



FOR

Every Nutrient

BY THE TEAM AT NUTRIVORE

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Introduction

Today, almost all of us are nutrient deficient or insufficient, which means almost every one of us has dietary shortfalls of essential nutrients!

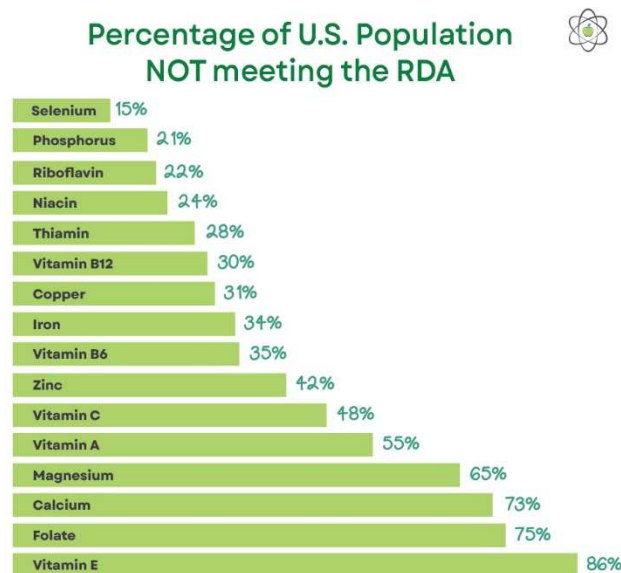
Many of us might think that nutrient deficiencies are mainly a problem in developing nations (whereas in Westernized countries like the United States, our problem is that we have too much food!), but this is a misconception. The typical Western Diet is definitely energy-rich, but it's also nutrient-poor: the types of food that many people eat each day are what are called *ultra-processed foods*. These are foods made mostly from ingredients extracted from foods—such as vegetable oils, corn starch, high-fructose corn syrup, and table sugar—and contain low amounts of the vitamins and minerals (and other health-promoting compounds) found in whole foods. Sadly, the result is a high prevalence of nutrient deficiency right in our own backyard.

Nearly all Americans routinely consume inadequate amounts of essential vitamins and minerals, even when you take supplements and fortified foods into account. In fact, micronutrient deficiencies are so common that some researchers speculate that at least 90% of us are deficient in at least one vital nutrient.

That's not even the worst of it!

About one third of Americans are at risk of developing a disease of malnutrition like anemia, scurvy, rickets, and night blindness.

And the risk is higher for certain demographics, including racial, sex, and socioeconomic disparities.



Source: United States Department of Agriculture (2009) *includes supplements

Deficiency vs Insufficiency?

Nutritional deficiency is defined as inadequate dietary intake of an essential nutrient resulting in a disease of malnutrition, such as iron-deficiency anemia (iron), scurvy (vitamin C), rickets (vitamin D), beriberi (vitamin B1), pellagra (vitamin B3), and night blindness (vitamin A).

Nutrient insufficiency (or inadequacy) is defined as a dietary shortfall of an essential nutrient that does not result in a disease of malnutrition but that doesn't mean that the nutrient insufficiency doesn't have a negative impact on our health!

How Come? Causes of Nutrient Deficiencies

Why do almost all of our diets fall short of meeting our body's nutritional needs? The complex reasons include: ultra-processed and hyperpalatable foods displacing more nutritionally valuable options; dietary guidelines historically focusing on nutritionally underwhelming foods; and, weight-loss and fad diets propelling diet myths, healthism, and restrictive eating patterns. Basically, it's harder than ever to choose healthy foods, and most people are confused about which foods those even are.

So What? Implications for Human Health

The biggest concern is that micronutrient deficiency is increasingly showing up as a major underlying driver of chronic disease, increasing risk for cardiovascular disease, type 2 diabetes, obesity, cancer, chronic kidney disease, asthma, allergies, neurodegenerative diseases like Alzheimer's disease, and infection. Not only is this eroding our health, but it is diminishing our quality of life as well.

What Can We Do About It?

Studies show that increasing our nutrient intake can improve our health in a whole host of ways! This is because each biological system within the human body requires a collection of nutrients to function properly. When we supply ample of those nutrients, we generally improve the health of the biological systems that require them.

However, studies also show that it's important to get these nutrients from the foods we eat, and that we don't get the same benefit when those nutrients come from multivitamin and multimineral supplements.

Enter **NUTRIVORE** – a simple yet revolutionary idea to obtain all the nutrients our body needs from the food we eat!

What is a Nutrivore?

Nutrivore is a revolutionary yet simple dietary concept: Get all the nutrients our bodies need from the foods we eat. That's it!

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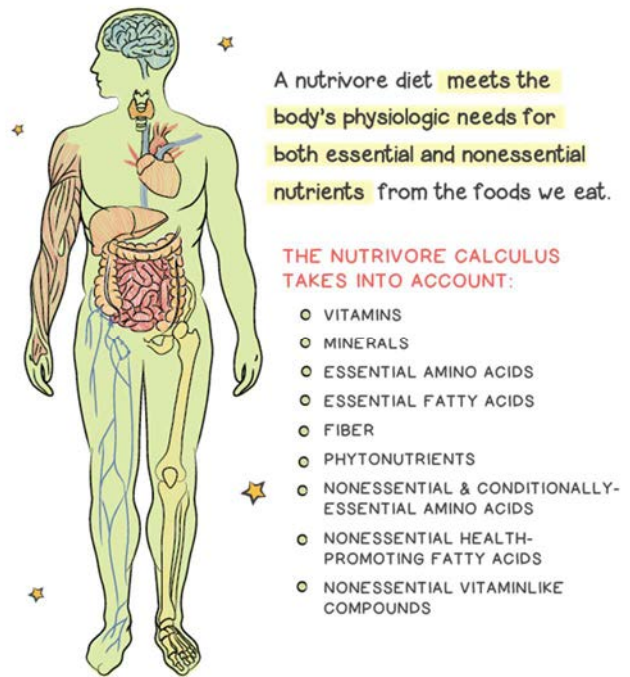
noun

1. A person who chooses foods to supply all the nutrients their body needs to thrive.
2. A diet predominantly comprised of nutrient-dense whole foods.
3. A radical yet simple idea: Get all the nutrients we need from the food we eat.

Nutrivore represents a completely new way to think about foods. Instead of labeling foods as "good" or "bad", we look at the overall quality of the whole diet.

The concept of Nutrivore is very simple: Choose foods such that the total of all the nutrients contained within those foods adds up throughout the day to meet or safely exceed our daily requirements for the full complement of essential and nonessential (but still very important) nutrients required to fully meet our body's physiologic needs, without consuming excess energy (i.e., while also staying within our daily caloric requirements).

The easiest way to do this is to have the foundation of the diet be a wide variety of nutrient-dense whole and minimally-processed foods, including selections from all of the nutritionally distinct food families. But, how do we identify the most nutrient-dense options? That's where the Nutrivore Score comes in!



What is the Nutrivore Score?



Simply put, the Nutrivore Score is an objective way to quantify the nutrient-density of foods!

Nutrient density refers to the concentration of nutrients (mainly vitamins and minerals, but also protein, fiber, phytonutrients, and other micronutrients) per calorie of food. High nutrient-density foods supply a wide range of nutrients (or alternatively, high levels of a specific, important nutrient) relative to the calories they contain.

"The Nutrivore Score is a measurement of the total amount of nutrients per calorie a food contains."

NUTRIVORE SCORE RANGES

Overall, the higher the Nutrivore Score, the more nutrient-dense the food.

More specifically:

- **SUPER** nutrient-dense foods have a Nutrivore Score higher than 800.
- **HIGH** nutrient-dense foods have a Nutrivore Score between 400 and 800.
- **MEDIUM** nutrient-dense foods have a Nutrivore Score between 150 and 400.
- **LOW** nutrient-dense foods have a Nutrivore Score less than 150.

Any food with a Nutrivore Score over 150 contributes more nutrients than calories to the diet but note that there is no cusp below which a food is "bad" and above which a food is "good". In fact, there are plenty of examples of foods with lower scores that are still incredibly valuable sources of nutrients. For example, cheese has an average Nutrivore Score of 140 but is also the most concentrated food source of calcium!

This example shows us that all foods lie on a spectrum of nutrient density and the Nutrivore Score is just one tool to help identify good options. Overall, we want to focus on whole and minimally-processed foods but it's also important to remember that we don't need to feel guilty about eating a food that isn't particularly nutrient-dense. Instead, let's focus on celebrating any choice we make that is nutrient focused.

Now that you understand the concept of Nutrivore and why it's so important for our overall health, let's put all this information into practice!

How to Use This Book

How the Book is Laid Out

This book is divided into 6 sections based on nutrient type:

- Carbohydrates
- Functional Fats
- Minerals
- Phytonutrients
- Proteins and Amino Acids
- Vitamins and Vitamin-Like Compounds

Each section begins with an overview page which provides a general description of the nutrient type, along with a table outlining minimum daily targets for specific nutrients in that category (Nutrient Target Table). The Nutrient Target Tables highlight ranges for adults aged 19 to 50. Recommendations for other age groups and pregnant and lactating women can be found in [Appendix A](#).

Nutrient Target Tables (RDA vs AI)

In the Nutrient Target Tables, the **Recommended Dietary (or Daily) Allowance (RDA)** listed represents the dietary intake level of that specific nutrient considered sufficient to meet the needs of 97.5% of healthy individuals. These RDAs are established by the Food and Nutrition Board of the Institute of Medicine and are calculated based on the estimated average requirement for each nutrient. Some specialists believe this is a gross underestimation of our true biological need, since these levels are generally determined based on symptoms of deficiency rather than amounts needed for optimal health and don't take into account that certain health conditions can increase the need for various nutrients. **That's why we say these values should be considered *minimum* daily targets.**



When there isn't sufficient information to develop an RDA, the Institute of Medicine has instead established a dietary intake level called **Adequate Intake (AI)** which is an amount believed to ensure nutritional adequacy for everyone in the demographic group.

Still, other nutrients have no established RDA or AI. For these nonessential nutrients the **Recommended Targets** are set based on Team Nutrivore's review of the scientific literature, established with the aim of providing improvements for overall health and reduction in chronic disease risk.

Upper Limits have been established for many of these nutrients and when available are listed in the tables. It's important to differentiate upper limit from toxicity. Nutrient toxicity is typically seen only in the context of supplementation and not via dietary intake of whole foods. In practice, this means we generally don't need to worry about the vitamin and mineral upper limits when we're consuming whole foods. However, it's always good practice to speak with your doctor or a nutritionist when it comes to matters of your health and any potential risk from under/over-consumption.

As an example, let's take a look at how to read vitamin nutrient target table.

RDA FOR
VITAMIN A

AI FOR
VITAMIN B5

UPPER LIMIT
FOR VITAMIN B6

Recommended Daily Allowance (RDA), Adequate Intake (AI), and Nutrient Targets for Vitamins and Vitamin-Like Compounds

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
Vit A (µg RE)	700		900		3000
Vit B1 (mg)	1.1		1.2		Not established
Vit B2 (mg)	1.1		1.3		Not established
Vit B3 (mg)	14		16		35 (from supplemental forms)
Vit B5 (mg)		5		5	Not established
Vit B6 (mg)	1.3		1.3		100
Vit B7 (µg)		30		30	Not established

Specific Nutrients Included in This Book

Within each section, there is detailed information on specific nutrients – 43 in total!

CARBOHYDRATES	FUNCTIONAL FATS	MINERALS
<ul style="list-style-type: none"> Fiber 	<ul style="list-style-type: none"> Alpha-Linolenic Acid (ALA) Conjugated Linoleic Acid (CLA) EPA & DHA Linoleic Acid Medium Chain Triglycerides (MCTs) Monounsaturated Fatty Acids (MUFA) 	<ul style="list-style-type: none"> Calcium Chromium Copper Iodine Iron Magnesium Manganese Phosphorus Potassium Selenium Zinc
PHYTONUTRIENTS	PROTEINS & AMINO ACIDS	VITAMINS
<ul style="list-style-type: none"> Betalains Carotenoids Glucosinolates Phytosterols Polyphenols Thiosulfonates 	<ul style="list-style-type: none"> Protein Ergothioneine Taurine 	<ul style="list-style-type: none"> Choline CoQ10 Myo-Inositol Vitamin A Vitamin B1 Vitamin B2 Vitamin B3

PHYTONUTRIENTS	PROTEINS & AMINO ACIDS	VITAMINS
		<ul style="list-style-type: none"> • Vitamin B5 • Vitamin B6 • Vitamin B7 • Vitamin B9 • Vitamin B12 • Vitamin C • Vitamin D • Vitamin E • Vitamin K

In addition to general information regarding the nutrient, what it is, and its role in the body, there are 2 tables of valuable information for each nutrient. This is probably what you are most excited to “sink your teeth” into!

To bring you these lists, we scoured our database of over 7,500 foods based on data available through USDA FoodData Central.

As opposed to the Nutrivore Score, which provides a measure of nutrients *per calorie*, the data in these tables represents nutrients *per serving*, the goal being to help us understand how much of a nutrient we are getting in the context of a meal (but don't worry we always include the Nutrivore Score of each food as well).

Serving Sizes

Serving sizes can be confusing as they vary depending on the type of food, but in general are probably much smaller than you think! If you're unsure what a serving size looks like for different types of food, [Appendix B](#) has you covered. In this section you will find a comprehensive guide outlining the serving sizes for many different foods, including visual approximations for each serving size.

Top Common Food Sources Table

The first table for each nutrient represents the ‘Top Common Food Sources’ of that nutrient. What does this mean exactly?

IN THIS TABLE YOU WILL FIND FOODS ORDERED BASED ON HOW MUCH OF THAT NUTRIENT YOU ARE GETTING PER SERVING.

This table is perfect for those of us who know we are deficient in a particular nutrient and want to choose foods that will give us the highest amount of that nutrient per serving.

For instance, let's say you have scurvy, so you really need to up your vitamin C intake. In this case you would flip to the Vitamin C page and look at the ‘Top Common Food Sources of Vitamin C’ table. The number one food listed is guavas, which provide an impressive 376.7 mg of vitamin C per serving (over 1.5 times higher than the second food on the list).

Top Common Food Sources of Vitamin C

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit C (mg/serving)	% DV
1	Guavas, Common	761	1 cup	376.7	419
2	Kiwi, Average	476	1 cup, sliced	228.6	254
3	Persimmons, Japanese	537	1 cup, diced	212.5	236
4	Currants, European Black	811	1 cup	202.7	225
5	Tomato Juice, Canned, w/o salt added	1568	1 cup	170.3	189
6	Longans	264	1 cup	159.6	177

Curious how that compares to dietary recommendations? You can find and compare to your specific vitamin C needs on the RDA Guideline table matching your age/gender/situation, either on the section overview page or in Appendix A.

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
Vit B9 (µg)	400		400		1000 (from supplemental forms)
Vit B12 (µg)	2.4		2.4		Not established
Vit C (mg)	75		90		2000
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	15		15		1000 (from supplemental forms)
Vit K (µg)		90		120	Not established

To make things even easier check out the final column of the 'Top Common Food Sources' table which shows you how the amount of vitamin C in guava compares to the reference daily intake (RDI). Without getting into too much detail, the RDI is essentially a subset of the RDA which is set forth by the Food and Drug Administration (FDA) and is used to calculate the percent daily value nutrition information that you can find on any food label. In this case 376.7 mg of vitamin C in one serving of guava is equivalent to 419% DV!

Top Common Food Sources of Vitamin C

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit C (mg/serving)	% DV
1	Guavas, Common	761	1 cup	376.7	419
2	Kiwi, Average	476	1 cup, sliced	228.6	254
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5	Tomato Juice, Canned, w/o salt added	1568	1 cup	170.3	189
6	Longans	264	1 cup	159.6	177

Wow! I didn't "C" that coming! And, if guava isn't something you'll likely eat or easily have access to, don't worry, there are 24 other foods on the list and we're sure you'll find something to suit your needs.

Top Nutrivore Score Common Foods Table

The second table for each nutrient represents the 'Top Nutrivore Score Common Foods that Are an Excellent Source' of that nutrient. What does this mean?

First, it will help to define what is meant by 'excellent source'.

In Nutrivore lingo:

- A **best source** food provides over 50% of the daily value of a nutrient per serving.
- An **excellent source** provides 20-50% of the daily value.
- A **good source** provides 10-20% of the daily value.

IN THIS TABLE WE HAVE RANKED FOODS WITH A MINIMUM OF 20% OF THE RECOMMENDED DAILY VALUE OF THE NUTRIENT BY NUTRIVORE SCORE (WHICH IS A MEASURE OF NUTRIENT DENSITY).

This table is perfect for those of us who are looking to follow a balanced diet – we want to ensure we are getting a particular nutrient, but we want to obtain it from the most nutrient dense foods possible.

Going back to that vitamin C example. Let's say it's cold season and you want to make sure you are getting lots of vitamin C in your diet, but you are looking to achieve that goal within the context of eating an overall balanced nutrient-dense diet. In that case, flip to the vitamin C page and locate the 'Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin C' table. The number one food on the list is watercress which has an impressive Nutrivore Score of 6929 (one of our top scores!). From the table you can also see that it provides 32% of the daily value for vitamin C, which makes it a great option for upping your vitamin C game, in addition to loading up on lots of other nutrients due to its high nutrient-density.

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin C

Rank	Food	Nutrivore Score	% DV
1	Watercress	6929	32
2	Chard, Average	6386	24
3	Turnip Greens	6370	73
4	Parsley	5491	22
5	Mustard Greens	5464	87
6	Daikon Radish	5149	28

For instance, watercress also makes Top 25 lists for carotenoids (58% RT), glucosinolates (108% RT), polyphenols (89% RT), vitamin A (12% DV), and vitamin K (142% DV)!! So not only are you helping meet your goal for vitamin C, but you are well on your way to meeting many other nutrient targets at the same time!

If you don't find this leafy green "in-cress-ive," no worries – any of the 25 foods on this list are great nutrient-dense options for obtaining vitamin C. The best part is that you have a variety of food types to choose from to suit your needs!

For those of you who are observant, you might notice that for some nutrients in the book fewer than 25 foods are included on this list. That's because there were limited foods which provided an excellent source of that nutrient. Sometimes, for more difficult to obtain nutrients, we instead opted to include a list of the 'Top Nutrient Dense Common Foods that are a Good Source' of that nutrient. In this case, you will find foods on the list that meet at least 10% or more of the daily value for that nutrient. And, sometimes even the 'Good' list has fewer than 25 options because there are limited foods that provide that nutrient in large quantities.

Yet Another Way to Use This Book

If you happen to love a particular food and just want to know if it made any of the lists in this book, you can look for the food in the (very extensive) index! For instance, let's say you love beans and eat them all the time. Now you're interested in finding out what nutrients you have been loading up on. Flip to the index and look up beans. Under the generic beans category are listed specific types of beans found within the book. Alternatively, if you're only interested in a particular type of bean, you can look it up by its specific name. That means that black beans can be found in the index under Beans, Black, Mature and under Black Beans, Mature. When you find your food of interest, flip to the pages listed in the index to find out what nutrients this food is rich in and to learn how that nutrient benefits your health!

Beans Adzuki, Mature 48, 68, 101, 102 Black, Mature 20, 54, 66, 68, 75, 76, 89, 90, 101, 102 Broad, Mature 19, 68, 102 Chickpeas, Mature 49, 101, 102 Cowpeas, Common (Blackeyed Peas), Mature 101 Fava, Mature 19, 68, 102 Garbanzo, Mature 49, 101, 102 Great Northern, Mature .. 20, 68, 85, 101, 102 Green 40, 85 Kidney, All Types, Mature 19, 101	A Adzuki Beans Mature 48, 68, 101, 102 Albacore (White) Tuna, Canned.. 27, 52, 55, 73, 93, 94, 107, 108 Almonds.. 29, 30, 33, 34, 39, 66, 75, 91, 99, 109, 110 Milk, Unsweetened. 29, 30, 109, 110
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How the Top 25 Common Food Lists Were Generated

Now that you know what's included in the book and how to use it, here's some background information on how we put together these lists:

- All foods included are raw versions of the food unless otherwise specified (e.g. canned).
- For some foods, where there was data for numerous varieties or types of that food, we created average entries so that a type of food would only occupy one spot on our lists. As an example, we created average entries for liver, crab, lettuce, pork, etc. However, if the average entry didn't make a list, but a specific type did – we defaulted to include that specific food entry. For instance, the average

lettuce entry, which includes data for butterhead, green leaf, iceberg, red leaf, and romaine lettuce, didn't make it into the Top 25 common foods for vitamin B9 (folate), but romaine (cos) did – so we included only that type of lettuce on this particular list. The rationale behind averaging foods was to ensure a greater variety of foods made the lists so that there are more types of food to choose from. (If you don't like liver, seeing 5 different types listed on a list isn't helpful, whereas one entry for liver can be easily ignored!).

