

Key Diet and Lifestyle Strategies for a Healthier Life

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STORY AT-A-GLANCE

- › Avoiding industrial seed oils, due to their high linoleic acid (LA) content, can go a long way toward safeguarding your health. Examples of cooking oils to avoid include canola, corn, rapeseed, cottonseed and soybean oil. As a general rule, anything over 10 grams of LA a day is likely to cause problems
- › For cooking, excellent substitutions include butter, tallow, ghee and organic coconut oil. Olive oil and avocado oil are problematic, as most are adulterated with cheap seed oils
- › If you're older, or eat a vegan or vegetarian diet, you're at high risk for vitamin B12 deficiency, which can have serious ramifications for your neurological function. Low B12 can also lead to elevated homocysteine, which raises your risk for dementia and cardiovascular problems
- › Carnosine, found in meat, helps reduce oxidative stress, especially as it relates to LA. Carnosine binds to harmful LA byproducts and helps your body excrete them. It's also important for building muscle, and acetyl carnitine is very beneficial for your memory
- › Oxalates, found in a wide variety of fruits, vegetables and nuts, can cause problems when they overaccumulate. Harmful effects include fibromyalgia, chronic inflammation and kidney stones

In the "Inspired" interview above, I discuss what I believe are some of the most important dietary and lifestyle strategies to safeguard your health, starting with avoiding seed oils (also commonly referred to as vegetable oils). Examples of cooking oils to avoid include canola, corn, rapeseed, cottonseed and soybean oil.

The reason for this recommendation is these kinds of industrial seed oils contain high amounts of a harmful omega-6 fat called linoleic acid (LA). LA is not dangerous in and of itself. The danger is really in the dosing. Most people consume up to 10 times more LA than they need, and the excessive amount is what causes the problem.

LA is referred to as an essential fat, which is true. You do need some. But it's present in nearly all foods – including whole foods but processed foods and condiments in particular – so there's virtually no way for you to become deficient.

In all likelihood, you're getting far more than your body needs, and in excess, LA creates free radicals that cause oxidative stress and damage your DNA, cell membranes and mitochondria. In this way, they contribute to chronic degenerative diseases of all kinds and premature aging.

How to Calculate Your LA Intake

The best way to ensure your LA intake is within the safe range is to use a nutritional calculator such as [Cronometer](#). Ideally, it is best to enter your food for the day before you actually eat it. The reason for this is quite simple: It's impossible to delete the food once you have already eaten it, but you can easily delete it from your menu if you find something pushes you over the ideal limit.

Once you've entered the food for the day, go to the "Lipid" section on the lower left side of the Cronometer app. To find out how much LA is in your diet for that day, just note how many grams of omega-6 is present. About 90% of the omega-6 you eat is LA. You can also move your cursor over the omega-6 field and the program will rank the order your largest contributors of LA, and tell you how much is in each food.

How to Reduce LA in Your Diet

As a general rule, anything over 10 grams of LA a day is likely to cause problems. The lower the better, but a reasonable goal for most people is to get your level below 5

grams per day. So, how do you cut seed oils out of your diet? Top culprits to minimize or eliminate include:

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| Vegetable oils or seed oils used in cooking | Processed foods, especially sauces, dressings and other condiments |
| All restaurant foods (not just fast food), as most will cook the food in seed oil, not butter or lard | Conventionally raised chicken and pork (both are high in LA due to being fed omega-6 grains ¹) |
| Most seeds and nuts (most, with the exception of macadamia nuts are loaded with LA) | Bread and other grain products |

Safer Alternatives

The next question then becomes, what do you replace these oils with? While I'm not a fan of avocado oil, fresh avocados are a great source of healthy fat as long as you limit them to one per day or less. Both olive oil and avocado oil, however, are problematic in that most of these oils are adulterated with cheap seed oils and/or have gone rancid.

It's very difficult to find really high-quality, fresh, unadulterated olive and avocado oil. For example, a 2020 Food Control report² found a vast majority of commercially available avocado oils labeled as "extra virgin" and "refined" were in fact adulterated and of poor quality; 82% were found to have gone rancid before their expiration date.³ The same goes for olive oil.

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years have been fed grains, which makes lard relatively high in LA.”

Still, even if you do find a good brand, I would limit the amount of olive oil or avocado oil to 1 tablespoon a day, as they can be high in LA. The total amount varies from brand to brand. In the case of olive oil, it could be as low as 3% or as high as 25%, depending on the type of olives used. Your best bet is to simply assume there's LA in there and limit the amount you use each day.

For cooking, excellent substitutions include butter, tallow, ghee and organic coconut oil. Lard used to be fine, but virtually all commercial hogs for the past 50 years have been fed grains, which makes lard relatively high in LA.

