, and margarine in small bowl. Stir together with fingertips until margarine is incorporated into dry ingredients (mixture will be crumbly). Set aside.
2. Mix remaining flour, remaining oatmeal, flaxseeds, baking soda, apple pie spice, and salt in medium bowl and make well in center of mixture.
3. Stir together applesauce, oil, remaining brown sugar, and egg substitute in another medium bowl until brown sugar dissolves. Pour all at once into well. Stir just until combined (do not overmix; batter should be lumpy). Stir in apple.
4. Spoon batter into muffin cups. Sprinkle with reserved crumb topping. Bake until toothpick inserted in center comes out clean, about 20 minutes.

Per serving (1 muffin): calories 221, fat 7 g, saturated fat 1 g, cholesterol 0 mg, sodium 215 mg, fiber 2 g, protein 3 g