- Even though we averaged food varieties or types, we kept different *forms* of the food separate. For instance, there is an average entry for fresh tuna, but canned tuna is included as a separate food to demonstrate that easy-to-find, cheaper and more convenient versions of a food are also nutrient-dense.
- We eliminated foods if deemed too difficult to obtain based on their widespread availability at "typical" grocery stores to ensure the lists were as practical as possible. For instance, we removed harder to find foods that are likely only available in specific geographical regions or foods only found via foraging (not everyone has time and/or the knowledge to forage).
- If the whole version of a food and the processed version made a list, in general we only included the whole-form. For instance, on some lists both almonds and almond butter made the Top 25, but we only included almonds. Our thought process here was that as a consumer if you see almonds are high in vitamin E, you will likely assume that almond butter, almond flour, chocolate covered almonds etc. would also have vitamin E. Again, the rationale here was to increase the variety of foods on a list. That being said, we did list oils separately since they are used very differently from the whole food version of the food and to highlight that cooking oils can also provide nutrients. That is why both sesame oil and sesame seeds and peanuts and peanut oil are on the Top Common Food Sources of MUFA list.
- For some foods, there were separate entries for different components of the food. For instance, there were entries for whole chicken, chicken dark meat, and chicken white meat and there were entries for egg yolk, egg white, and whole eggs. If a component and the whole food form of the food made the list, we defaulted to only include the whole version even if the component had a higher amount of the nutrient. For instance, when looking at choline egg yolk would be the top source with 149 %DV per serving, with whole eggs coming in at spot #3 containing 53 %DV per serving. However, we only included whole eggs on the list at spot #2. Again, this was to allow for more types of food to make a list and to default to the most convenient form of the food. In the case of chicken or turkey if both white and whole or dark and whole chicken made the list, we only included the whole form.
- When calculating Nutrivore Scores, information for bonus nutrients (not found in the USDA) was obtained by the Nutrivore team by scouring other databases and journal articles. In some cases the data available was limited. For the purposes of calculating Nutrivore Scores, we sometimes had to extrapolate data. For instance, if we only had information for beef, we used that same data for other game meats such as deer or bison, or we sometimes used chicken data for turkey, or salmon data for other types of oily fish. You get the idea. When generating the Top 25 lists we intentionally omitted foods with extrapolated data. As a result, some of the foods that made the Top 25 may only have a small amount of the nutrient of interest per serving, but it highlights those foods that are great sources, while providing options for alternative sources. However, if you see chicken on a list but you prefer another type of poultry, chances are you are still getting some of that nutrient but we just didn't have specific data to include.
- Even if they made a list, we did not include quality of life foods that should be consumed in moderation, such as processed meats like bacon, ice cream, and butter to name a few. The rationale being that we shouldn't load up on those foods even if they are high in a particular nutrient.

Finally, these lists are not comprehensive to every possible food but are based on data available in the USDA FoodData Central Legacy Foods database (which includes over 7,500 foods!)

Take Home Messages

Compiling these lists was illuminating even to nutrient nerds like us. There were so many surprises – oranges did not make the Top 25 list for vitamin C and bananas didn't make the potassium list either (what?), and who knew soybeans were *so* nutritious!! That's what happens when we look at the data from an unbiased lens – the numbers don't lie!

But the most amazing result in all of this was seeing how **across all of the nutrient lists, all food categories were represented at least once**. Yes, of course, it's true that certain food groups are more highly represented (more on that later), BUT how amazing is it that all types of foods show up and we mean everything, including dairy (cheese, milk, yogurt), various oils, sweeteners (molasses), and whole grains (durum wheat, whole-grain flour, oats, teff). Even chocolate made some of the lists (but you'll have to read the book to find out which ones, we're not giving away any spoilers!). In other words, some of the foods we mistakenly feel guilty eating may be filling a needed nutrient gap.

What else did we learn when compiling this e-book? Here's a few other points of interest from taking a high-level look at all the lists in the book.

Variety matters! We've said it before, and we'll say it again! Studies show that the more different foods we eat (preferably whole or minimally processed), the better! This is called dietary diversity, and it's key to getting all the nutrients we need in synergistic quantities for optimal health. If you find an averaged value on the list, that indicates that all types/varieties of that food provide the nutrient of interest and you can be confident choosing any "type" will be beneficial. All this is to say, even if we have a favorite food we like to eat all the time, choosing to mix up the variety of that food in our day to day lives will help us achieve a more nutrient balanced diet.

Another thing you might notice – **convenience foods make the list!** In fact, sometimes processed versions of the food fair even better than their fresh counterparts. For instance, canned tomato juice made more lists than red ripe tomatoes! Many canned foods, juices and convenience foods made the book including yeast extract spread (more commonly known as Vegemite or Marmite), canned tuna and canned sardines. So, even when we're short on time, we have great convenient nutrient-dense options to choose from!

Bottom line, **every time you choose a nutrient dense food you are taking a step in the right direction towards nutrient sufficiency and becoming a Nutrivore!**

That being said, there are definitely some stand-out foods...

Nutrient Super Stars

Our inner nerds felt compelled to tabulate a group (an honor roll as it were) of foods which made it on the **greatest number of nutrient "Top 25" lists**. Basically, we went through the book and counted every time a food made a list for one of the nutrients (no, we did not count the food twice if it made *both* the 'Top Food Source' *and* 'Top Nutrivore Score Food' lists). Then we compiled all foods that were represented on 8 or more nutrient lists (out of 43 nutrients represented in the book) to bring you a list of 'Nutrient Super Stars'.

Overall, **58 foods made the cut broadly categorized into 5 groups** and I'm sure it will come as no surprise which food groups were most highly represented. Nutrient super star foods included seafood (23 foods),

plant foods (15 foods), meat & dairy - including organ meat, red meat, poultry, and eggs (12 foods), nuts and seeds (6 foods), and an "other" category (2 foods). The goal here was to create a practical list of super star foods and we think we've done just that!

Topping off the nutrient super stars were 2 foods which were represented on an impressive 22 different nutrient lists! Intrigued? The results may surprise you, but you'll need to keep reading to find out what these over-achieving foods are and to see the remaining 56 nutrient super stars! One of them is even related to chocolate!!

Including these nutrient super stars in our diet on a regular basis is a great first step to obtaining all the nutrients our body needs from the food we eat!

Final Thoughts

We all have a lot on our plate (pun intended!) so the main purpose of this book is to make life easier by helping us choose foods that fit our nutrient needs and help us create a balanced nutrient-dense diet.

We want to inspire people to take control of their own health journeys by arming them with the knowledge that no foods are off limits, and while some are certainly better than others, our choices can always be made with nutrient density in mind, given our circumstances and the dietary framework we identify with.

And with that, let the nerding out on nutrients begin

Carbohydrates



Carbohydrates (including sugar, starch and fiber) are a class of organic molecules with the basic structural components being sugar molecules, or saccharides, which have a general molecular formula of $C_m(H_2O)_n$. Their two main roles in supporting health are as an energy source and as fermentable substrate for the gut microbiome. Chemically, carbohydrates are classified based on the number of saccharides they contain: monosaccharides are made up of a single sugar molecule (glucose and fructose), disaccharides contain two sugar molecules (sucrose and lactose), oligosaccharides are medium-length chains of three to ten sugar molecules, and polysaccharides are long chains of sugar molecules that can be hundreds long.

From a dietary perspective carbohydrates can be classified into 3 main categories based on how they're digested and absorbed: sugars, starches, and fiber.

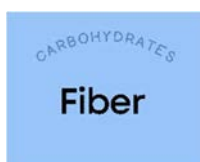
- **SUGARS:** Simple carbohydrates like glucose, fructose, and sucrose that are digested and absorbed quickly, having a rapid impact on blood sugar levels and insulin secretion (naturally found in fruit, dairy products and natural sweeteners like honey and cane sugar).
- **STARCHES:** Complex carbohydrates, polysaccharides composed primarily of glucose, which take longer to break down during digestion and have a more gradual impact on blood sugar levels (found in grains, legumes, and root vegetables such as potatoes, sweet potatoes, and cassava).
- **FIBER:** Complex carbohydrates, oligosaccharides and polysaccharides from plant cell walls that don't get fully broken down by our digestive enzymes and instead are fermented in our digestive tracts. Fiber can be further divided into a few major classes based on molecular structure, including cellulose, hemicellulose, pectin, lignin, chitin, chitosan, gums, glucans, mucilages, fructans and resistant starch. It can also be classified based on its solubility, viscosity and how readily it is fermented by our gut bacteria.

Recommended Daily Target for Fiber

Nutrient	19-50 Female**	19-50 Male**	Upper Limit
	Recommended Target (RT)	Recommended Target (RT)	
Fiber (g)	28 (14g/1000 kcal) 19-30 years 25 (14g/1000kcal) 31-50 years	34 (14g/1000 kcal) 19-30 years 31 (14g/1000kcal) 31-50 years	Not established

**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following carbohydrate:



Fiber

[Fiber](#) serves as substrate for the trillions of microbes that inhabit our digestive tracts, collectively referred to as the gut microbiome. Through their metabolism of fiber, these resident microbes benefit us in a whole host of ways, including aiding digestion, vitamin production, detoxification, providing resistance to pathogens, immune regulation, neurotransmitter regulation, regulation of gene expression, and more! In fact, every human cell is impacted by the activities of our gut microbes. A healthy gut microbial community is essential for our health, while an aberrant gut microbiome has been linked to conditions as wide-ranging as cancer, obesity, diabetes, cardiovascular disease, anxiety, depression, neurodegenerative diseases, autism, autoimmune disease, allergies, asthma, and more!



Fiber has other benefits, like regulating peristalsis of the intestines (the rhythmic motion of muscles around the intestines that pushes food through the digestive tract), stimulating the release of the suppression of the hunger hormone ghrelin (so we feel more full), and slowing the absorption of simple sugars into the bloodstream to regulate blood sugar levels and avoid the excess production of insulin.

Top Common Food Sources of Fiber

Rank	Food	Nutrivore Score	Serving Size (Raw)	Fiber (g/serving)	% DV
1	Passion-Fruit, Purple	261	1 cup	24.5	88
2	Pigeon Peas (Red Gram), Mature	211	1/2 cup	15.4	55
3	Kumquats	381	1 cup	14.6	52
4	Cocoa Powder, Unsweetened	1024	1 oz / 28 g	10.4	37
5	Tigernut	192	1 oz / 28 g	10.0	36
6	Chia Seeds, Dried	450	1 oz / 28 g	9.6	34
7	Kidney Beans, All Types, Mature	217	1/5 cup	9.2	33
8	Artichokes, (Globe or French)	771	1 cup	9.1	32
9	Guavas, Common	761	1 cup	8.9	32
10	Muscadine Grapes	644	1 cup	8.7	31
11	Peas, Green, Split, Mature	274	1/5 cup	8.7	31
12	Soybeans, Mature	326	1/2 cup	8.6	31
13	Raspberries	491	1 cup	8.0	29
14	Barley, Pearled	158	1/4 cup	7.8	28
15	Flaxseed	515	1 oz / 28 g	7.6	27
16	Blackberries	743	1 cup	7.6	27
17	Cassava	224	1 cup	7.6	27
18	Broad Beans (Fava Beans), Mature	442	1/5 cup	7.5	27
19	Figs, Dried	141	1/2 cup	7.3	26
20	Pomegranates	256	1 cup, arils	7.0	25
21	Mung Beans, Mature	249	1/5 cup	6.8	24
22	Lima Beans, Large, Mature	304	1/5 cup	6.8	24

23	Lupins, Mature	224	1/5 cup	6.8	24
24	Raisins, Dark, Seedless	106	1/2 cup	6.5	23
25	Parsnips	372	1 cup, sliced	6.5	23

Top Nutrivore Score Common Foods that Are an Excellent Source of Fiber

Rank	Food	Nutrivore Score	% DV
1	Cocoa Powder, Unsweetened	1024	37
2	Currants, European Black	811	23
3	Goji Berries, Dried	780	21
4	Artichokes, (Globe or French)	771	32
5	Guavas, Common	761	32
6	Blackberries	743	27
7	Muscadine Grapes	644	31
8	Persimmons, Japanese	537	22
9	Flaxseed	515	27
10	Raspberries	491	29
11	Lemons, w/o peel	477	21
12	Chia Seeds, Dried	450	34
13	Black Beans, Mature	446	22
14	Broad Beans (Fava Beans), Mature Seeds	442	27
15	Great Northern Beans, Mature	419	22
16	Kidney Beans, Red, Mature	413	20
17	Pinto Beans, Mature	390	22
18	Kumquats	381	52
19	Parsnips	372	23
20	Limes	344	21
21	Lotus Root	344	21
22	Quinces	336	20
23	Soybeans, Mature	326	31
24	Lima Beans, Large, Mature	304	24
25	Peas, Green, Split, Mature	274	31



FIBER COMES IN TWO DIFFERENT FORMS:

SOLUBLE FIBER

Forms a gel-like material in the gut which slows the movement of material through the digestive system.

Typically fermented by the bacteria in the colon, producing gases and physiologically active by-products (like short-chain fatty acids and vitamins).

INSOLUBLE FIBER

Speeds up the movement of material through the digestive system.

Produce gases and physiologically active by-products (like short-chain fatty acids and vitamins).

Insoluble fibers ferment slowly, therefore move through the colon and add bulk to the stool (good for regulating bowel movements and managing constipation)

Functional Fats

NUTRIENTS

Lipids, Fats & Fatty Acids

Dietary [fat](#) is a macronutrient, one of the three major classes of nutrients that we need in large quantities (the others being carbohydrates and protein). Fat is a concentrated source of energy in our foods—with 9 calories per gram, it's the most calorie-dense macronutrient, compared to the mere 4 calories per gram provided by carbohydrates and protein—as well as the main molecule our own bodies use for long term energy storage, but fats have much more extensive roles in our biology.

Fats are a type of lipid, which is broadly defined as a molecule that is insoluble in water but that dissolves in organic solvents like ether and chloroform. [Lipids encompass fats and oils, fatty acids, phospholipids,](#)

[and sterols like cholesterol.](#)

Lipids perform three primary biological functions within the body:

1. they serve as structural components of cell membranes,
2. they are energy storage molecules and some can be directly used for energy,
3. they function as important signaling molecules, including forming the backbone of autocrine (within a cell) and paracrine (between neighboring cells) signaling molecules as well steroid hormones and vitamin D.

The impact of dietary fat on our health is dependent on both the type of fat and how much of it we're eating.

Fats and oils are more technically called *triglycerides* (or triacylglycerol), which are composed of three fatty acids linked together (esterified) by a glycerol molecule. [Fatty acids are the building blocks of fats.](#) They are used not only for energy but also for many basic structures in the human body, such as the outer membrane of every single cell. There are many different fatty acids, each with different effects on, and roles in, human health.

[Each fatty acid consists of a bunch of hydrocarbons \(a carbon atom bonded with one to three hydrogen atoms, the number of which varies for different fats\) bonded together in a string, called the hydrocarbon chain, with a carboxyl group at one end, the molecular formula of which is COOH \(one carbon atom bound to two oxygen atoms and a hydrogen atom\).](#)

Fatty acids can be categorized based on the type of molecular bond between the carbons in the hydrocarbon chain (saturated, monounsaturated and polyunsaturated) and by the length of the hydrocarbon chain (short-chain, medium-chain and long-chain).

Recommended Daily Allowance (RDA), Adequate Intake (AI), and Nutrient Targets for Functional Fats

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
ALA (g)		1.1		1.6	Not established
*CLA (g)	0.7		0.7		Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		12		17	Not established
*MUFAs (g)	20		20		Not established
*MCTs (g)	6		6		Not established

*Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health and reduction of chronic disease risk.

**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following functional fats:



Alpha-Linolenic Acid

[Alpha-linolenic acid \(ALA\)](#) is the only truly essential omega-3 fatty acid. Like other omega-3 fats, it plays an important role in regulating inflammation, pain perception, and blood pressure. It's also major structural component of the phospholipid layer of cell membranes. Getting enough ALA helps maintain cardiovascular health, while also potentially protecting against cancer, pneumonia, and some forms of depression.

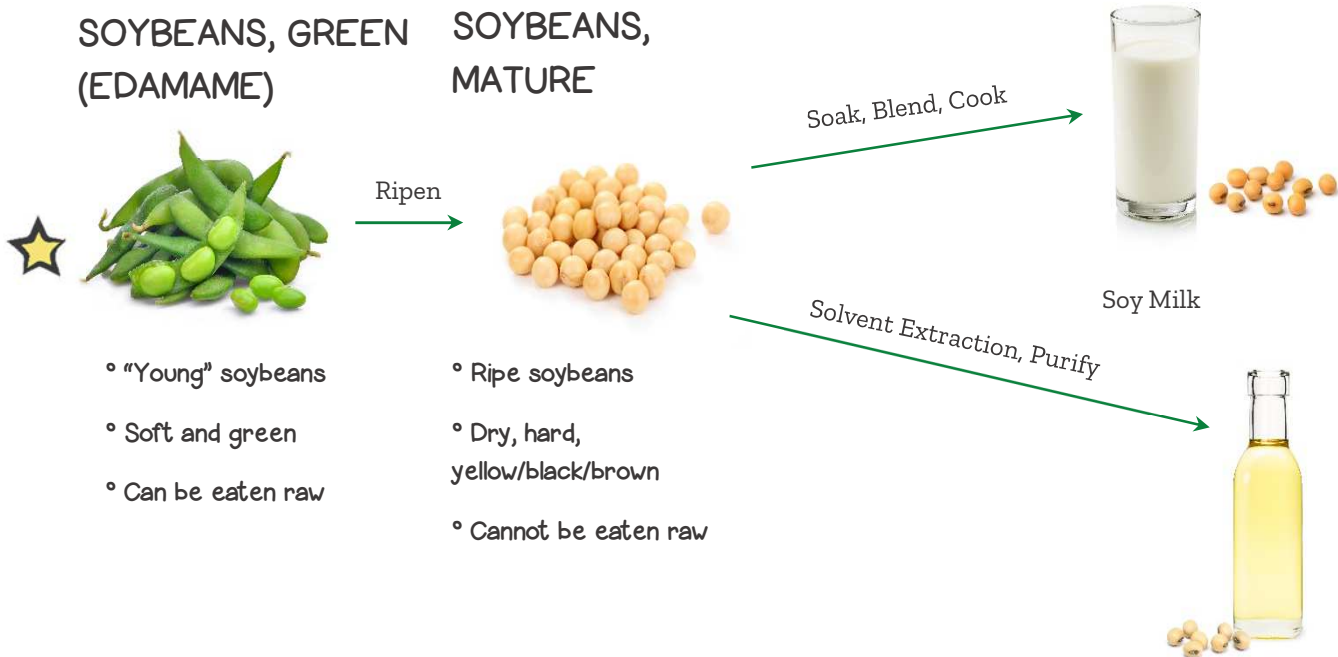


Top Common Food Sources of ALA

Rank	Food	Nutrivore Score	Serving Size (Raw)	ALA (g/serving)	% DV
1	Flaxseed Oil, Cold-Pressed	428	1 tbsp	7.3	454
2	Flaxseed	515	1 oz / 28 g	6.4	399
3	Chia Seeds, Dried	450	1 oz / 28 g	5.0	312
4	Hemp Seeds, Hulled	415	1 oz / 28 g	2.8	178
5	Walnuts	303	1 oz / 28 g	2.5	159
6	Canola Oil	176	1 tbsp	1.3	80
7	Soybeans, Mature	326	1/2 cup	1.2	77
8	Vegetable Oil (Soybean)	160	1 tbsp	1.0	60
9	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	0.6	36
10	Eel, Mixed Species	385	4 oz / 115 g	0.5	31
11	Soybeans, Green (Edamame)	359	1/2 cup	0.5	30
12	Soy Milk, Unsweetened, Plain	425	1 cup	0.4	25
13	Tofu, Average	288	1/4 cup	0.4	24
14	Pecans	221	1 oz / 28 g	0.3	17
15	Chinese Broccoli	2431	1 cup	0.2	15
16	Skipjack Tuna	645	4 oz / 115 g	0.2	15
17	Mustard Seed, Ground	1904	1 tbsp	0.2	15
18	Navy Beans, Mature	269	1/5 cup	0.2	14
19	Whitefish, Mixed Species	663	4 oz / 115 g	0.2	13
20	Kimchi (Cabbage)	1097	1 cup	0.2	13
21	Lamb, Average	263	3.5 oz / 100 g	0.2	13
22	Atlantic Salmon, Farmed	673	4 oz / 115 g	0.2	12
23	Kale	4233	2 cups	0.2	12
24	Guavas, Common	761	1 cup	0.2	12
25	Cow's Milk, Whole	202	1 cup	0.2	11

Top Nutrivore Score Common Foods that Are a Good Source of ALA

Rank	Food	Nutrivore Score	% DV
1	Kale	4233	12
2	Chinese Broccoli	2431	15
3	Mustard Seed, Ground	1904	15
4	Kimchi (Cabbage)	1097	13
5	Atlantic Mackerel	922	11
6	Guavas, Common	761	12
7	Trout, Mixed Species	710	11
8	Atlantic Salmon, Farmed	673	12
9	Whitefish, Mixed Species	663	13
10	Sardines, Canned in Oil, w/ bone	654	36
11	Skipjack Tuna	645	15
12	Flaxseed	515	399
13	Raspberries	491	10
14	Chia Seeds	450	312
15	Soy Milk, Unsweetened, Plain	425	25
16	Hemp Seeds, Hulled	415	178
17	Rabbit, Average	414	10
18	Eel, Mixed Species	385	31
19	Soybeans, Green (Edamame)	359	30
20	Soybeans, Mature	326	77
21	Walnuts	303	159
22	Tofu, Average	288	24
23	Navy Beans, Mature	269	14
24	Lamb, Average	263	13
25	Duck, Average	238	11



Conjugated Linoleic Acid

[Conjugated linoleic acid](#) (CLA) is an omega-6 fatty acid mostly found in meat and dairy products from grass-fed animals. Despite technically being a *trans* fat, CLA exhibits a range of beneficial health properties, including anti-cancer, anti-obesity, anti-diabetes, and anti-heart disease activities. It also promotes gut health and immune function.