Butter contains retinol (the active form of vitamin A), vitamin D, E and K2, antioxidants, minerals and iodine, all of which are important for health.⁴ About 20% of butterfat also consists of short- and medium-chain fatty acids, which are used right away for quick energy and therefore don't contribute to fat levels in your blood. Therefore, a significant portion of the butter you consume is used immediately for energy – similar to a carbohydrate.

Chicken fat is lower on my list of cooking oils primarily because of the unhealthy diet chickens are fed. Conventional chickens are routinely fed genetically engineered grains loaded with glyphosate, so their fat will be negatively affected. The grains and corn are also loaded with LA, which will make the fat higher in LA. The same is true for pork, so when buying lard, make sure it's from organically raised animals.

The Importance of B12

Chemical-dependent farming has depleted soils of many important minerals. While many are frantically concerned about the looming fertilizer shortage, there are very effective and efficient ways to grow food without synthetic fertilizers. The switch-over,

however, does take time, so it's not an immediate solution. But, in the long-term, if farmers do the right thing, we could actually improve our food production.

Soil depletion is the reason why many of us need to take nutritional supplements. This is particularly true if you're eating a primarily plant-based diet. If you're a vegan or vegetarian, you're at high risk for vitamin B12 deficiency, which can have serious ramifications for your health, especially your neurological function. Low B12 can also lead to elevated homocysteine, which raises your risk for dementia and cardiovascular problems.

B12 is best taken either by injection or sublingually (under the tongue). You also want to make sure you're taking methylcobalamin, not cyanocobalamin (which is the most commonly found B12). When taken sublingually (either by tablet or spray), it goes straight into your bloodstream.

If you take it as an oral supplement, you have to rely on a glycoprotein produced in your stomach called intrinsic factor, which binds to the B12 and shuttles it into the intestine to the end of the small intestine where it's absorbed. As you get older, you lose the ability to produce intrinsic factor, making you more likely to suffer from B12 deficiency.

Carnosine, Carnitine, Magnesium and Copper

Another important nutrient is carnosine, a dipeptide (meaning it has two amino acids – beta alanine and histidine – and carnosine is found in meat. It's really important for reducing oxidative stress, especially as it relates to LA.

LA is highly susceptible to oxidation, and as the fat oxidizes, it breaks down into harmful subcomponents such as advanced lipid oxidation end products (ALEs) and oxidized LA metabolites (OXLAMs). These ALEs and OXLAMs are what cause the damage.

Carnosine binds to ALEs like a magnet and acts as a sort of sacrificial sink. It's a substitute target for this really profoundly damaging molecule. In this way, carnosine allows your body to excrete the ALEs from your body before they damage you.

However, taking a carnosine supplement is not a good idea. Not only is it expensive, but your body doesn't break it down well. If you do opt for a supplement, I recommend taking beta alanine, as this precursor will help raise your carnosine level. The best way is to eat animal products. You typically won't need a supplement if you eat sufficient amounts of animal proteins.

Carnitine is another important nutrient found in animal foods. It is especially useful for building muscle and facilitating fats into your mitochondria for energy production. A special type of carnitine called acetyl carnitine, taken in large amounts (1 to 2 grams a day), is very beneficial for your memory, and when used topically in your eyes, as an eye drop formulation, can help prevent cataracts.

Magnesium and copper deficiencies are also very common. Copper deficiency is particularly problematic as it contributes to high iron levels in your tissues, which is extremely potent oxidative stressor.

One of the best way to raise your copper level is to eat whole foods high in copper, acerola cherries being the classic example. The acerola cherry is high in tyrosinase, which is high in copper. Magnesium is also something that most people need these days.

The Danger of Oxalates

Vegans and vegetarians can also run into problems through oxalates. Oxalate, also known as oxalic acid, is found in a wide variety of fruits and vegetables. While not harmful in and of itself – your liver actually produces oxalate naturally⁵ – oxalates can cause problems when they overaccumulate.

Overaccumulation can occur either from overconsumption, or because your body either absorbs exceptionally high amounts of soluble oxalates or overproduces oxalate (primary hyperoxaluria⁶), or if you excrete excessive amounts of urinary calcium (hypercalciuria⁷).⁸

An overaccumulation of oxalate in your kidneys can lead to the development of calcium oxalate kidney stones, the most common type of kidney stones.⁹ If you are predisposed to kidney stones or have calcium oxalate stones already, your doctor may recommend avoiding foods rich in oxalates, such as dark green vegetables (especially spinach and Swiss chard), bran, rhubarb, beets and beet greens, chocolate, nuts (especially almonds, cashews and peanuts), nut milks and nut butters.^{10,11}

It can also be helpful to increase your calcium intake. While this may seem counterintuitive, seeing how calcium is the largest component of these stones, the answer to this paradox is that high dietary calcium actually blocks a chemical action that causes the formation of the stones in the first place.^{12,13}

Oxalates can affect other organs and conditions as well. Examples include fibromyalgia, vulvodynia (vulvar pain)¹⁴ and chronic inflammation.¹⁵ Oxalate also impairs the absorption of nonheme iron and can lower your iron stores,¹⁶ needed for red blood cell formation.

What's more, oxalates have the ability to chelate a number of toxic metals, including mercury and lead. Unfortunately, they do this by trapping the heavy metals in your tissues, which makes it difficult to eliminate them.¹⁷

The Importance of Strength Training

Exercise is, of course, a foundational aspect of good health, but the type of exercise you do can make a big difference. I've been an avid exerciser since 1968, and for the first 40 years of my life I focused almost exclusively on cardiovascular exercise such as running.

I completely ignored resistance training. Now, as I've gotten older, reality has driven home the importance of building and maintaining muscle. An estimated 9 out of 10 Americans are metabolically inflexible, insulin resistant or both, which contributes to obesity, diabetes, heart disease, cancer, inflammation and arthritis, just to name a few.

One of the ways you can improve your metabolic flexibility is to have more muscle mass, because muscle is the biggest sink in your body for glucose (sugar). So, when you eat a meal, the receptors in the cells of your muscles, called GLUT4 receptors, absorb blood sugar, thereby lowering the level of sugar in your blood. Once inside your muscle, the blood sugar is converted to glycogen and stored for when your muscle needs it.

So, if you have enough muscle mass, you have built-in protection against high blood sugar and insulin spikes that cause insulin resistance and diabetes. You also need to be mindful of your LA intake, because high levels of LA are more damaging to metabolic flexibility than high levels of carbs.

What's more, glutamine, a nonessential amino acid (meaning your body can generate it) is an important nutrient source for your immune cells, and the way your body generates glutamine is through muscle contraction. So, when you're contracting skeletal muscle, you're quite literally nourishing your immune system.

Are You Getting Enough Protein?

To build muscle, it's really important to get enough protein in your diet, ideally animal protein. There are 20 amino acids and nine of them are essential, which means you have to get them from your diet, as your body cannot make them from other substrates. In particular, skeletal muscle requires branched-chain amino acids – leucine, isoleucine and valine.

Must you eat animal protein? No, but one of the problems with avoiding animal protein is that it is quite difficult to obtain enough complete essential amino acids, especially branched chained amino acids to stimulate the mammalian target of rapamycin (mTOR), an important anabolic switch that is activated by about 3 grams of branched chain amino acids.

While there are plants that are high in protein, they're not identical or even equivalent to animal protein in most cases. Certain micronutrients found in animal foods you simply cannot get from plants. This includes vitamin B12, vitamin A (retinol not beta-carotene),

creatine, bioavailable iron, carnitine and carnosine, all of which are important for muscle growth and health in general.

To determine your personal protein requirement, Lyon recommends 1 gram of protein per pound of ideal body weight (the weight you would ideally be, not necessarily the weight you are now). Once you have that number, you can divide it by the number of meals you eat to get your per-meal quota which, for older adults should be around 30 to 50 grams per meal.

For reference, there's approximately 7 grams of protein in each ounce of steak, so a 5-ounce steak would give you 35 grams of high-quality protein. For children, the average amount per meal is around 5 to 10 grams, while young adults typically can get away with 20 grams per meal.

For most normal-weight adults, 30 grams per meal is really the minimum you need to stimulate muscle protein synthesis. If you have a robust strength training program, you may need to go even higher. To make sure you're getting enough protein in your meals, consider using [Cronometer](#). That way, you're not guessing.

Time-Restricted Eating Helps Optimize Your Health

Another core lifestyle strategy that will help optimize your health by making you metabolically flexible is time-restricted eating (TRE), a form of intermittent fasting. I believe TRE is best done 16 to 18 hours a day, every day, which is probably the sweet spot to optimize metabolic health if you are insulin resistant or metabolically inflexible.

This schedule will give you virtually all the same benefits as calorie restriction with respect to longevity benefits, but without any of the downsides, the primary one being compliance. However, if you are one of the one in 20 that is not insulin resistant than you don't want to decrease your eating time to less than 8 hours per day.

Most people eat more or less continuously throughout each day, which will keep mTOR continuously activated. When you're doing TRE, mTOR gets stimulated only once or twice a day, which is not a problem. mTOR is best activated twice a day in a pulsatile

fashion. When you activate it continuously as most people do, it can lead to an increase in risk in diseases like cancer.

I prefer to do my workout in a fasted state, followed by an infrared sauna and swim, and then break my fast afterward. This will reduce the carbohydrate load in the muscles as they're using up glucose during the workout. This, in turn, gives you the additional benefits of autophagy.

In addition, when muscle contracts, it releases myokines, which play a role in both lipolysis (the breakdown of fat) and glucose utilization, and when you train in a low-glycogen fasted state, myokine release is increased.

Sources and References

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