Top Common Food Sources of CLA

Rank	Food	Nutrivore Score	Serving Size (Raw)	CLA (mg/serving)	% RT
1	Lamb, Average	263	3.5 oz / 100 g	110.9	16
2	Cheese, Hard, Average	130	1.5 oz / 40 g	109.6	16
3	Sour Cream, Cultured	82	1/4 cup	84.1	12
4	Beef, Average	293	3.5 oz / 100 g	76.9	11
5	Cheese, Soft, Average	141	1.5oz/40g/ ½ cup	70.4	10
6	Yogurt, Average	208	1 cup	62.0	9
7	Hemp Seeds, Hulled	415	1 oz / 28 g	57.3	8
8	Milk, Average	245	1 cup	39.6	6
9	Catfish, Average	432	4 oz / 115 g	24.2	3
10	Veal, Average	326	3.5 oz / 100 g	20.2	3
11	Liver, Average	4192	3.5 oz / 100 g	18.1	3
12	Kidney, Average	2558	3.5 oz / 100 g	16.5	2
13	Swordfish	557	4 oz / 115 g	15.0	2
14	Kefir, Low-Fat, Plain	296	1 cup	14.6	2
15	Chicken Egg, Whole	355	100 g / 2 large	12.0	2
16	Safflower Oil, Linoleic	88	1 tbsp	9.5	1
17	Turkey, Whole, Average	334	3.5 oz / 100 g	9.5	1
18	Chicken, Whole, Average	273	3.5 oz / 100 g	8.5	1
19	Canola Oil	176	1 tbsp	7.0	1
20	Giblets, Average	1319	3.5 oz / 100 g	6.8	1
21	Pork, Average	287	3.5 oz / 100 g	5.3	1
22	Vegetable Oil (Soybean)	160	1 tbsp	4.1	1
23	Trout, Mixed Species	710	4 oz / 115 g	3.8	1
24	Cloves, Ground	2209	1 tbsp	3.8	1
25	Salmon, Average	712	4 oz / 115 g	3.3	0.5

Top Nutrivore Score Common Foods that Are a Good Source of CLA

Rank	Food	Nutrivore Score	% RT
1	Beef, Average	293	11
2	Lamb, Average	263	16
3	Cow's Milk, Whole	202	12
4	Yogurt, Average	181	13
5	Cheese, Soft, Average	141	10
6	Cheese, Hard, Average	130	16
7	Sour Cream, Cultured	82	12

★ The top 4 plant sources of CLA:

HEMP SEEDS (HULLED)



SAFFLOWER OIL (SAFFLOWER SEEDS)



VEGETABLE OIL (SOYBEANS)



CANOLA OIL (CANOLA SEEDS)



EPA & DHA

[Eicosapentaenoic acid \(EPA\)](#) and [docosahexaenoic acid \(DHA\)](#) are long-chain omega-3 fats that play important roles in neurological health, immune function, eye health and vision, inflammation, pain signaling, gut health, fetal development, and some aspects of cardiovascular health (like triglyceride levels and blood clotting). They exert many of their effects by helping form chemical messengers called prostaglandins, thromboxanes, and leukotrienes. EPA and DHA also serve as a structural component of the cell membrane, influencing important properties such as membrane fluidity and permeability. Small amounts of them can be synthesized from a shorter-chain omega-3 fat, alpha-linolenic acid (ALA).



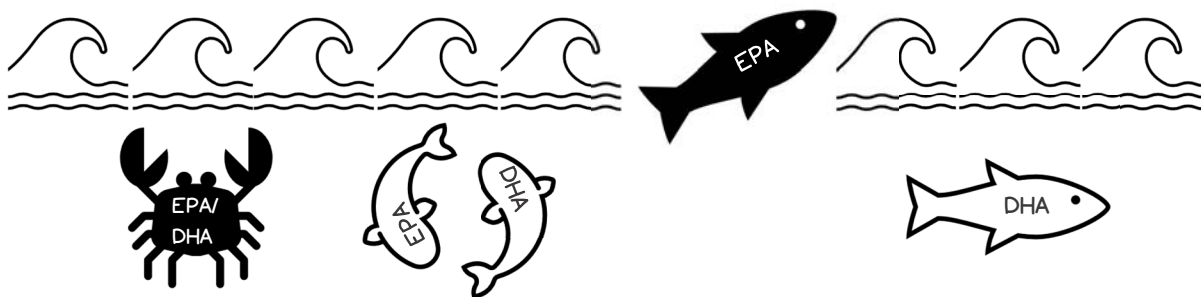
Top Common Food Sources of EPA+DHA

Rank	Food	Nutrivore Score	Serving Size (Raw)	EPA+DHA (mg/serving)	% DV
1	Atlantic Mackerel	922	4 oz / 115 g	2643.9	1058
2	European Anchovies, Canned in Oil	736	4 oz / 115 g	2363.3	945
3	Herring, Average	876	4 oz / 115 g	1856.7	743
4	Whitefish, Mixed Species	663	4 oz / 115 g	1446.7	579
5	Salmon, Average	712	4 oz / 115 g	1366.9	547
6	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	1129.3	452
7	Albacore Tuna, Canned in Water	544	4 oz / 115 g	991.3	397
8	Swordfish	557	4 oz / 115 g	869.4	348
9	Trout, Mixed Species	710	4 oz / 115 g	839.5	336
10	Sea Bass, Average	680	4 oz / 115 g	775.7	310
11	Fresh Water Bass, Mixed Species	555	4 oz / 115 g	684.3	274
12	Tuna, Average	752	4 oz / 115 g	586.1	234
13	Squid, Mixed Species	890	4 oz / 115 g	561.2	224
14	Oysters, Average	2759	4 oz / 115 g	533.6	213
15	Blue Mussels	1564	4 oz / 115 g	507.2	203
16	Fish Broth	742	1 cup	478.2	191
17	Crab, Average	1096	4 oz / 115 g	421.2	168
18	Snapper, Mixed Species	548	4 oz / 115 g	357.7	143
19	Grouper, Mixed Species	400	4 oz / 115 g	284.1	114
20	Flatfish (Flounder and Sole)	749	4 oz / 115 g	281.8	113
21	Catfish, Average	432	4 oz / 115 g	251.9	101
22	Atlantic and Pacific Halibut	523	4 oz / 115 g	223.1	89
23	Northern Lobster	839	4 oz / 115 g	195.5	78
24	Octopus, Common	1618	4 oz / 115 g	180.6	72
25	Cod, Average	453	4 oz / 115 g	180.6	72

Top Nutrivore Score Common Foods that Are an Excellent Source of EPA+DHA

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	21
2	Nori (Laver) Seaweed	3910	26
3	Oysters, Average	2759	213
4	Octopus, Common	1618	72
5	Blue Mussels	1564	203
6	Crab, Average	1096	168
7	Clams, Mixed Species	1046	49
8	Atlantic Mackerel	922	1058
9	Squid, Mixed Species	890	224
10	Herring, Average	876	743
11	Wakame Seaweed	841	60
12	Northern Lobster	839	78
13	Tuna, Average	752	234
14	Flatfish (Flounder and Sole)	749	113
15	Fish Broth	742	191
16	European Anchovies, Canned in Oil	736	945
17	Salmon, Average	712	547
18	Trout, Mixed Species	710	336
19	Sea Bass, Average	680	310
20	Whitefish, Mixed Species	663	579
21	Atlantic Sardines, Canned in Oil, w/ bone	654	452
22	Scallops, Mixed Species	645	47
23	Crayfish, Average	597	66
24	Swordfish	557	348
25	Fresh water bass, mixed species	555	274

★ The ocean hosts the majority of our best sources of EPA/DHA.



Linoleic Acid

[Linoleic acid](#) is the only essential omega-6 fatty acid. Along with being required for human growth and development, it serves as a structural component of cell membranes, plays a role in maintaining skin health and integrity, and is a precursor for bioactive lipid mediators. Although linoleic acid can lower LDL cholesterol levels, research hasn't consistently shown any protective effect against heart disease. Likewise, there's mixed evidence (some showing benefit, some showing harm) for the effects of linoleic acid on cancer. Higher intakes have also been associated with depression and obesity, although it may have a protective effect against diabetes.



Top Common Food Sources of Linoleic Acid

Rank	Food	Nutrivore Score	Serving Size (Raw)	LA (g/serving)	% DV
1	Walnuts	303	1 oz / 28 g	10.7	63
2	Safflower Oil, Linoleic	88	1 tbsp	10.1	60
3	Grapeseed Oil	82	1 tbsp	9.5	56
4	Pine Nuts, Dried	222	1 oz / 28 g	9.3	55
5	Soybeans, Mature	326	1/2 cup	9.2	54
6	Sunflower Oil, Linoleic	104	1 tbsp	8.9	53
7	Hemp Seeds, Hulled	415	1 oz / 28 g	7.8	46
8	Corn Oil	103	1 tbsp	7.3	43
9	Vegetable Oil (Soybean)	160	1 tbsp	6.8	40
10	Brazil Nuts, Dried	694	1 oz / 28 g	6.8	40
11	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	6.5	38
12	Sesame Seeds, Dried	299	1 oz / 28 g	6.0	35
13	Almond Milk, Unsweetened	688	1 cup	5.9	35
14	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	5.8	34
15	Pecans	221	1 oz / 28 g	5.8	34
16	Sesame Oil	127	1 tbsp	5.6	33
17	Peanuts, All Types	219	1 oz / 28 g	4.4	26
18	Peanut Oil	90	1 tbsp	4.3	25
19	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	4.1	24
20	Pistachios	265	1 oz / 28 g	3.9	23
21	Soybeans, Green (Edamame)	359	1/2 cup	3.6	21
22	Chicken Egg, Yolk	342	100 g / 6 eggs	3.5	21
23	Almonds	234	1 oz / 28 g	3.5	20
24	Tofu, Average	288	1/4 cup	2.9	17
25	Canola Oil	176	1 tbsp	2.7	16

Top Nutrivore Score Common Foods that Are a Good Source of Linoleic Acid

Rank	Food	Nutrivore Score	% DV
1	Brazil Nuts, Dried	694	40
2	Almond Milk, Unsweetened	688	35
3	Sardines, Canned in Oil, w/ bone	654	24
4	Flaxseed	515	10
5	Chia Seeds, Dried	450	10
6	Tempeh	438	10
7	Soy Milk, Unsweetened, Plain	425	14
8	Hemp Seeds, Hulled	415	46
9	Soybeans, Green (Edamame)	359	21
10	Chicken Egg, Yolk	342	21
11	Sunflower Seeds, Shelled, Dried	340	38
12	Poppy Seeds	333	15
13	Soybeans, Mature	326	54
14	Turkey, Dark, Average	326	10
15	Walnuts	303	63
16	Sesame Seeds, Dried	299	35
17	Hazelnuts (Filberts)	292	13
18	Tofu, Average	288	17
19	Chicken, Whole, Average	273	10
20	Pumpkin Seeds, Shelled, Dried	271	34
21	Pistachios	265	23
22	Duck, Average	238	11
23	Almonds	234	20
24	Goose, Average	230	12
25	Pine Nuts, Dried	222	55

★ Interestingly, egg yolks appear on this list but egg whites, or whole eggs do not. The whites are protein-filled, but the yolks contain the water-soluble vitamins, minerals, and...fats (including linoleic acid)!



Medium Chain Triglycerides

[Medium-chain triglycerides](#) (MCTs) are a type of saturated fat composed of at least two medium-chain fatty acids. Their exceptionally rapid and direct absorption (straight from the intestine to the liver) allows them to be quickly burned for fuel. The earliest use of MCTs was to help treat epilepsy, but they also possess benefits for weight loss and body composition—including by spontaneously reducing appetite and food intake, and by increasing resting energy expenditure via thermogenesis (heat production). MCTs may also help increase insulin sensitivity among diabetics, improve memory and cognition in Alzheimer's patients, improve exercise performance, and boost gut health.



Top Common Food Sources of MCTs

Rank	Food	Nutrivore Score	Serving Size (Raw)	MCT (g/serving)	% RT
1	Coconut Milk or Cream	175	1 cup	37.8	630
2	Coconut Oil	112	1 tbsp	7.4	124
3	Coconut Meat	179	1 oz / 28 g	5.4	90
4	Cheese, Soft, Average	141	1.5oz/40g/½cup	1.4	23
5	Cheese, Hard, Average	130	1.5 oz / 40 g	1.1	18
6	Yogurt, Average	208	1 cup	0.7	12
7	Sour Cream, Cultured	82	1/4 cup	0.7	11
8	Milk, Average	245	1 cup	0.3	6
9	Coconut Water	271	1 cup	0.3	5
10	Kefir, Low-Fat, Plain	296	1 cup	0.2	3
11	Ginger, Ground	668	1 tbsp	0.1	1
12	Turmeric, Ground	637	1 tbsp	0.1	1
13	Lamb, Average	263	3.5 oz / 100 g	0.1	1
14	Lemon Juice	339	1 cup	0.1	1
15	Duck, Average	238	3.5 oz / 100 g	0.04	1
16	Sage, Ground	1121	1 tbsp	0.04	1
17	Goose, Average	230	3.5 oz / 100 g	0.03	1
18	Buckwheat	303	1/4 cup	0.03	0.5
19	Chicken Egg, Yolk	342	100 g / 6 eggs	0.03	0.5
20	Nutmeg, Ground	157	1 tbsp	0.03	0.4
21	European Anchovies, Canned in Oil	736	4 oz / 115 g	0.02	0.4
22	Zucchini, w/ skin	1477	1 cup, sliced	0.02	0.4
23	Beef, Average	293	3.5 oz / 100 g	0.02	0.4
24	Chocolate, Dark, 70-85% Cacao	235	1 oz / 28 g	0.02	0.4
25	Macadamia Nuts	167	1 oz / 28 g	0.02	0.4

Top Nutrivore Score Common Foods that Are a Good Source of MCTs

Rank	Food	Nutrivore Score	% RT
1	Yogurt, Average	208	12
2	Cow's Milk, Whole	202	12
3	Coconut Meat	179	90
4	Coconut Milk or Cream	175	630
5	Cheese, Soft, Average	141	23
6	Cheese, Hard, Average	130	18
7	Coconut Oil	112	124
8	Sour Cream, Cultured	82	11

★ Amazingly, coconut water can be substituted for blood plasma in an emergency.



Monounsaturated Fatty Acids

[Monounsaturated fatty acids](#) (MUFA), the most abundant of which is oleic acid, play an important role in cellular function due to its presence in phospholipids in cell membranes. Oleic acid is beneficial for cardiovascular health—both in reducing risk factors like high blood pressure, cholesterol, triglycerides, inflammation, and oxidative stress, and in reducing actual cardiovascular disease incidence and events. Oleic acid has even demonstrated anti-cancer activity, with an ability to inhibit the progression, proliferation, and metastasis of several types of cancer cells. Research shows this fat could benefit body weight regulation and obesity through its effects on energy metabolism and lipogenesis. In fact, human trials show that enriching diets with oleic acid leads to decreases in central obesity, abdominal fat, body weight, and food intake, while also possibly increasing energy expenditure! Oleic acid also possesses some benefits for diabetics—influencing genes and pathways involved in insulin signaling and glucose metabolism, as well as helping protect against some complications of diabetes, like diabetic retinopathy and atherosclerosis.



Top Common Food Sources of MUFAs

Rank	Food	Nutrivore Score	Serving Size (Raw)	MUFA (g/serving)	% RT
1	Macadamia Nuts	167	1 oz / 28 g	16.5	82
2	Hazelnuts (Filberts)	292	1 oz / 28 g	12.8	64
3	Chicken Egg, Yolk	342	100 g / 6 eggs	11.7	59
4	Sunflower Oil, High-Oleic	105	1 tbsp	11.7	59
5	Pecans	221	1 oz / 28 g	11.4	57
6	Extra-Virgin Olive Oil	139	1 tbsp	11.3	57
7	Safflower Oil, High Oleic	82	1 tbsp	10.2	51
8	Avocado Oil	71	1 tbsp	9.9	49
9	Goose, Average	230	3.5 oz / 100 g	9.8	49
10	Canola Oil	176	1 tbsp	8.9	44
11	Almonds	234	1 oz / 28 g	8.8	44
12	Eel, Mixed Species	385	4 oz / 115 g	8.3	41
13	Duck, Average	238	3.5 oz / 100 g	7.1	35
14	Peanuts, All Types	219	1 oz / 28 g	6.8	34
15	Brazil Nuts, Dried	694	1 oz / 28 g	6.7	33
16	Californian Avocados	251	1/4 cup	6.7	33
17	Cashews	203	1 oz / 28 g	6.7	33
18	Pistachios	265	1 oz / 28 g	6.5	33
19	Atlantic Mackerel	922	4 oz / 115 g	6.3	31
20	Peanut Oil	90	1 tbsp	6.2	31
21	Herring, Average	876	4 oz / 115 g	6.1	30
22	Tigernut	192	1 oz / 28 g	5.4	27

23	Sesame Oil	127	1 tbsp	5.4	27
24	Pine Nuts, Dried	222	1 oz / 28 g	5.3	26
25	Sesame Seeds, Dried	299	1 oz / 28 g	5.3	26

Top Nutrivore Score Common Foods that Are an Excellent Source of MUFAs

Rank	Food	Nutrivore Score	% RT
1	Atlantic Mackerel	922	31
2	Herring, Average	876	30
3	European Anchovies, Canned in Oil	736	22
4	Brazil Nuts, Dried	694	33
5	Atlantic Salmon, Farmed	673	22
6	Sardines, Canned in Oil, w/ bone	654	22
7	Eel, Mixed Species	385	41
8	Chicken Egg, Yolk	342	59
9	Sunflower Seeds, Shelled, Dried	340	26
10	Soybeans, Mature	326	20
11	Sesame Seeds, Dried	299	26
12	Beef, Average	293	23
13	Hazelnuts (Filberts)	292	64
14	Pumpkin Seeds, Shelled, Dried	271	23
15	Avocado, Average	271	25
16	Pistachios	265	33
17	Lamb, Average	263	25
18	Duck, Average	238	35
19	Chicken, Dark Meat, Average	236	20
20	Almonds	234	44
21	Goose, Average	230	49
22	Pine Nuts, Dried	222	26
23	Pecans	221	57
24	Peanuts, All Types	219	34
25	Cashews	203	33

★ #1 CARIBOU BONE MARROW

Did you know...we left off the REAL #1 food because it is not easy to find...



Minerals



[Minerals](#) perform many different roles in the human body, including forming structural tissues (like bones and teeth), maintaining acid-base balance, regulating enzyme systems, serving as electrolytes (necessary for nerve impulse transmission and muscle contraction), and metabolic processes.

A mineral is a chemical element (that is, a member of the Periodic Table of Elements) required as an essential nutrient other than carbon, hydrogen, nitrogen, oxygen, and sulfur (which form the backbone of most organic molecules including amino acids, fatty acids, and vitamins). Dietary minerals may be present in inorganic salts (like table salt, a.k.a. sodium chloride) or as part of carbon-

containing organic compounds (like magnesium in chlorophyll, the pigment that makes plants green).

Essential minerals can be divided into macrominerals, which we need in excess of 100 milligrams per day to avoid symptoms of deficiency, and trace minerals, which we need in much smaller amounts (1 to 100 milligrams per day). Macrominerals include sodium, chloride, potassium, phosphorus, magnesium, sulfur, and calcium. Trace minerals include copper, chromium, fluoride, iodine, iron, molybdenum, manganese, selenium, and zinc.

Recommended Daily Allowance (RDA) and Adequate Intake (AI) for Minerals

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
Calcium (mg)	1000		1000		2500
Chromium (µg)		25		35	Not established
Copper (µg)	900		900		10,000
Iodine (µg)	150		150		1100
Iron (mg)	18		8		45
Magnesium (mg)	310 (19-30 years) 320 (31-50 years)		400 (19-30 years) 420 (31-50 years)		350 (from supplemental forms)
Manganese (mg)		1.8		2.3	11
Phosphorous (mg)	700		700		4000
Potassium (mg)		2600		3400	Not established
Selenium (µg)	55		55		400
Zinc (mg)	8		11		40

**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following minerals:

MINERALS
20
Ca
40.078
Calcium

MINERALS
24
Cr
51.996
Chromium

MINERALS
29
Cu
63.546
Copper

MINERALS
53
I
126.904
Iodine

MINERALS
26
Fe
55.845
Iron

MINERALS
12
Mg
24.305
Magnesium

MINERALS
25
Mn
54.938
Manganese

MINERALS
15
P
30.974
Phosphorus

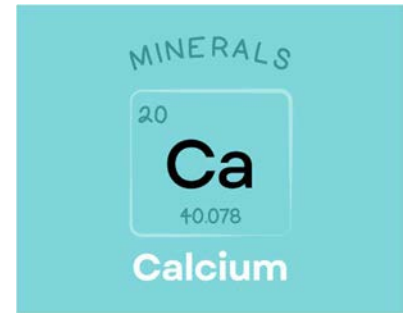
MINERALS
19
K
39.098
Potassium

MINERALS
34
Se
78.971
Selenium

MINERALS
30
Zn
65.380
Zinc

Calcium

[Calcium](#) is a major structural component of bones and teeth, and also serves as an electrolyte—a type of electricity-conducting mineral needed for regulating nerve impulses, muscle contraction (including the heartbeat), blood pH, and fluid balance. Getting enough calcium helps protect against osteoporosis and bone fractures, while also potentially reducing the risk of colorectal cancer, pregnancy-related high blood pressure, and kidney stones. It may even help improve PMS symptoms and assist in body weight regulation!



Top Common Food Sources of Calcium

Rank	Food	Nutrivore Score	Serving Size (Raw)	Calcium (mg/serving)	% DV
1	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	439.3	34
2	Cassava	224	1 cup	362.6	28
3	Yogurt, Average	208	1 cup	343.0	26
4	Cheese, Hard, Average	130	1.5 oz / 40 g	328.3	25
5	Kefir, Low-Fat, Plain	296	1 cup	315.9	24
6	Milk, Average	245	1 cup	293.7	23
7	Sesame Seeds, Dried	299	1 oz / 28	273.0	21
8	European Anchovies, Canned in Oil	736	4 oz / 115 g	266.8	21
9	Soybeans, Mature	326	1/2 cup	257.6	20
10	Tofu, Average	302	1/4 cup	253.9	20
11	Soybeans, Green (Edamame)	359	1/2 cup	252.2	19
12	Soy Milk, Unsweetened, Plain	425	1 cup	245.4	19
13	Turnip Greens	6370	2 cups	209.0	16
14	Dandelion Greens	2815	2 cups	205.7	16
15	Cheese, Soft, Average	141	1.5 oz / 40 g or 1/2 cup	199.5	15
16	Chia Seeds, Dried	450	1 oz / 28	176.7	14
17	Collard Greens (Collards)	3323	2 cups	167.0	13
18	Molasses	367	1 tbsp	143.8	11
19	Kumquats	381	1 cup	139.5	11
20	Kelp Seaweed	700	1 cup	134.4	10
21	Pigeon Peas (Red Gram), Mature	211	1/2 cup	133.3	10
22	Chicken Egg, Yolk	342	100 g (6 eggs)	129.0	10
23	Mustard Greens	5464	2 cups	128.8	10
24	Kale	4233	2 cups	127.0	10
25	Poppy Seeds	333	1 tbsp	126.5	10

Top Nutrivore Score Common Foods that Are a Good Source of Calcium

Rank	Food	Nutrivore Score	% DV
1	Turnip Greens	6370	16
2	Mustard Greens	5464	10
3	Kale	4233	10
4	Collard Greens (Collards)	3323	13
5	Dandelion Greens	2815	16
6	European Anchovies, Canned in Oil	736	21
7	Kelp Seaweed	700	10
8	Sardines, Canned in Oil, w/ bone	654	34
9	Chia Seeds, Dried	450	14
10	Kumquats	381	11
11	Molasses	367	11
12	Soybeans, Green (Edamame)	359	19
13	Chicken Egg, Yolk	342	10
14	Poppy Seeds	333	10
15	Soybeans, Mature	326	20
16	Tofu, Average	302	20
17	Sesame Seeds, Dried	299	21
18	Kefir, Low-Fat, Plain	296	24
19	Milk, Average	245	23
20	Cassava	224	28
21	Pigeon Peas (Red Gram), Mature	211	10
22	Yogurt, Average	208	26
23	Cheese, Soft, Average	141	15
24	Cheese, Hard, Average	130	25

★ Despite dairy products being commonly considered as some of the best calcium sources, there are some amazing plant and non-dairy options that are equally impressive!



Chromium

[Chromium](#) is an essential trace mineral that mostly exists in the trivalent form (Cr³⁺) within the human body. Its most important function is in serving as a cofactor for chromodulin, which amplifies insulin signaling. As a result, chromium is particularly important for carbohydrate metabolism and may play a protective role against blood sugar disorders like type 2 diabetes. Chromium has also been shown to reduce food intake, cravings, and binge behavior in some populations, and may also help improve blood lipid profiles.

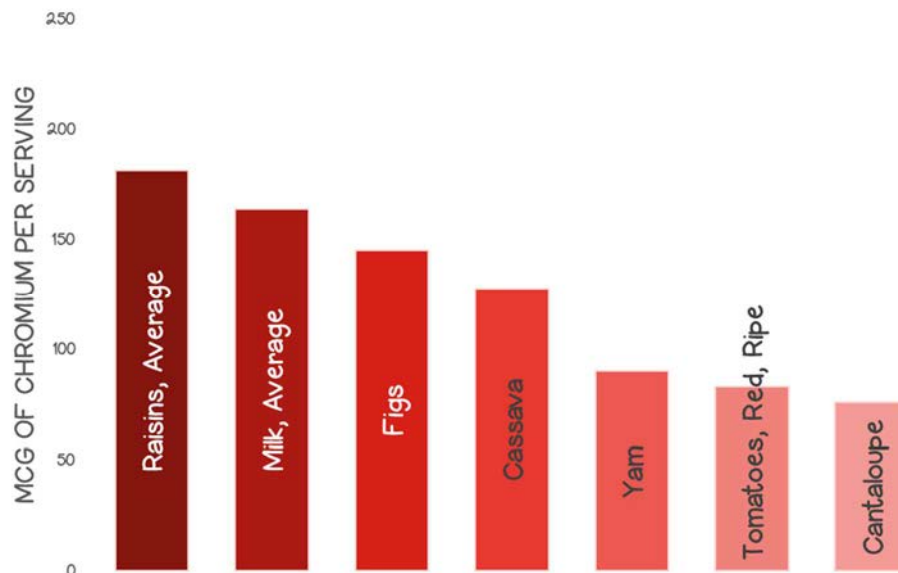


Top Common Food Sources of Chromium

Rank	Food	Nutrivore Score	Serving Size (Raw)	Chromium (µg/serving)	% DV
1	Raisins, Average	108	1/2 cup	181.3	518
2	Milk, Average	245	1 cup	164.0	469
3	Figs	158	1 cup, chopped	145.2	415
4	Cassava	224	1 cup	127.9	366
5	Yam	167	1 cup, cubes	90.3	258
6	Tomatoes, Red, Ripe	983	1 cup	83.0	237
7	Cantaloupe	457	1 cup, diced	76.0	217
8	Lotus Root	344	1 cup	75.4	215
9	Dates, Average	76	1/2 cup	72.2	206
10	Watermelon	405	1 cup, diced	71.4	204
11	Apricots, Dried, Sulfured	130	1/2 cup	69.0	197
12	Kohlrabi	2497	1 cup	64.9	186
13	Taro	178	1 cup, sliced	60.9	174
14	Sweet Pepper, Average	1201	1 cup, sliced	57.9	165
15	White Mushroom, Average	1878	1 cup	57.5	164
16	Mangos	342	1 cup	57.0	163
17	Pomegranates	256	1 cup, arils	56.0	160
18	Chocolate, Dark, 70-85% Cacao	235	1 oz / 28 g	53.2	152
19	Apples	213	1 cup, chopped	49.7	142
20	Oysters, Average	2759	4 oz / 115 g	48.3	138
21	Pistachios	265	1 oz / 28 g	47.0	134
22	Beef, Average	293	3.5 oz / 100 g	45.0	129
23	Almonds	234	1 oz / 28 g	42.0	120
24	Blue Mussels	1564	4 oz / 115 g	41.4	118
25	Lemons, w/o peel	477	1 cup	36.9	105

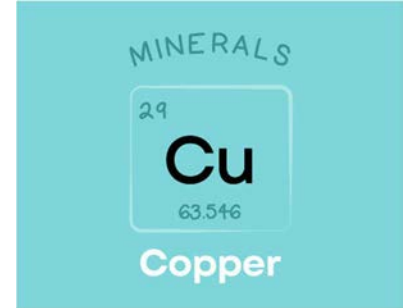
Top Nutrivore Score Common Foods that Are an Excellent Source of Chromium

Rank	Food	Nutrivore Score	% DV
1	Radishes	5863	75
2	Oysters, Average	2759	138
3	Kohlrabi	2497	186
4	Green Onions (Tops Only)	2097	27
5	Green Cabbage	2034	53
6	Beets	2013	100
7	Turnips	1954	79
8	White Mushroom, Average	1878	164
9	Octopus, Common	1618	89
10	Blue Mussels	1564	118
11	Peppers, Hot Chili, Green	1234	70
12	Sweet Pepper, Average	1201	165
13	Pumpkin	1036	103
14	Cocoa Powder, Unsweetened	1024	78
15	Tomatoes, Red, Ripe	983	237
16	Carrots	899	40
17	Okra	859	88
18	Northern Lobster	839	72
19	Celery	767	32
20	Guavas, Common	761	68
21	Sardines, Canned in Oil, w/ bone	654	43
22	Papaya	636	59
23	Black Pepper	635	30
24	Green Beans	605	87
25	Eggplant	563	48



Copper

[Copper](#) is a trace mineral that's essential for all living organisms. Copper serves as a component of numerous enzymes and proteins in the body, giving it diverse roles in the growth, development, and maintenance of various organs (including the heart and brain), bone, and connective tissue. Copper is also involved in glucose and cholesterol metabolism, helps regulate gene expression, can scavenge free radicals, and is needed for the production of red blood cells.



Top Common Food Sources of Copper

Rank	Food	Nutrivore Score	Serving Size (Raw)	Copper (mg/serving)	% DV
1	Liver, Average	4192	3.5 oz / 100 g	6.1	676
2	Squid, Mixed Species	890	4 oz / 115 g	2.2	242
3	Oysters, Average	2759	4 oz / 115 g	2.0	220
4	Northern Lobster	839	4 oz / 115 g	1.6	172
5	Soybeans, Mature	326	1/2 cup	1.5	171
6	Sesame Seeds, Dried	299	1 oz / 28 g	1.1	127
7	Pigeon Peas (Red Gram), Mature	211	1/2 cup	1.1	120
8	Cocoa Powder, Unsweetened	1024	1 oz / 28 g	1.1	118
9	Clam Juice, Canned	14744	1 cup	0.9	104
10	Crab, Average	1096	4 oz / 115 g	0.8	91
11	Coconut Milk or Cream	168	1 cup	0.8	86
12	Cashews	203	1 oz / 28 g	0.6	68
13	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	0.5	56
14	Lentils, Pink or Red	443	1/5 cup	0.5	56
15	Octopus, Common	1618	4 oz / 115 g	0.5	56
16	Kidney, Average	2558	3.5 oz / 100 g	0.5	55
17	Chocolate, Dark, 70-85% Cacao	235	1 oz / 28 g	0.5	55
18	Brazil Nuts, Dried	694	1 oz / 28 g	0.5	54
19	Hazelnuts (Filberts)	292	1 oz / 28 g	0.5	54
20	Crayfish, Mixed Species, Wild	616	4 oz / 115 g	0.5	54
21	Buckwheat	303	1/4 cup	0.5	53
22	Hemp Seeds, Hulled	415	1 oz / 28 g	0.5	50
23	Walnuts	303	1 oz / 28 g	0.4	49
24	Lychee	319	1 cup	0.4	49
25	Cremini (Brown) Mushrooms	2279	1 cup, whole	0.4	48

Top Nutrivore Score Common Foods that Are an Excellent Source of Copper

Rank	Food	Nutrivore Score	% DV
1	Clam Juice, Canned	14744	104
2	Turnip Greens	6370	43
3	Mustard Greens	5464	21
4	Liver, Average	4192	676
5	Nori (Laver) Seaweed	3910	23
6	Maitake Mushrooms	3551	22
7	Dandelion Greens	2815	21
8	Oysters, Average	2759	220
9	Kidney, Average	2558	55
10	Oyster Mushrooms	2550	23
11	Radicchio	2471	30
12	White Mushroom, Average	1878	37
13	Fiddlehead Ferns	1721	42
14	Octopus, Common	1618	56
15	Chanterelle Mushrooms	1555	21
16	Asparagus	1385	28
17	Giblets, Average	1319	35
18	Tomato Puree, Canned, w/o salt added	1248	27
19	Crab, Average	1096	91
20	Cocoa Powder, Unsweetened	1024	118
21	Squid, Mixed Species	890	242
22	Wakame Seaweed	841	25
23	Northern Lobster	839	172
24	Goji Berries, Dried	780	40
25	Artichokes, (Globe or French)	771	43



A popular cocktail in Canada is the Ceasar, made with Clamato Juice which is a combination of tomato and clam juice. Americans know this drink as the Bloody Mary (without the clam juice) or the Bloody Ceasar in certain places. Who knew a Canadian bar selection could also be a top Nutrivore choice, especially if virgin, thanks to clam juice?



Iodine

[Iodine](#) is a trace mineral that serves as a structural component of thyroid hormones, giving it a major role in thyroid health and function. As a result, it's involved in regulating metabolism, reproductive function, fatty acid release, carbohydrate absorption, growth, and development. Consuming adequate amounts is particularly important during pregnancy (for preventing complications like preeclampsia, preterm delivery, miscarriage, and stillbirth) and during childhood (where it supports central nervous system development). Untreated iodine deficiency can lead to goiter and hypothyroidism.

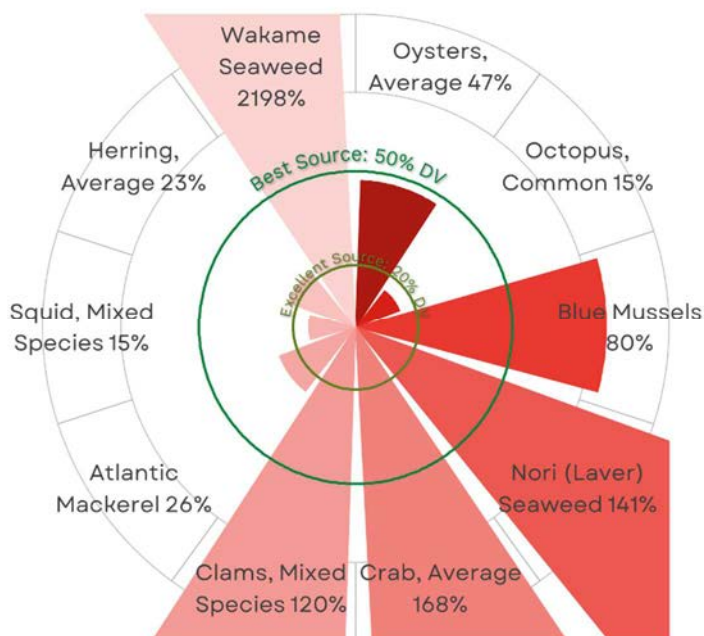


Top Common Food Sources of Iodine

Rank	Food	Nutrivore Score	Serving Size (Raw)	Iodine (µg/serving)	% DV
1	Kelp Seaweed	700	1 cup	78497.9	52332
2	Wakame Seaweed	841	1 cup	3296.4	2198
3	Haddock	464	4 oz / 115 g	491.5	328
4	Crab, Average	1096	4 oz / 115 g	252.3	168
5	Shrimp, Mixed Species	535	4 oz / 115 g	241.5	161
6	Nori (Laver) Seaweed	3910	1 cup	211.5	141
7	Clams, Mixed Species	1046	4 oz / 115 g	180.6	120
8	Blue Mussels	1564	4 oz / 115 g	120.5	80
9	Northern Lobster	839	4 oz / 115 g	120.3	80
10	Cod, Average	453	4 oz / 115 g	101.0	67
11	Crayfish, Average	597	4 oz / 115 g	97.8	65
12	European Anchovies, Canned in Oil	736	4 oz / 115 g	83.0	55
13	Oysters, Average	2759	4 oz / 115 g	70.8	47
14	Eel, Mixed Species	385	4 oz / 115 g	69.0	46
15	Atlantic Mackerel	922	4 oz / 115 g	39.5	26
16	Herring, Average	876	4 oz / 115 g	35.0	23
17	Salmon, Average	712	4 oz / 115 g	28.8	19
18	Flatfish (Flounder and Sole)	749	4 oz / 115 g	28.8	19
19	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	28.8	19
20	Trout, Mixed Species	710	4 oz / 115 g	28.8	19
21	Atlantic and Pacific Halibut	523	4 oz / 115 g	23.4	16
22	Octopus, Common	1618	4 oz / 115 g	23.0	15
23	Squid, Mixed Species	890	4 oz / 115 g	23.0	15
24	Whitefish, Mixed Species	663	4 oz / 115 g	23.0	15
25	Snapper, Mixed Species	548	4 oz / 115 g	21.9	15

Top Nutrivore Score Common Foods that Are a Good Source of Iodine

Rank	Food	Nutrivore Score	% DV
1	Nori (Laver) Seaweed	3910	141
2	Oysters, Average	2759	47
3	Octopus, Common	1618	15
4	Blue Mussels	1564	80
5	Crab, Average	1096	168
6	Clams, Mixed Species	1046	120
7	Atlantic Mackerel	922	26
8	Squid, Mixed Species	890	15
9	Herring, Average	876	23
10	Wakame Seaweed	841	2198
11	Northern Lobster	839	80
12	Tuna, Average	752	10
13	Flatfish (Flounder and Sole)	749	19
14	European Anchovies, Canned in Oil	736	55
15	Salmon, Average	712	19
16	Trout, Mixed Species	710	19
17	Kelp Seaweed	700	52332
18	Sea Bass, Average	680	14
19	Whitefish, Mixed Species	663	15
20	Atlantic Sardines, Canned in Oil, w/ bone	654	19
21	Scallops, Mixed Species	645	14
22	Crayfish, Average	597	65
23	Swordfish	557	12
24	Fresh Water Bass, Mixed Species	555	14
25	Snapper, Mixed Species	548	15



★ Comparing the %DV of the top 10 nutrient dense foods that are an excellent source of iodine.

Iron

Iron is a mineral required for the metabolism of all living organisms. It's needed for the function of numerous iron-dependent proteins involved in electron transport, energy metabolism, oxygen transport and storage, DNA replication and repair, free radical scavenging, and oxidative processes. It plays an important role in reproductive health, gestation, immunity, and central nervous system development.



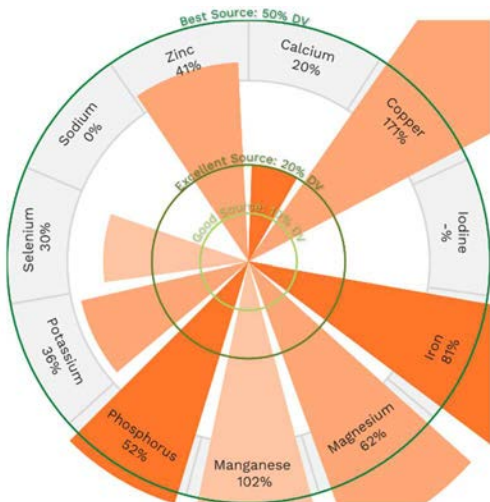
Top Common Food Sources of Iron

Rank	Food	Nutrivore Score	Serving Size (Raw)	Iron (mg/serving)	% DV
1	Soybeans, Mature	326	1/2 cup	14.6	81
2	Liver, Average	4192	3.5 oz / 100 g	13.4	74
3	Coconut Milk or Cream	175	1 cup	6.5	36
4	Octopus, Common	1618	4 oz / 115 g	6.1	34
5	Oysters, Average	2759	4 oz / 115 g	5.9	33
6	Giblets, Average	1319	3.5 oz / 100 g	5.9	33
7	Pigeon Peas (Red Gram), Mature	211	1/2 cup	5.4	30
8	European Anchovies, Canned in Oil	736	4 oz / 115 g	5.3	30
9	Kidney, Average	2558	3.5 oz / 100 g	5.3	29
10	Turmeric, Ground	637	1 tbsp	5.2	29
11	Jerusalem-Artichoke	195	1 cup, slices	5.1	28
12	Hearts of Palm, Canned	707	1 cup	4.6	25
13	Soybeans, Green (Edamame)	359	1/2 cup	4.5	25
14	Blue Mussels	1564	4 oz / 115 g	4.5	25
15	Sesame Seeds, Dried	299	1 oz / 28 g	4.1	23
16	Emu, Ostrich, Average	551	3.5 oz / 100 g	4.0	22
17	Cumin Seed	641	1 tbsp	4.0	22
18	Cocoa Powder, Unsweetened	1024	1 oz / 28 g	3.9	22
19	Lima Beans, Large, Mature	304	1/5 cup	3.9	22
20	Passion-Fruit, Purple	261	1 cup	3.8	21
21	Kimchi (Cabbage)	1097	1 cup	3.8	21
22	Fenugreek Seed	264	1 tbsp	3.7	21
23	Teff	253	1/4 cup	3.7	20
24	Dandelion Greens	2815	2 cups	3.4	19
25	Duck, Average	238	3.5 oz / 100 g	3.4	19

Top Nutrivore Score Common Foods that Are a Good Source of Iron

Rank	Food	Nutrivore Score	% DV
1	Mustard Greens	5464	10
2	Liver, Average	4192	74
3	Beet Greens	3259	11
4	Dandelion Greens	2815	19
5	Oysters, Average	2759	33
6	Kidney, Average	2558	29
7	Octopus, Common	1618	34
8	Blue Mussels	1564	25
9	Chanterelle Mushrooms	1555	10
10	Asparagus	1385	16
11	Giblets, Average	1319	33
12	Leeks (Bulb and Lower Leaf-Portion)	1128	10
13	Kimchi (Cabbage)	1097	21
14	Clams, Mixed Species	1046	10
15	Cocoa Powder, Unsweetened	1024	22
16	Atlantic Mackerel	922	10
17	Spearmint	914	15
18	Wakame Seaweed	841	10
19	Currants, European Black	811	10
20	Goji Berries, Dried	780	17
21	Artichokes, (Globe or French)	771	12
22	Shallots	740	11
23	European Anchovies, Canned in Oil	736	30
24	Mulberries	719	14
25	Sauerkraut, Canned	710	12

#1 SOYBEAN



#2 CHICKEN LIVER



While liver is averaged among many "kinds", chicken is a good example.

Magnesium

[Magnesium](#) is an essential mineral needed by every cell in the body. As an electrolyte, it's important for regulating fluid balance, nerve and muscle function, blood pH, and neurotransmission. It also serves as a cofactor for hundreds of different enzymes, giving it a role over 300 metabolic reactions—including pathways for cell signaling, energy production, protein synthesis, nucleic acid synthesis, and ion transport. Magnesium also has important structural functions in cells and bone tissue. Consuming enough magnesium may help protect against a variety of chronic diseases, including cardiovascular disease, type 2 diabetes, and osteoporosis.



Top Common Food Sources of Magnesium

Rank	Food	Nutrivore Score	Serving Size (Raw)	Magnesium (mg/serving)	% DV
1	Soybeans, Mature	326	1/2 cup	260.4	62
2	Hemp Seeds, Hulled	415	1 oz / 28 g	198.4	47
3	Pigeon Peas (Red Gram), Mature	211	1/2 cup	187.6	45
4	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	165.8	39
5	Cocoa Powder, Unsweetened	1024	1 oz / 28 g	139.7	33
6	Prickly Pears	881	1 cup	126.7	30
7	Tamarinds	77	1 cup, pulp	110.4	26
8	Flaxseed	515	1 oz / 28 g	109.8	26
9	Chinook Salmon	775	4 oz / 115 g	109.3	26
10	Brazil Nuts, Dried	694	1 oz / 28 g	105.3	25
11	Coconut Milk, Canned	184	1 cup	104.0	25
12	Artichokes, (Globe or French)	771	1 cup	100.8	24
13	Buckwheat	303	1/4 cup	99.3	24
14	Sesame Seeds, Dried	299	1 oz / 28 g	98.3	23
15	Kelp Seaweed	700	1 cup	96.8	23
16	Amaranth Grain	207	1/4 cup	94.2	22
17	Chia Seeds, Dried	450	1 oz / 28 g	93.8	22
18	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	91.0	22
19	Teff	253	1/4 cup	88.8	21
20	Atlantic Mackerel	922	4 oz / 115 g	87.4	21
21	Lima Beans, Large, Mature	304	1/5 cup	86.3	21
22	Wakame Seaweed	841	1 cup	85.6	20
23	Quinoa	227	1/4 cup	84.7	20
24	Soybeans, Green (Edamame)	359	1/2 cup	83.2	20
25	Cashews	203	1 oz / 28 g	81.8	19

Top Nutrivore Score Common Foods that Are a Good Source of Magnesium

Rank	Food	Nutrivore Score	% DV
1	Chard, Average	6386	14
2	Spinach	4548	11
3	Beet Greens	3259	13
4	Fiddlehead Ferns	1721	10
5	Crab, Average	1096	12
6	Cocoa Powder, Unsweetened	1024	33
7	Atlantic Mackerel	922	21
8	Prickly Pears	881	30
9	Okra	859	14
10	Wakame Seaweed	841	20
11	Northern Lobster	839	10
12	Artichokes, (Globe or French)	771	24
13	Tuna, Average	752	11
14	European Anchovies, Canned in Oil	736	19
15	Salmon, Average	712	10
16	Hearts of Palm, Canned	707	13
17	Kelp Seaweed	700	23
18	Brazil Nuts, Dried	694	25
19	Sea Bass, Average	680	11
20	Butternut Squash	670	11
21	Tomatoes, Sun-Dried	655	12
22	Sardines, Canned in Oil, w/ bone	654	11
23	Adzuki Beans, Mature Seeds	576	10
24	Flaxseed	515	26
25	Chia Seeds, Dried	450	22

★ MAGNESIUM CAN BE FOUND IN **MANY** DIFFERENT FOOD GROUPS...

- ✓ Leafy Greens
- ✓ Shellfish
- ✓ Legumes
- ✓ Seeds
- ✓ Chocolate
- ✓ Tropical Fruit
- ✓ Seaweed
- ✓ Fish
- ✓ Nuts
- ✓ Milk Alternatives
- ✓ Other Veggies
- ✓ Whole Grains
- ✓ Winter Squash
- ✓ Dried Fruit

Manganese

[Manganese](#) is an essential mineral that serves as a cofactor and component of numerous enzymes. Through these roles, it's involved in carbohydrate metabolism, amino acid synthesis, gluconeogenesis, detoxification, lipid processing, free radical defense, bone and collagen formation, and wound healing. Although the research so far is limited, some evidence suggests that manganese can protect against osteoporosis and diabetes, and may even be involved in seizure disorders.



Top Common Food Sources of Manganese

Rank	Food	Nutrivore Score	Serving Size (Raw)	Manganese (mg/serving)	% DV
1	Chickpeas (Garbanzo Beans), Mature	454	1/5 cup	8.5	371
2	Teff	253	1/4 cup	4.5	194
3	Muscadine Grapes	644	1 cup	4.4	192
4	Blue Mussels	1564	4 oz / 115 g	3.9	170
5	Cloves, Ground	2209	1 tbsp	3.9	170
6	Pine Nuts, Dried	222	1 oz / 28 g	2.5	107
7	Coconut Milk or Cream	175	1 cup	2.4	106
8	Soybeans, Mature	326	1/2 cup	2.3	102
9	Hemp Seeds, Hulled	415	1 oz / 28 g	2.2	94
10	Hearts of Palm, Canned	707	1 cup	2.0	88
11	Oats	208	1/4 cup	1.9	83
12	Turmeric, Ground	637	1 tbsp	1.9	81
13	Pigeon Peas (Red Gram), Mature	211	1/2 cup	1.8	80
14	Ginger, Ground	668	1 tbsp	1.7	75
15	Hazelnuts (Filberts)	292	1 oz / 28 g	1.7	75
16	Cardamom	656	1 tbsp	1.6	71
17	Pineapple	358	1 cup, chunks	1.5	67
18	Wheat, Durum	200	1/4 cup	1.4	63
19	Cinnamon, Ground	1146	1 tbsp	1.4	59
20	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	1.3	55
21	Amaranth Grain	207	1/4 cup	1.3	55
22	Pecans	221	1 oz / 28 g	1.3	55
23	Macadamia Nuts	167	1 oz / 28 g	1.2	50
24	Molasses	367	1 tbsp	1.2	50
25	Wheat Flour, Whole-Grain	227	1/4 cup	1.1	50

Top Nutrivore Score Common Foods that Are an Excellent Source of Manganese

Rank	Food	Nutrivore Score	% DV
1	Turnip Greens	6370	22
2	Mustard Greens	5464	22
3	Spinach	4548	23
4	Kale	4233	20
5	Nori (Laver) Seaweed	3910	34
6	Tea, Average	3721	21
7	Collard Greens (Collards)	3323	21
8	Oysters, Average	2759	22
9	Cloves, Ground	2209	170
10	Fiddlehead Ferns	1721	26
11	Blue Mussels	1564	170
12	Cinnamon, Ground	1146	59
13	Cocoa Powder, Unsweetened	1024	47
14	Okra	859	34
15	Wakame Seaweed	841	49
16	Strawberries	762	26
17	Blackberries	743	40
18	Shallots	740	20
19	Trout, Mixed Species	710	43
20	Hearts of Palm, Canned	707	88
21	Ginger, Ground	668	75
22	Cardamom	656	71
23	Tomatoes, Sun-Dried	655	22
24	Muscadine Grapes	644	192
25	Turmeric, Ground	637	81

★ Interestingly, most of the “warming” spices make both lists. Warming spices are given that name as they are often used to create a spice, or heat to a dish, in addition to literally warming a person up from the inside out. If you have ever smelled mulled wine, or tasted a delicious gingerbread cookie, there is no doubt that the warm feelings fill both your heart and tummy!

CINNAMON



CLOVES



GINGER



TURMERIC

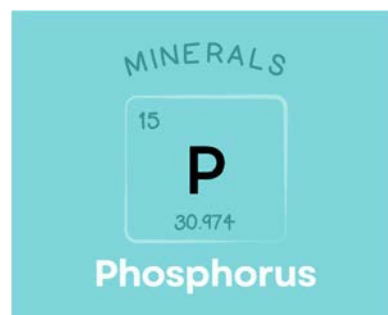


CARDAMOM



Phosphorus

[Phosphorus](#) is an essential mineral that makes up about 1% of the total weight of the human body. Along with serving an important structural role for building nucleic acids and cell membranes, phosphorus is involved in numerous biological processes—including acid-base regulation, energy production, cell signaling, and bone mineralization. Excess phosphorus has been linked to a higher risk of cardiovascular disease, fractures, and osteoporosis, especially in the context of a low-calcium diet.



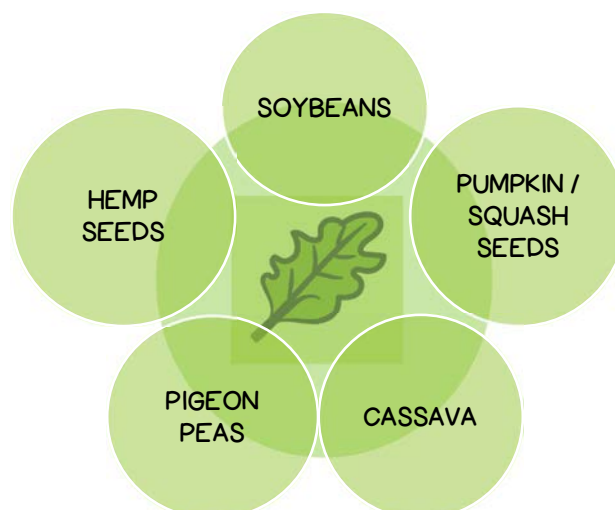
Top Common Food Sources of Phosphorus

Rank	Food	Nutrivore Score	Serving Size (Raw)	Phosphorus (mg/serving)	% DV
1	Soybeans, Mature	326	1/2 cup	654.7	52
2	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	563.5	45
3	Hemp Seeds, Hulled	415	1 oz / 28 g	467.8	37
4	Chicken Egg, Yolk	342	100 g (6 eggs)	390.0	31
5	Scallops, Mixed Species	645	4 oz / 115 g	384.1	31
6	Pigeon Peas (Red Gram), Mature	211	1/2 cup	376.2	30
7	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	345.2	28
8	Liver, Average	4192	3.5 oz / 100 g	326.7	26
9	Yogurt, Average	208	1 cup	316.1	25
10	Cassava	224	1 cup	313.1	25
11	Whitefish, Mixed Species	663	4 oz / 115 g	310.5	25
12	Salmon, Average	712	4 oz / 115 g	299.6	24
13	Swordfish	557	4 oz / 115 g	293.3	23
14	Coconut Cream, Raw	165	1 cup	292.8	23
15	Parmesan Cheese, Hard	138	1.5 oz / 40 g	291.5	23
16	European Anchovies, Canned in Oil	736	4 oz / 115 g	289.8	23
17	Flatfish (Flounder and Sole)	749	4 oz / 115 g	289.8	23
18	Tuna, Average	752	4 oz / 115 g	289.0	23
19	Trout, Mixed Species	710	4 oz / 115 g	281.8	23
20	Shrimp, Mixed Species	535	4 oz / 115 g	280.6	22
21	Cod, Average	453	4 oz / 115 g	278.3	22
22	Clam Juice, Canned	14744	1 cup	273.6	22
23	Goose, Average	230	3.5 oz / 100 g	273.0	22
24	Crayfish, Average	597	4 oz / 115 g	272.6	22
25	Atlantic Herring	996	4 oz / 115 g	271.4	22

Top Nutrivore Score Common Foods that Are an Excellent Source of Phosphorus

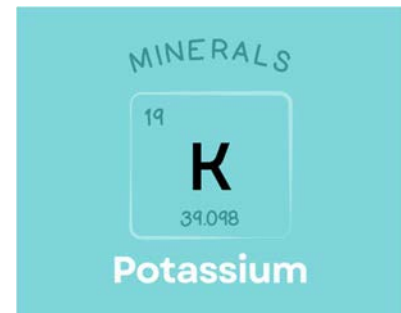
Rank	Food	Nutrivore Score	% DV
1	Clam Juice, Canned	14744	22
2	Liver, Average	4192	26
3	Atlantic Mackerel	922	20
4	Squid, Mixed Species	890	20
5	Herring, Average	876	21
6	Tuna, Average	752	23
7	Flatfish (Flounder and Sole)	749	23
8	European Anchovies, Canned in Oil	736	23
9	Salmon, Average	712	24
10	Trout, Mixed Species	710	23
11	Whitefish, Mixed Species	663	25
12	Sardines, Canned in Oil, w/ bone	654	45
13	Scallops, Mixed Species	645	31
14	Crayfish, Average	597	22
15	Swordfish	557	23
16	Albacore Tuna, Canned in Water	544	20
17	Shrimp, Mixed Species	535	22
18	Atlantic and Pacific Halibut	523	22
19	Haddock	464	21
20	Cod, Average	453	22
21	Hemp Seeds, Hulled	415	37
22	Eel, Mixed Species	385	20
23	Soybeans, Green (Edamame)	359	20
24	Chicken Egg, Yolk	342	31
25	Soybeans, Mature	326	52

★ VERY FEW PLANT FOODS OFFER HIGH AMOUNTS OF PHOSPHORUS:



Potassium

[Potassium](#) is an essential mineral that functions as an electrolyte, with roles in a wide variety of life-sustaining processes such as heart function, muscle contraction, nerve impulse transmission, blood pressure control, blood pH, and fluid balance. It also helps regulate hormone secretion and insulin and glucose metabolism. Studies show a protective effect of potassium against stroke, and this nutrient may also help reduce the risk of kidney stones and osteoporosis.



Top Common Food Sources of Potassium

Rank	Food	Nutrivore Score	Serving Size (Raw)	Potassium (mg/serving)	% DV
1	Soybeans, Mature	326	1/2 cup	1671.2	36
2	Pigeon Peas (Red Gram), Mature	211	1/2 cup	1426.8	30
3	Yam	167	1 cup, cubes	1224.0	26
4	Raisins, Average	104	1/2 cup	1080.3	23
5	Tomatoes, Sun-Dried	655	1/2 cup	925.3	20
6	Passion-Fruit, Purple	261	1 cup	821.3	17
7	Cassava	224	1 cup	811.6	17
8	Molasses	367	1 tbsp	796.9	17
9	Soybeans, Green (Edamame)	359	1/2 cup	793.6	17
10	Coconut Cream, Raw	165	1 cup	780.0	17
11	Apricots, Dried, Sulfured	130	1/2 cup	755.3	16
12	Tamarinds	77	1 cup, pulp	753.6	16
13	Water Chestnuts, Chinese (Matai)	257	1 cup, sliced	724.2	15
14	Guavas, Common	761	1 cup	688.1	15
15	Plantain, Average	180	1 cup, sliced	679.3	14
16	Lotus Root	344	1 cup	667.2	14
17	Jerusalem-Artichokes	195	1 cup, slices	643.5	14
18	Potatoes, Flesh and Skin	272	1 cup, diced	637.5	14
19	Prunes	176	1/2 cup, pitted	636.8	14
20	European Anchovies, Canned in Oil	736	4 oz / 115 g	625.6	13
21	Yogurt, Plain, Skim Milk	263	1 cup	624.8	13
22	Artichokes, (Globe or French)	771	1 cup	621.6	13
23	Lima Beans, Large, Mature	304	1/5 cup	620.6	13
24	Taro	178	1 cup, sliced	614.6	13
25	Coconut Water	271	1 cup	600.0	13

Top Nutrivore Score Common Foods that Are a Good Source of Potassium

Rank	Food	Nutrivore Score	% DV
1	Beet Greens	3259	12
2	Kohlrabi	2497	10
3	Tomato Juice, Canned, w/o salt added	1568	11
4	Artichokes, (Globe or French)	771	13
5	Guavas, Common	761	15
6	Pacific Herring	755	10
7	Shallots	740	11
8	European Anchovies, Canned in Oil	736	13
9	Salmon, Average	712	10
10	Butternut Squash	670	10
11	Tomatoes, Sun-Dried	655	20
12	Sardines, Canned in Oil, w/ bone	654	10
13	Rainbow Trout, Wild	645	12
14	Muscadine Grapes	644	10
15	Swordfish	557	10
16	Snapper, Mixed Species	548	10
17	Atlantic and Pacific Halibut	523	11
18	Kiwi, Average	476	12
19	Black Beans, Mature	446	12
20	Atlantic Cod	431	10
21	Mahimahi	416	10
22	Kidney Beans, Red, Mature	413	11
23	Grouper, Mixed Species	400	12
24	Pinto Beans, Mature	390	12
25	Sweet Potato	379	10

★ POTASSIUM CAN BE FOUND IN MANY DIFFERENT FOOD GROUPS...

- | | | |
|----------------|-------------------|-----------------|
| ✓ Leafy Greens | ✓ Tropical Fruit | ✓ Other Veggies |
| ✓ Root Veggies | ✓ Dried Fruit | ✓ Sugars |
| ✓ Legumes | ✓ Fish | ✓ Winter Squash |
| ✓ Juice | ✓ Alliums | |
| ✓ Dairy | ✓ Cruciferous Veg | |

Surprised bananas did not make the list? Bananas have 537.0 mg of potassium (11% DV) per serving (1 extra large banana).



Selenium

[Selenium](#) is a trace mineral needed by all mammals to sustain life. It serves as a component of the non-proteinogenic amino acids selenocysteine and selenomethionine, and also helps form over two dozen selenoproteins involved in reproduction, thyroid hormone metabolism, antioxidant defense, DNA synthesis, and immunity. Observational research suggests selenium could play a protective role against cancer, heart disease, asthma, and inflammatory bowel disease, although human trials have generally been lacking or contradictory. There's also evidence that selenium can play a preventative role in asthma and inflammatory bowel disease, while also reducing mortality in patients with sepsis.



Top Common Food Sources of Selenium

Rank	Food	Nutrivore Score	Serving Size (Raw)	Selenium (µg/serving)	% DV
1	Brazil Nuts, Dried	694	1 oz / 28 g	536.8	976
2	Kidney, Average	2558	3.5 oz / 100 g	152.6	278
3	European Anchovies, Canned in Oil	736	4 oz / 115 g	78.3	142
4	Albacore Tuna, Canned in Water	544	4 oz / 115 g	75.6	137
5	Northern Lobster	839	4 oz / 115 g	73.1	133
6	Swordfish	557	4 oz / 115 g	66.0	120
7	Tuna, Average	752	4 oz / 115 g	62.7	114
8	Oysters, Average	2759	4 oz / 115 g	61.5	112
9	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	60.6	110
10	Chicken Egg, Yolk	342	100 g / 6 eggs	56.0	102
11	Giblets, Average	1319	3.5 oz / 100 g	54.0	98
12	Atlantic and Pacific Halibut	523	4 oz / 115 g	52.4	95
13	Blue Mussels	1564	4 oz / 115 g	51.5	94
14	Squid, Mixed Species	890	4 oz / 115 g	51.5	94
15	Octopus, Common	1618	4 oz / 115 g	51.5	94
16	Atlantic Mackerel	922	4 oz / 115 g	50.7	92
17	Liver, Average	4192	3.5 oz / 100 g	48.4	88
18	Tilapia	409	4 oz / 115 g	48.1	87
19	Snapper, Mixed Species	548	4 oz / 115 g	43.9	80
20	Wheat, Durum	200	1/4 cup	42.9	78
21	Herring, Average	876	4 oz / 115 g	42.0	76
22	Mahimahi	416	4 oz / 115 g	42.0	76
23	Sea bass, Average	680	4 oz / 115 g	42.0	76
24	Grouper, Mixed Species	400	4 oz / 115 g	42.0	76
25	Crab, Average	1096	4 oz / 115 g	41.8	76

Top Nutrivore Score Common Foods that Are an Excellent Source of Selenium

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	88
2	Oysters, Average	2759	112
3	Kidney, Average	2558	278
4	Mustard Seed, Ground	1904	24
5	White Mushroom, Average	1878	29
6	Octopus, Common	1618	94
7	Blue Mussels	1564	94
8	Giblets, Average	1319	98
9	Crab, Average	1096	76
10	Clams, Mixed Species	1046	64
11	Atlantic Mackerel	922	92
12	Squid, Mixed Species	890	94
13	Herring, Average	876	76
14	Northern Lobster	839	133
15	Tuna, Average	752	114
16	Flatfish (Flounder and Sole)	749	56
17	European Anchovies, Canned in Oil	736	142
18	Salmon, Average	712	64
19	Trout, Mixed Species	710	26
20	Brazil Nuts, Dried	694	976
21	Sea Bass, Average	680	76
22	Whitefish, Mixed Species	663	26
23	Sardines, Canned in Oil, w/ bone	654	110
24	Scallops, Mixed Species	645	27
25	Crayfish, Average	597	63

★ Brazil nuts are not actually nuts, they are the seed of a tree's fruit, and that tree is also called a Brazil nut. The trees (and nuts) are not found solely in Brazil, but grow all over South America including Bolivia, Columbia, the Guiana's, Peru, Venezuela and Brazil.



Zinc

[Zinc](#) is an essential trace mineral that serves as a cofactor for over 300 enzymes and 1000 transcription factors, giving it important roles in immune function, sensory organ function, reproduction, gene regulation, DNA synthesis, wound healing, and the metabolism and activity of multiple other nutrients. Research shows it can reduce the duration of the common cold when taken shortly after the onset of illness, and can also benefit immune health in the elderly and among HIV/AIDS patients. Some studies also suggest a protective role of zinc in neurological conditions like Alzheimer's disease and depression.



Top Common Food Sources of Zinc

Rank	Food	Nutrivore Score	Serving Size (Raw)	Zinc (mg/serving)	% DV
1	Oysters, Average	2759	4 oz / 115 g	36.0	327
2	Beef, Average	293	3.5 oz / 100 g	4.8	44
3	Crab, Average	1096	4 oz / 115 g	4.8	43
4	Soybeans, Mature	326	1/2 cup	4.5	41
5	Liver, Average	4192	3.5 oz / 100 g	4.5	41
6	Goat	525	3.5 oz / 100 g	4.0	36
7	Emu, Ostrich, Average	551	3.5 oz / 100 g	3.9	35
8	Bison, Average	367	3.5 oz / 100 g	3.8	35
9	Giblets, Average	1319	3.5 oz / 100 g	3.3	30
10	Lamb, Average	263	3.5 oz / 100 g	3.2	30
11	Deer, Average	560	3.5 oz / 100 g	3.1	29
12	Game Meat, Average	528	3.5 oz / 100 g	3.0	28
13	Veal, Average	326	3.5 oz / 100 g	3.0	27
14	Pigeon Peas (Red Gram), Mature	211	1/2 cup	2.8	26
15	Hemp Seeds, Hulled	415	1 oz / 28 g	2.8	26
16	European Anchovies, Canned in Oil	736	4 oz / 115 g	2.8	26
17	Turkey, Dark, Average	326	3.5 oz / 100 g	2.7	25
18	Wild Rice	154	1/4 cup	2.4	22
19	Yogurt, Plain, Skim Milk	263	1 cup	2.4	22
20	Coconut Cream, Raw	165	1 cup	2.3	21
21	Kidney, Average	2558	3.5 oz / 100 g	2.3	21
22	Chicken Egg, Yolk	342	100 g / 6 eggs	2.3	21
23	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	2.2	20
24	Sesame Seeds, Dried	299	1 oz / 28 g	2.2	20
25	Pork, Average	287	3.5 oz / 100 g	2.1	19

Top Nutrivore Score Common Foods that Are an Excellent Source of Zinc

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	41
2	Oysters, Average	2759	327
3	Kidney, Average	2558	21
4	Giblets, Average	1319	30
5	Crab, Average	1096	43
6	Northern Lobster	839	37
7	European Anchovies, Canned in Oil	736	26
8	Deer, Average	560	29
9	Emu, Ostrich, Average	551	35
10	Game Meat, Average	528	28
11	Goat	525	36
12	Hemp Seeds, Hulled	415	26
13	Bison, Average	367	35
14	Chicken Egg, Yolk	342	21
15	Soybeans, Mature	326	41
16	Turkey, Dark, Average	326	25
17	Veal, Average	326	27
18	Sesame Seeds, Dried	299	20
19	Beef, Average	293	44
20	Pumpkin Seeds, Shelled, Dried	271	20
21	Lamb, Average	263	30
22	Yogurt, Plain, Skim Milk	263	22
23	Pigeon Peas (Red Gram), Mature	211	26
24	Coconut Cream, Raw	165	21
25	Wild Rice	154	22

★ There are only 7 plant-based sources of zinc that make the top 25 common food sources list.

WILD RICE



PIEGEON PEAS



PUMPKIN SEEDS



SOYBEANS



SESAME SEEDS



COCONUT CREAM



HEMP SEEDS



Phytonutrients



[Phytonutrients](#) are amazing gifts from the plant kingdom. Phytonutrients are nutritive compounds in plants that, while not technically considered essential (which is why they are no longer categorized as vitamins), are absolutely vital for optimal health and disease prevention.

Phytonutrients are biologically-active compounds in plants (derived from the Greek *phyton* meaning “plant”), where they serve a variety of functions, such as supporting plant growth and reproduction, or providing defense against pathogens, predators or competitors. Even though the human body cannot synthesize phytonutrients, they are not classified as essential nutrients, a fact that reflects more

closely our limited knowledge of exactly how these 10,000-plus compounds benefit human health rather than their nutritional importance.

Phytonutrients are responsible for giving many fruits and vegetables their rich colors and unique scents, like the deep red of tomatoes or the aroma of garlic. They’re also a big reason why unprocessed plant foods (fruits and veggies in whole food form) are found to be disease-protective in study after study. Certain phytonutrients have the ability to slow the growth of cancer cells, help regulate hormones, prevent DNA damage, protect against oxidative stress, reduce inflammation, and induce apoptosis (death) in damaged cells (like a spring cleanup)—just to name a few of their beneficial activities. No wonder studies show that the higher our consumption of these beneficial compounds, the lower our risk of chronic disease.

A few classes of phytonutrients are the subject of intense study for their promising roles in supporting human health. These include carotenoids (vitamin A precursor molecules like β -carotene), chlorophyll, sterols and stanols, glucosinolates, organosulfur compounds, and polyphenols.

Science has only scratched the surface of the 40,000+ phytonutrients in existence, but we know enough so far to say that many of these compounds are true rock stars! We have mounting research that a few classes of phytonutrients in particular play such a major role in human health that their dietary abundance is a necessary feature of any food plan designed to promote health.

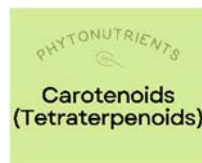
Recommended Nutrient Targets for Phytonutrients

Nutrient	19-50 Female**	19-50 Male**	Upper Limit
	Recommended Target (RT)	Recommended Target (RT)	
*Betain (mg)	25	25	Not established
*Carotenoids (µg)	9000	9000	Not established
*Glucosinolates (mg)	60	60	Not established
*Phytosterols (mg)	1300	1300	Not established
*Polyphenols (mg)	800	800	Not established
*Thiosulfinates (mg)	12	12	Not established

* Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health and reduction of chronic disease risk.

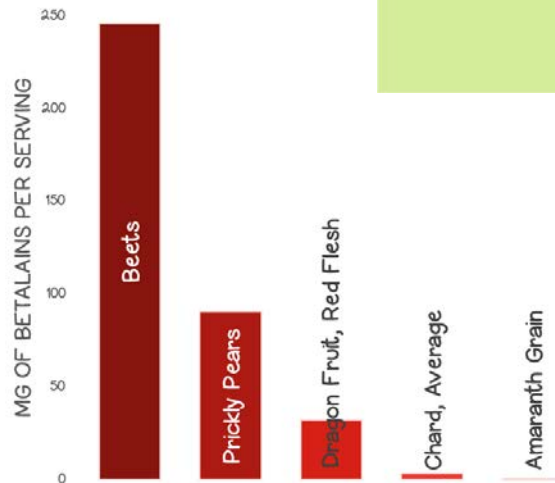
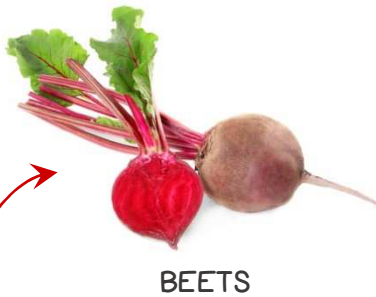
**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following phytonutrients:



Betalains

[Betalains](#) are a class of red to yellow pigments found in certain plants, including beets (in which they were first identified), chard, amaranth, cactus pear, pitahaya (dragon fruit), and some species of wild mushrooms. Betalains demonstrate a variety of health-promoting biological activities, reducing risk of cancer, cardiovascular disease, and type 2 diabetes, with emerging evidence of benefit to neurodegenerative diseases as well.



Top Common Food Sources of Betalains

Rank	Food	Nutrivore Score	Serving Size (Raw)	Betalains (mg/serving)	% RT
1	Beets	2013	1 cup	245.7	983
2	Prickly Pears	881	1 cup	90.6	362
3	Dragon Fruit, Red Flesh	800	1 cup	32.2	129
4	Chard, Average	6386	2 cups	3.3	13
5	Amaranth Grain	207	1/4 cup	0.3	1

Top Nutrivore Score Common Foods that Are a Good Source of Betalains

Rank	Food	Nutrivore Score	% RT
1	Chard, Average	6386	13
2	Beets	2013	983
3	Prickly Pears	881	362
4	Dragon Fruit, Red Flesh	800	129

Carotenoids (Tetraterpenoids)

[Carotenoids](#) are a diverse group of phytonutrients that are responsible for giving fruits and vegetables vibrant red, orange, and yellow pigmentation. Across studies, eating foods high in carotenoids appears to reduce the risk of head and neck cancers, supports vision health (particularly age-related eye diseases), may protect against metabolic syndrome and diabetes, and can reduce inflammation. Carotenoids have strong antioxidant properties, and help facilitate communication between cells by promoting the synthesis of connexin proteins, which create gap junctions in cell membranes that allow small molecules to be exchanged (which is part of how cells “talk” to each other!). Consuming carotenoids with fat significantly increases their absorption.



Top Common Food Sources of Carotenoids

Rank	Food	Nutrivore Score	Serving Size (Raw)	Carotenoids (µg/serving)	% RT
1	Goji Berries, Dried	780	1/2 cup	89062.4	990
2	Tomato Juice, Canned, w/o salt added	1568	1 cup	22761.8	253
3	Dandelion Greens	2815	2 cups	21942.8	244
4	Turnip Greens	6370	2 cups	21754.7	242
5	Kumquats	381	1 cup	18967.5	211
6	Carrots	899	1 cup	15384.3	171
7	Butternut Squash	670	1 cup, cubes	11943.4	133
8	Sweet Potato	379	1 cup	11326.3	126
9	Spinach	4548	2 cups	10694.4	119
10	Chard, Average	6386	2 cups	10578.2	118
11	Pumpkin	1036	1 cup, 1 " cubes	9994.6	111
12	Tomatoes, Red, Ripe	983	1 cup	9597.6	107
13	Guavas, Common	761	1 cup	9203.7	102
14	Passion-Fruit, Purple	261	1 cup	9036.9	100
15	Chinese Broccoli	2431	1 cup	8881.6	99
16	Watermelon	405	1 cup, diced	7479.9	83
17	Romaine (Cos) Lettuce	2128	2 cups	7085.7	79
18	Radicchio	2471	2 cups	7078.4	79
19	Mustard Greens	5464	2 cups	6238.4	69
20	Collard Greens (Collards)	3323	2 cups	5296.3	59
21	Watercress	6929	2 cups	5223.1	58
22	Grapefruit, Pink and Red	361	1 cup	4873.7	54
23	Fiddlehead Ferns	1721	1 cup	4648.7	52
24	Mangos	342	1 cup	4631.2	51
25	Kale	4233	2 cups	4580.5	51

Top Nutrivore Score Common Foods that Are an Excellent Source of Carotenoids

Rank	Food	Nutrivore Score	% RT
1	Watercress	6929	58
2	Chard, Average	6386	118
3	Turnip Greens	6370	242
4	Spinach	4548	119
5	Kale	4233	51
6	Nori (Laver) Seaweed	3910	28
7	Bok Choy	3428	21
8	Collard Greens (Collards)	3323	59
9	Beet Greens	3259	45
10	Brussels Sprouts	2817	20
11	Dandelion Greens	2815	244
12	Radicchio	2471	79
13	Chinese Broccoli	2431	99
14	Arugula	2019	22
15	Lettuce, Average	1953	47
16	Fiddlehead Ferns	1721	52
17	Summer Squash, All Varieties	1596	28
18	Tomato Juice, Canned, w/o salt added	1568	253
19	Zucchini, w/ skin	1477	28
20	Peppers, Sweet, Red	1358	22
21	Leeks (Bulb and Lower Leaf-Portion)	1128	29
22	Pumpkin	1036	111
23	Tomatoes, Red, Ripe	983	107
24	Carrots	899	171
25	Paprika	847	39

★ DID YOU KNOW...



You can further increase the bioavailability of carotenoids by chopping, puréeing, and cooking carotenoid-containing vegetables.

Glucosinolates

[Glucosinolates](#) are well-studied sulfur-containing compounds which break down into bioactive *isothiocyanates* and *indoles* when vegetables are damaged (via chewing, cutting, or other processing). Isothiocyanates (like sulforaphane) are absolute rock stars as far as human health is concerned! Research spanning human epidemiology, animal models, and *in vitro* experiments show that dietary isothiocyanates are inversely associated with bladder cancer, lung cancer, colon cancer, breast cancer, and pancreatic cancer; some evidence also suggests they may be able to improve ventricular function following heart attacks.



Indoles also have powerful cancer prevention benefits through multiple mechanisms that include modulation of phases I and II detoxification enzymes, regulation of cell cycle arrest, control of cell growth, induction of apoptosis, antioxidant activity, anti-angiogenic effects, and epigenetic regulation. Indole-3-carbinol breaks down into 3,3'-Diindolylmethane (DIM), which is known for its anti-inflammatory, immune system modulating, cancer prevention and estrogen metabolism benefits.

Top Common Food Sources of Glucosinolates

Rank	Food	Nutrivore Score	Serving Size (Raw)	Glucosinolates (mg/serving)	% RT
1	Turnip Greens	6370	2 cups	810.7	1351
2	Mustard Greens	5464	2 cups	609.8	1016
3	Radish, Average	5506	1 cup	585.8	976
4	Kohlrabi	2497	1 cup	399.6	666
5	Brussels Sprouts	2817	1 cup	392.0	653
6	Turnips	1954	1 cup, cubes	344.5	574
7	Broccoli	2833	1 cup	298.5	497
8	Mustard Seed, Ground	1904	1 tbsp	277.3	462
9	Kale	4233	2 cups	158.6	264
10	Chinese Cabbage (Pe-Tsai)	3020	1 cup, shredded	146.7	244
11	Collard Greens (Collards)	3323	2 cups	144.5	241
12	Green Cabbage	2034	1 cup, chopped	131.7	220
13	Rutabagas	766	1 cup	128.8	215
14	Wasabi	523	1 tbsp	118.7	198
15	Broccoli Raab (Rapini)	4155	1 cup, chopped	111.7	186
16	Cauliflower	1585	1 cup, chopped	84.1	140
17	Red Cabbage	1369	1 cup, chopped	72.1	120
18	Bok Choy	3428	1 cup, shredded	70.7	118
19	Watercress	6929	2 cups	64.6	108
20	Savoy Cabbage	1321	1 cup, shredded	61.6	103

21	Chinese Broccoli	2431	1 cup	54.7	91
22	Papaya	636	1 cup, 1" pieces	53.7	89
23	Arugula	2019	2 cups	39.2	65
24	Capers, Canned	5247	1 tbsp	30.9	51
25	Horseradish, Prepared	850	1 tbsp	24.0	40

Top Nutrivore Score Common Foods that Are an Excellent Source of Glucosinolates

Rank	Food	Nutrivore Score	% RT
1	Watercress	6929	108
2	Turnip Greens	6370	1351
3	Radish, Average	5506	976
4	Mustard Greens	5464	1016
5	Capers, Canned	5247	51
6	Kale	4233	264
7	Broccoli Raab (Rapini)	4155	186
8	Bok Choy	3428	118
9	Collard Greens (Collards)	3323	241
10	Chinese Cabbage (Pe-Tsai)	3020	244
11	Broccoli	2833	497
12	Brussels Sprouts	2817	653
13	Kohlrabi	2497	666
14	Chinese Broccoli	2431	91
15	Green Cabbage	2034	220
16	Arugula	2019	65
17	Turnips	1954	574
18	Mustard Seed, Ground	1904	462
19	Cauliflower	1585	140
20	Red Cabbage	1369	120
21	Savoy Cabbage	1321	103
22	Horseradish, Prepared	850	40
23	Rutabagas	766	215
24	Sauerkraut, Canned	710	22
25	Papaya	636	89



★ About 70% of us can detect a bitter taste in cruciferous veggies, and about 20% of us have two copies of the bitter sensitivity gene and if that's you, you're much more likely to hate cruciferous vegetables, eat fewer vegetables in general, and gravitate towards sweet treats!

Phytosterols

[Plant sterols and stanols](#) (together, referred to as phytosterols) are a sub-group of triterpenes with a steroid hormone structure. They block absorption of cholesterol in the gastrointestinal tract, which lowers LDL cholesterol, reducing atherosclerosis and heart disease risk. Research has shown that eating at least 2 grams of plant sterols per day can lower LDL cholesterol by 5 to 10%. In addition, phytosterols have antioxidant and anti-inflammatory properties, improve blood sugar regulation and insulin sensitivity, and improve the composition of the gut microbiome.



Top Common Food Sources of Phytosterols

Rank	Food	Nutrivore Score	Serving Size (Raw)	Phytosterols (mg/serving)	% RT
1	Strawberries	762	1 cup	719.7	55
2	Kumquats	381	1 cup	404.6	31
3	Corn Oil	103	1 tbsp	134.8	10
4	Canola Oil	176	1 tbsp	125.1	10
5	Soybeans, Mature	326	1/2 cup	115.1	9
6	Sesame Seeds, Dried	299	1 oz / 28 g	113.1	9
7	Raisins, Average	104	1/2 cup	107.4	8
8	Coconut Milk or Cream	175	1 cup	96.0	7
9	Tofu, Average	288	1/4 cup	92.5	7
10	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	90.2	7
11	Sesame Oil	127	1 tbsp	86.7	7
12	Pistachios	265	1 oz / 28 g	83.2	6
13	Black Beans, Mature	446	1/5 cup	80.0	6
14	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	77.8	6
15	Pine Nuts, Dried	222	1 oz / 28 g	66.4	5
16	Flaxseed Oil, Cold Pressed	428	1 tbsp	63.5	5
17	Lentil, Average	466	1/5 cup	61.1	5
18	Sunflower Oil, High-Oleic	105	1 tbsp	61.0	5
19	Flaxseed	515	1 oz / 28 g	58.8	5
20	Almonds	234	1 oz / 28 g	58.2	4
21	Avocado, Average	271	1/4 cup	52.1	4
22	Macadamia Nuts	167	1 oz / 28 g	55.4	4
23	Clementines	291	1 cup	50.7	4
24	Tangerines (Mandarin Oranges)	238	1 cup sections	49.7	4
25	Kidney Beans, Red, Mature	413	1/5 cup	49.6	4

Top Nutrivore Score Common Foods that Are a Good Source of Phytosterols

Rank	Food	Nutrivore Score	% RT
1	Strawberries	762	55
2	Kumquats	381	31
3	Canola Oil	176	10
4	Corn Oil	103	10



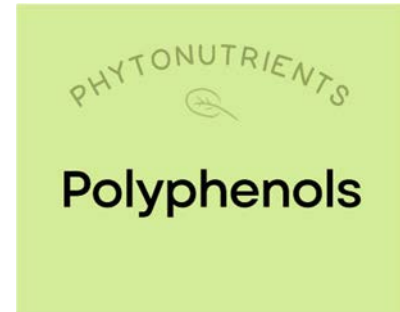
STRAWBERRIES



KUMQUATS

Polyphenols

Polyphenols play a huge role in protecting against cancer, heart disease, diabetes, asthma, osteoporosis, neurodegenerative diseases, and other conditions associated with oxidative stress. In fact, a major reason foods like red wine and olive oil (as well as diets rich in both, such as the Mediterranean diet) show up as so beneficial may be due to their high polyphenol content! Along with chronic diseases, supplementing with polyphenols has been shown to protect against infections and reduce the signs of aging. Polyphenols exert their most potent effects by acting as antioxidants—preventing cellular damage by neutralizing hazardous oxygen radicals and improving cellular health as a result (which, in turn, benefits virtually every system in the body). As a result of their antioxidant properties, polyphenols also boost the immune system and protect against both chronic and acute diseases. In addition, polyphenols can help regulate enzyme function, stimulate cell receptors, modulate the functions of inflammatory cells (including T and B lymphocytes, macrophages, platelets, and natural killer cells), alter adhesion molecule expression, affect nerve cells and cardiac muscle cells, and exert antiviral effects.



Top Common Food Sources of Polyphenols

Rank	Food	Nutrivore Score	Serving Size (Raw)	Polyphenols (mg/serving)	% RT
1	Fiddlehead Ferns	1721	1 cup	3097.7	387
2	Quinces	336	1 cup	3094.5	387
3	Adzuki Beans, Mature Seeds	576	1/6 cup	2945.2	368
4	Lentil, Average	466	1/5 cup	2616.1	327
5	Plums	521	1 cup, sliced	2310.0	289
6	Cocoa Powder, Unsweetened	1024	1 oz / 28 g	2249.2	281
7	Cassava	224	1 cup	2241.3	280
8	Black Beans, Mature	446	1/5 cup	2214.0	277
9	Artichokes, (Globe or French)	771	1 cup	2192.4	274
10	Mulberries	719	1 cup	2127.9	266
11	Asian Pears	621	1 cup, sliced	2000.8	250
12	Kidney Beans, Red, Mature	413	1/5 cup	1985.3	248
13	Pinto Beans, Mature	390	1/5 cup	1829.4	229
14	Broad Beans (Fava Beans), Mature	442	1/5 cup	1677.0	210
15	Currants, European Black	811	1 cup	1579.2	197
16	Coffee, Instant, Average	6078	6 oz / 3/4 cup	1552.0	194
17	Raisins, Average	104	1/2 cup	1544.3	193
18	Persimmons, Japanese	537	1 cup, diced	1540.2	193
19	Great Northern Beans, Mature	419	1/6 cup	1538.9	192
20	Blackberries	743	1 cup	1520.6	190
21	Blueberries	396	1 cup	1422.3	178

22	Buckwheat	303	1/4 cup	1419.0	177
23	Cloves, Ground	2209	1 tbsp	1398.4	175
24	Chocolate, Dark, 70-85% Cacao	235	1 oz / 28 g	1242.4	155
25	Pomegranates	256	1 cup, arils	1240.8	155

Top Nutrivore Score Common Foods that Are an Excellent Source of Polyphenols

Rank	Food	Nutrivore Score	% RT
1	Watercress	6929	89
2	Chard, Average	6386	97
3	Coffee, Instant, Average	6078	194
4	Mustard Greens	5464	52
5	Capers, Canned	5247	39
6	Spinach	4548	52
7	Enoki Mushrooms	4434	51
8	Coffee, Average	4431	64
9	Kale	4233	22
10	Nori (Laver) Seaweed	3910	90
11	Tea, Average	3721	53
12	Bok Choy	3428	23
13	Collard Greens (Collards)	3323	22
14	Beet Greens	3259	63
15	Broccoli	2833	38
16	Brussels Sprouts	2817	39
17	Dandelion Greens	2815	102
18	Kohlrabi	2497	28
19	Radicchio	2471	101
20	Espresso Coffee	2304	25
21	Cloves, Ground	2209	175
22	Beets	2013	41
23	Fiddlehead Ferns	1721	387
24	Cabbage, Average	1702	50
25	Summer Squash, All Varieties	1596	122

★ AN INFAMOUS FOOD THAT DOES NOT MAKE THE TOP 25 BUT IS “PHENOL-MENAL” IN ITS OWN RIGHT...



OLIVE OIL

Thiosulfinates

[Thiosulfinates](#) are the compounds responsible for the distinctive pungent flavor of allium vegetables (such as onions, garlic, shallots, and leeks). Thiosulfinates provide diverse beneficial effects, including powerful anticancer properties as well as antioxidant, anti-inflammatory, and antithrombotic effects. In general, thiosulfinates exert their effects by modulating important enzymes (like the cytochrome P450 superfamily and glutathione S-transferases) that help detoxify carcinogens and prevent DNA adducts from forming.



Top Common Food Sources of Thiosulfinates

Rank	Food	Nutrivore Score	Serving Size (Raw)	Thiosulfinates (mg/serving)	% RT
1	Garlic Powder	5529	1 tbsp	206.3	1720
2	Garlic	5622	1 tbsp	81.4	678
3	Shallots	740	1 cup	75.3	628
4	Leeks (Bulb and Lower Leaf-Portion)	1128	1 cup	47.7	397
5	Welsh Onions	1704	1 cup	32.5	271
6	Chives	3531	1/4 cup	8.4	70
7	Spring Onions or Scallions	1932	1/4 cup	8.1	68
8	Onions	380	1 cup	7.5	62
9	Green Onions (Tops Only)	2097	1/4 cup	5.8	48
10	Onion Powder	348	1 tbsp	3.8	32
11	Dehydrated Onion Flakes	392	1 tbsp	2.8	24

Top Nutrivore Score Common Foods that Are an Excellent Source of Thiosulfinates

Rank	Food	Nutrivore Score	% RT
1	Garlic	5622	678
2	Garlic Powder	5529	1720
3	Chives	3531	70
4	Green Onions (Tops Only)	2097	48
5	Spring Onions or Scallions	1932	68
6	Welsh Onions	1704	271
7	Leeks (Bulb and Lower Leaf-Portion)	1128	397
8	Shallots	740	628
9	Dehydrated Onion Flakes	392	24
10	Onions	380	62
11	Onion Powder	348	32

Proteins & Amino Acids



[Proteins](#) are the molecules that actually perform most of the various functions of life. In addition to being major structural components of cells and tissues, they have incredibly diverse roles from driving chemical reactions (e.g., enzymes) to signaling (e.g., some types of hormones) to transporting and storing nutrients.

Proteins are made from long chains of amino acids, anywhere from twenty to more than two thousand amino acids long. Amino acids have the general molecular formula of $R-CH(NH_2)-COOH$. NH_2 is the basic amino group, $COOH$ is an acidic carboxyl group, and R represents a molecular unit called a *side chain* that is unique for each amino acid. The chemical properties of the side chain create classes

of amino acids: nonpolar and aliphatic; aromatic (generally nonpolar); polar but uncharged; negatively charged (acidic); and positively charged (basic).

While approximately five hundred different amino acids have been identified in various life forms, only twenty are used to build every single type of protein in the human body. These twenty are further subdivided into 3 categories: essential (our bodies can't make them so they must be obtained from food) – histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine; conditionally essential (other amino acids *can* be converted into these amino acids but the process is so inefficient most of the time we still need to get them from food) – arginine, cysteine, glutamine, glycine, proline, and tyrosine; and non-essential amino acids (our bodies can make them in sufficient quantities provided there is enough protein in our diet) – alanine, asparagine, aspartic acid, glutamic acid, and serine.

In addition, a variety of non-proteinogenic amino acids, that is amino acids that are not encoded into our DNA nor incorporated into proteins, have biological roles in the human body. Some examples include anserine, carnosine, creatine, ergothioneine, GABA, 4-hydroxyproline, levodopa, ornithine, taurine, and theanine.

Recommended Daily Allowance (RDA) and Nutrient Targets for Proteins and Amino Acids

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
*Ergothioneine (mg)	2.25		2.25		Not established
*Taurine (mg)	400		400		Not established
Protein (g)	46		56		Not established

* Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health and reduction of chronic disease risk.

**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following proteins and amino acids:



Protein

Dietary [protein](#) is necessary to supply the amino acid building blocks for all of the proteins in our bodies. The recommended daily allowance of protein is 0.36 grams per pound body weight (0.8 grams per kilogram of body weight). That amounts to 56 grams for a 150-pound person. However, it's important to emphasize that this number is considered a minimum daily allotment, and there is no established upper limit. In fact, many studies have evaluated diets containing three to four times more protein than this minimum and proven benefits to weight management, body composition, hormone regulation, and cardiovascular health. These studies suggest that an optimal protein intake for most people is probably in the range of 1.2 to 1.8 grams per kilogram bodyweight (82 to 122 grams for that same 150-pound person), and that people who are very active may see the best results at even higher intake.



Top Common Food Sources of Protein

Rank	Food	Nutrivore Score	Serving Size (Raw)	Protein (g/serving)	% DV
1	Soybeans, Mature	326	1/2 cup	33.9	68
2	European Anchovies, Canned in Oil	736	4 oz / 115 g	33.2	66
3	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	28.3	57
4	Albacore Tuna, Canned in Water	544	4 oz / 115 g	27.2	54
5	Tuna, Average	752	4 oz / 115 g	26.7	53
6	Trout, Mixed Species	710	4 oz / 115 g	23.9	48
7	Salmon, Average	712	4 oz / 115 g	23.9	48
8	Snapper, Mixed Species	548	4 oz / 115 g	23.6	47
9	Tilapia	409	4 oz / 115 g	23.1	46
10	Swordfish	557	4 oz / 115 g	22.6	45
11	Deer, Average	560	3.5 oz / 100 g	22.4	45
12	Emu, Ostrich, Average	551	3.5 oz / 100 g	22.3	45
13	Grouper, Mixed Species	400	4 oz / 115 g	22.3	45
14	Game Meat, Average	528	3.5 oz / 100 g	22.2	44
15	Pigeon Peas (Red Gram), Mature	211	1/2 cup	22.2	44
16	Turkey, Whole, Average	334	3.5 oz / 100 g	22.1	44
17	Greek Yogurt, Plain, Whole Milk	178	1 cup	22.1	44
18	Whitefish, Mixed Species	663	4 oz / 115 g	22.0	44
19	Fresh Water Bass, Mixed Species	555	4 oz / 115 g	21.7	43
20	Atlantic Mackerel	922	4 oz / 115 g	21.4	43
21	Beef, Lean, Average	321	3.5 oz / 100 g	21.4	43
22	Atlantic and Pacific Halibut	523	4 oz / 115 g	21.3	43
23	Bison, Average	367	3.5 oz / 100 g	21.3	43

24	Mahimahi	416	4 oz / 115 g	21.3	43
25	Eel, Mixed Species	385	4 oz / 115 g	21.2	42

Top Nutrivore Score Common Foods that Are an Excellent Source of Protein

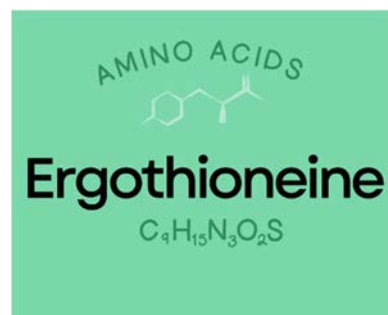
Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	39
2	Kidney, Average	2558	33
3	Octopus, Common	1618	34
4	Blue Mussels	1564	27
5	Giblets, Average	1319	36
6	Crab, Average	1096	42
7	Clams, Mixed Species	1046	34
8	Atlantic Mackerel	922	43
9	Squid, Mixed Species	890	36
10	Herring, Average	876	40
11	Northern Lobster	839	38
12	Tuna, Average	752	53
13	Flatfish (Flounder and Sole)	749	29
14	European Anchovies, Canned in Oil	736	66
15	Salmon, Average	712	48
16	Trout, Mixed Species	710	48
17	Sea Bass, Average	680	42
18	Whitefish, Mixed Species	663	44
19	Sardines, Canned in Oil, w/ bone	654	57
20	Scallops, Mixed Species	645	28
21	Crayfish, Average	597	35
22	Deer, Average	560	45
23	Swordfish	557	45
24	Fresh Water Bass, Mixed Species	555	43
25	Emu, Ostrich, Average	551	45

★ The only non-animal food that shows up on either of these lists is ALSO the number 1 top common food source of protein: SOYBEANS!



Ergothioneine

Ergothioneine is a non-proteinogenic amino acid with powerful antioxidant and anti-inflammatory properties shown to mitigate diseases associated with aging, including cardiovascular disease, cancer, liver disease, cataracts, and Alzheimer's disease. It has been shown to enhance memory, reduce risk of depression, reduce neuroinflammation, and improve sleep. There's evidence for a role in fetal development, female fertility, and it reduces risk of preeclampsia. Ergothioneine has even been called the "longevity vitamin" since studies show that it reduces all-cause mortality and is associated with longer lifespan.



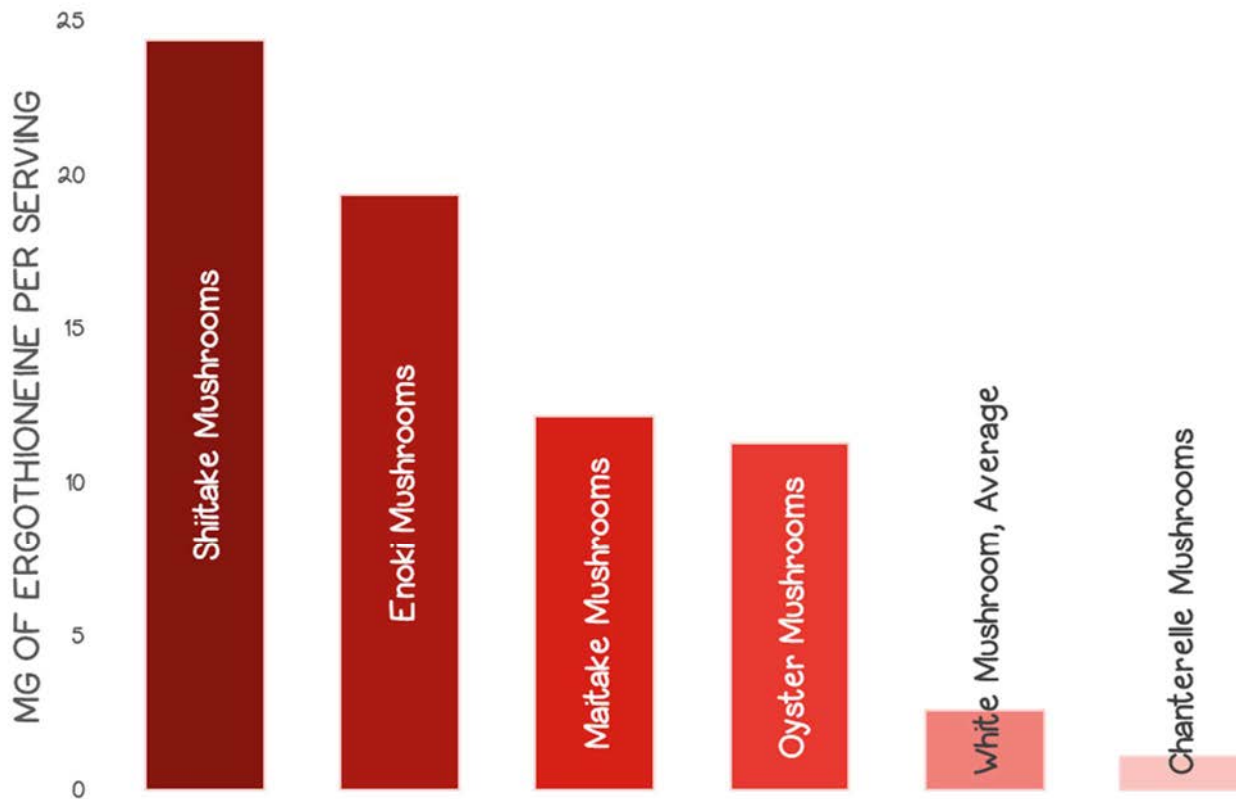
Top Common Food Sources of Ergothioneine

Rank	Food	Nutrivore Score	Serving Size (Raw)	Ergothioneine (mg/serving)	% RT
1	Shiitake Mushrooms	4343	1 cup, sliced	24.4	1086
2	Enoki Mushrooms	4434	1 cup, sliced	19.4	861
3	Maitake Mushrooms	3551	1 cup, diced	12.2	541
4	Oyster Mushrooms	2550	1 cup, sliced	11.3	500
5	Tempeh	438	1/2 cup	3.4	150
6	White Mushroom, Average	1878	1 cup	2.6	116
7	Asparagus	1385	1 cup	1.5	66
8	Chanterelle Mushrooms	1555	1 cup	1.1	49
9	Liver, Average	4192	3.5 oz / 100 g	0.6	26
10	Black Beans, Mature	446	1/5 cup	0.5	23
11	Kidney, Average	2558	3.5 oz / 100 g	0.3	15
12	Kidney Beans, Red, Mature	413	1/5 cup	0.2	7
13	Pork, Average	287	3.5 oz / 100 g	0.2	7
14	Beef, Average	293	3.5 oz / 100 g	0.1	6
15	Garlic	5622	1 tbsp	0.1	5
16	Brazil Nuts, Dried	694	1 oz / 28 g	0.1	5
17	Lamb, Average	263	3.5 oz / 100 g	0.1	5
18	Chicken, Whole, Average	273	3.5 oz / 100 g	0.1	5
19	Passion-Fruit, Purple	261	1 cup	0.1	3
20	Oats	208	1/4 cup	0.1	3
21	Kiwi, Average	476	1 cup, sliced	0.1	3
22	Parsnips	372	1 cup, sliced	0.1	3
23	Chicken Egg, Whole	355	100 g / 2 large	0.1	3
24	Pistachios	265	1 oz / 28 g	0.1	2
25	Almonds	234	1 oz / 28 g	0.1	2

Top Nutrivore Score Common Foods that Are an Excellent Source of Ergothioneine

Rank	Food	Nutrivore Score	% RT
1	Enoki Mushrooms	4434	861
2	Shiitake Mushrooms	4343	1086
3	Liver, Average	4192	26
4	Maitake Mushrooms	3551	541
5	Oyster Mushrooms	2550	500
6	White Mushroom, Average	1878	116
7	Pork Kidney	1650	34
8	Chanterelle Mushrooms	1555	49
9	Asparagus	1385	66
10	Black Beans, Mature	446	23
11	Tempeh	438	150

★ Mushrooms are by far the best source of ergothioneine, but one kicks the “shiitake” out of the others...



Taurine

Taurine is a non-proteinogenic amino sulfonic acid that supports neurological development, serves as a major component of bile (which helps to digest fats), and plays a role in water and mineral regulation within the blood (including through membrane stabilization and calcium signaling). Taurine also regulates the immune system and serves as an important antioxidant, and it plays a role in cardiovascular function and the development of skeletal muscle.



Top Common Food Sources of Taurine

Rank	Food	Nutrivore Score	Serving Size (Raw)	Taurine (mg/serving)	% RT
1	Scallops, Mixed Species	645	4 oz / 115 g	951.9	238
2	Blue Mussels	1564	4 oz / 115 g	753.7	188
3	Clams, Mixed Species	1046	4 oz / 115 g	598.8	150
4	Oysters, Average	2759	4 oz / 115 g	456.2	114
5	Octopus, Common	1618	4 oz / 115 g	448.5	112
6	Squid, Mixed Species	890	4 oz / 115 g	410.2	103
7	Tuna, Average	752	4 oz / 115 g	381.8	95
8	Chicken, Whole, Average	273	3.5 oz / 100 g	378.0	95
9	Crab, Average	1096	4 oz / 115 g	319.7	80
10	Turkey, Whole, Average	334	3.5 oz / 100 g	306.0	77
11	Lamb, Average	263	3.5 oz / 100 g	300.6	75
12	Flatfish (Flounder and Sole)	749	4 oz / 115 g	294.4	74
13	Shrimp, Mixed Species	535	4 oz / 115 g	178.5	45
14	Whitefish, Mixed Species	663	4 oz / 115 g	173.7	43
15	Cod, Average	453	4 oz / 115 g	124.2	31
16	Pork, Average	287	3.5 oz / 100 g	118.0	30
17	Liver, Average	4192	3.5 oz / 100 g	106.7	27
18	Beef, Average	293	3.5 oz / 100 g	100.0	25
19	Atlantic Mackerel	922	4 oz / 115 g	89.7	22
20	Salmon, Average	712	4 oz / 115 g	69.0	17
21	Veal, Average	326	3.5 oz / 100 g	40.0	10
22	Atlantic and Pacific Halibut	523	4 oz / 115 g	36.8	9
23	Haddock	464	4 oz / 115 g	32.2	8
24	Yogurt, Plain, Skim Milk	263	1 cup	8.1	2
25	Milk, Average	245	1 cup	5.9	1

Top Nutrivore Score Common Foods that Are a Good Source of Taurine

Rank	Food	Nutrivore Score	% RT
1	Liver, Average	4192	27
2	Oysters, Average	2759	114
3	Octopus, Common	1618	112
4	Blue Mussels	1564	188
5	Crab, Average	1096	80
6	Clams, Mixed Species	1046	150
7	Atlantic Mackerel	922	22
8	Squid, Mixed Species	890	103
9	Tuna, Average	752	95
10	Flatfish (Flounder and Sole)	749	74
11	Salmon, Average	712	17
12	Whitefish, Mixed Species	663	43
13	Scallops, Mixed Species	645	238
14	Shrimp, Mixed Species	535	45
15	Cod, Average	453	31
16	Turkey, Whole, Average	334	77
17	Veal, Average	326	10
18	Beef, Average	293	25
19	Pork, Average	287	30
20	Chicken, Whole, Average	273	95
21	Lamb, Average	263	75

★ Taurine is present in very different quantities when comparing light and dark meat...

TURKEY, DARK MEAT
306 mg/100 g



TURKEY, LIGHT MEAT
30 mg/100 g

CHICKEN, DARK MEAT
170 mg/100 g



CHICKEN, LIGHT MEAT
18 mg/100 g

Vitamins & Vitamin-Like Compounds



The term *vitamin* is derived from the Latin *vita*, meaning “essence of life.” Discovered predominantly in the late nineteenth and early twentieth centuries, vitamins were labeled with letters (A, B, C, D, E, etc.) as they were discovered, until technological advances permitting the identification of molecular structures changed the nomenclature.

Other substances originally labeled as vitamins lost their classification once their structure was identified; for example, flavonoids were originally given the name vitamin P.

[Vitamins](#) can be broadly divided into two classes:

- **FAT-SOLUBLE VITAMINS** including vitamins A, D, E, and K, dissolve in fats and oils.
- **WATER-SOLUBLE VITAMINS**, including all the B vitamins and vitamin C, dissolve in water.

This property affects the way in which vitamins are absorbed and used in the body. Fat-soluble vitamins tend to form important elements of cell membranes and water-soluble vitamins tend to act as coenzymes (a nonprotein compound that is necessary for the functioning of an enzyme). Each vitamin plays an important and unique role in supporting human health.

In addition, there are many vitamin-like compounds that have recently been identified as essential to supporting overall health. Some examples include alpha-lipoic acid, betaine, carnitine, choline, coQ10 (ubiquinone and ubiquinol), inositol (aka myo-inositol), and pyrroloquinoline quinone (PQQ).

Recommended Daily Allowance (RDA), Adequate Intake (AI), and Nutrient Targets for Vitamins and Vitamin-Like Compounds

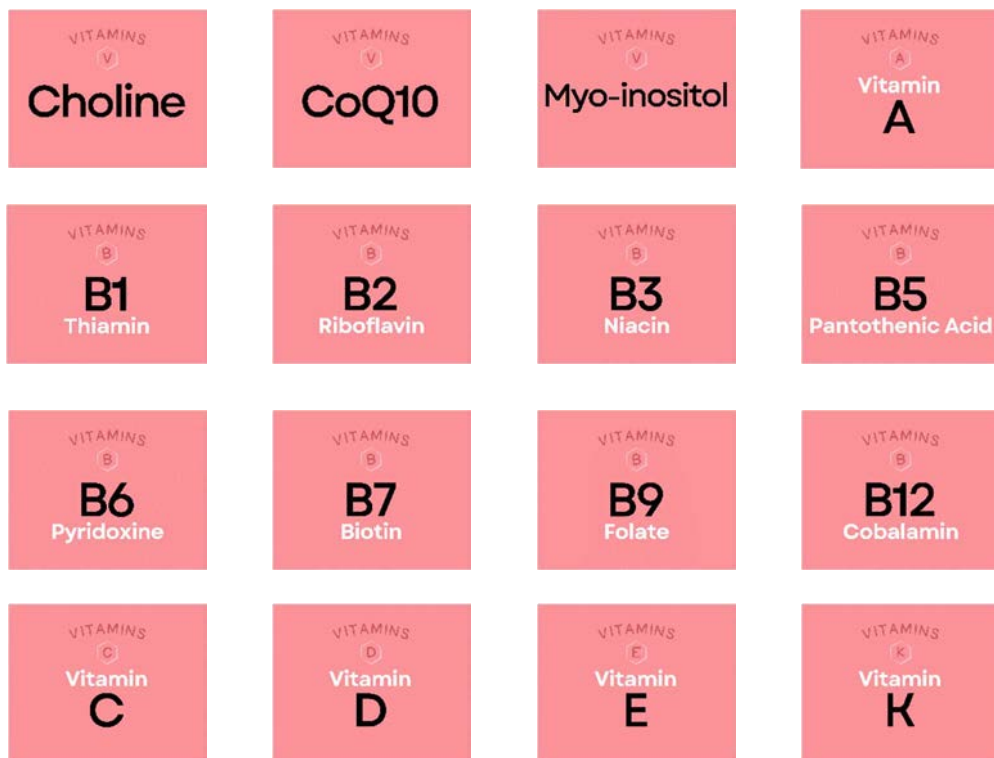
Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
Vit A (µg RE)	700		900		3000
Vit B1 (mg)	1.1		1.2		Not established
Vit B2 (mg)	1.1		1.3		Not established
Vit B3 (mg)	14		16		35 (from supplemental forms)
Vit B5 (mg)		5		5	Not established
Vit B6 (mg)	1.3		1.3		100
Vit B7 (µg)		30		30	Not established
Vit B9 (µg)	400		400		1000 (from supplemental forms)

Nutrient	19-50 Female**		19-50 Male**		Upper Limit
	RDA	AI	RDA	AI	
Vit B12 (µg)	2.4		2.4		Not established
Vit C (mg)	75		90		2000
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	15		15		1000 (from supplemental forms)
Vit K (µg)		90		120	Not established
Choline (mg)		425		550	3500
*CoQ10 (mg)	6		6		Not established
*Myo-Inositol (mg)	1500		1500		Not established

* Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health and reduction of chronic disease risk.

**Recommendations for other age groups and pregnant and lactating women can be found in Appendix A.

In this section you will find out the top common food sources for the following vitamins:



Choline

Choline is often grouped together with B-complex vitamins, and sometimes referred to as vitamin B4. It plays an essential role in building cell membranes. Choline also serves as the backbone for a neurotransmitter called acetylcholine, which is involved in heart health, gut motility (the movement of contents through the digestive tract controlled by the coordinated contraction and relaxation of specialized gut muscle tissue), and muscle movement. Adequate intake during pregnancy can help reduce risk of neural tube defects. Choline is abundant in foods such as fish and shellfish, liver, eggs, poultry, and green vegetables (both leafy and non-leafy).



Top Common Food Sources of Choline

Rank	Food	Nutrivore Score	Serving Size (Raw)	Choline (mg/serving)	% DV
1	Beef Kidney	2543	3.5 oz / 100 g	321.6	58
2	Chicken Egg, Whole	355	100 g / 2 large	293.8	53
3	Liver, Average	4192	3.5 oz / 100 g	264.9	48
4	Giblets, Average	1319	3.5 oz / 100 g	150.3	27
5	Salmon, Average	712	4 oz / 115 g	122.5	22
6	Soybeans, Mature	326	1/2 cup	107.8	20
7	European Anchovies, Canned in Oil	736	4 oz / 115 g	97.8	18
8	Crab, Average	1096	4 oz / 115 g	97.5	18
9	Shrimp, Mixed Species	535	4 oz / 115 g	93.0	17
10	Crayfish, Average	597	4 oz / 115 g	93.0	17
11	Game Meat, Average	528	3.5 oz / 100 g	90.2	16
12	Veal, Average	326	3.5 oz / 100 g	89.6	16
13	Deer, Average	560	3.5 oz / 100 g	87.9	16
14	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	86.3	16
15	Bison, Average	367	3.5 oz / 100 g	86.2	16
16	Rabbit, Average	414	3.5 oz / 100 g	82.8	15
17	Goat	525	3.5 oz / 100 g	81.1	15
18	Goose, Average	230	3.5 oz / 100 g	80.9	15
19	Northern Lobster	839	4 oz / 115 g	80.8	15
20	Oysters, Average	2759	4 oz / 115 g	80.6	15
21	Lamb, Average	263	3.5 oz / 100 g	78.5	14
22	Cod, Average	453	4 oz / 115 g	74.9	14
23	Blue Mussels	1564	4 oz / 115 g	74.8	14
24	Tuna, Average	752	4 oz / 115 g	74.8	14
25	Whitefish, Mixed Species	663	4 oz / 115 g	74.8	14

Top Nutrivore Score Common Foods that Are a Good Source of Choline

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	48
2	Oysters, Average	2759	15
3	Beef Kidney	2543	58
4	Octopus, Common	1618	14
5	Blue Mussels	1564	14
6	Giblets, Average	1319	27
7	Crab, Average	1096	18
8	Clams, Mixed Species	1046	14
9	Atlantic Mackerel	922	14
10	Squid, Mixed Species	890	14
11	Herring, Average	876	14
12	Northern Lobster	839	15
13	Artichokes, (Globe or French)	771	11
14	Tuna, Average	752	14
15	Flatfish (Flounder and Sole)	749	14
16	European Anchovies, Canned in Oil	736	18
17	Salmon, Average	712	22
18	Trout, Mixed Species	710	14
19	Sea bass, Average	680	13
20	Whitefish, Mixed Species	663	14
21	Sardines, Canned in Oil, w/ bone	654	16
22	Scallops, Mixed Species	645	14
23	Crayfish, Average	597	17
24	Deer, Average	560	16
25	Swordfish	557	14

DID YOU KNOW...



The color of the egg yolk depends on the type of feed a chicken eats. The more yellow-pigmented the feed, the darker the yolk will be; however, this does not affect the quality or taste of the yolk.

The color of the eggshell is determined by the breed of chicken!



CoQ10

Ubiquinone is the oxidized form and ubiquinol is the reduced, more bioavailable form of the vitaminlike compound coenzyme Q10 (coQ10). CoQ10 is a potent antioxidant and a cofactor in the electron transport chain for the production of ATP. It may be helpful in treating or preventing heart and blood vessel conditions, diabetes, gum disease, muscular dystrophy, chronic fatigue syndrome, and breast cancer. Sources include beef, pork, mackerel, yellowtail fish, and chicken; it's also found in smaller amounts in vegetables like broccoli and herbs like parsley.



Top Common Food Sources of CoQ10

Rank	Food	Nutrivore Score	Serving Size (Raw)	CoQ10 (mg/serving)	% RT
1	Deer, Average	560	3.5 oz / 100 g	15.8	263
2	Liver, Average	4192	3.5 oz / 100 g	8.4	139
3	Atlantic Mackerel	922	4 oz / 115 g	7.8	130
4	Grapes, Red or Green (European Type ex. Thompson Seedless)	271	1 cup	7.7	128
5	Giblets, Average	1319	3.5 oz / 100 g	5.1	84
6	Beef, Average	293	3.5 oz / 100 g	3.8	63
7	Vegetable Oil (Soybean)	160	1 tbsp	2.7	45
8	Pork, Average	287	3.5 oz / 100 g	2.5	41
9	Soybeans, Green (Edamame)	359	1/2 cup	2.4	40
10	Extra-Virgin Olive Oil	139	1 tbsp	2.2	37
11	Chicken, Whole, Average	273	3.5 oz / 100 g	2.1	35
12	Herring, Average	876	4 oz / 115 g	1.8	30
13	Soybeans, Mature	326	1/2 cup	1.8	29
14	Atlantic and Pacific Halibut	523	4 oz / 115 g	1.7	28
15	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	1.4	23
16	Eel, Mixed Species	385	4 oz / 115 g	1.3	21
17	Trout, Mixed Species	710	4 oz / 115 g	1.3	21
18	Blue Mussels	1564	4 oz / 115 g	1.1	18
19	Peanut Oil	90	1 tbsp	1.0	17
20	Canola Oil	176	1 tbsp	0.9	15
21	Salmon, Average	712	4 oz / 115 g	0.9	15
22	Broccoli	2833	1 cup	0.8	13
23	Peanuts, All Types	219	1 oz / 28 g	0.7	12
24	Cauliflower	1585	1 cup, chopped	0.7	12
25	Californian Avocados	251	1/4 cup	0.6	11

Top Nutrivore Score Common Foods that Are a Good Source of CoQ10

Rank	Food	Nutrivore Score	% RT
1	Spinach	4548	10
2	Liver, Average	4192	139
3	Broccoli	2833	13
4	Cauliflower	1585	12
5	Blue Mussels	1564	18
6	Giblets, Average	1319	84
7	Atlantic Mackerel	922	130
8	Herring, Average	876	30
9	Flatfish (Flounder and Sole)	749	11
10	Salmon, Average	712	15
11	Trout, Mixed Species	710	21
12	Sardines, Canned in Oil, w/ bone	654	23
13	Scallops, Mixed Species	645	10
14	Deer, Average	560	263
15	Atlantic and Pacific Halibut	523	28
16	Soy Milk, Unsweetened, Plain	425	10
17	Eel, Mixed Species	385	21
18	Soybeans, Green (Edamame)	359	40
19	Soybeans, Mature	326	29
20	Sesame Seeds, Dried	299	11
21	Beef, Average	293	63
22	Pork, Average	287	41
23	Chicken, Whole, Average	273	35
24	Grapes, Red or Green (European Type ex. Thompson Seedless)	271	128
25	Californian Avocados	251	11

★ There are in fact THREE foods that tie for 25th place:

- California Avocados
- Sesame Seeds
- Flatfish (flounder/sole)



Myo-Inositol

Sometimes referred to as vitamin B8, inositol is a carbocyclic sugar that is an important structural component of cell membranes. It mediates cell signal transduction in response to a variety of hormones (including insulin), neurotransmitters, and growth factors and participates in osmoregulation. It has been shown to improve insulin sensitivity and reduce anxiety. Foods rich in inositol include fruits, legumes, and nuts.

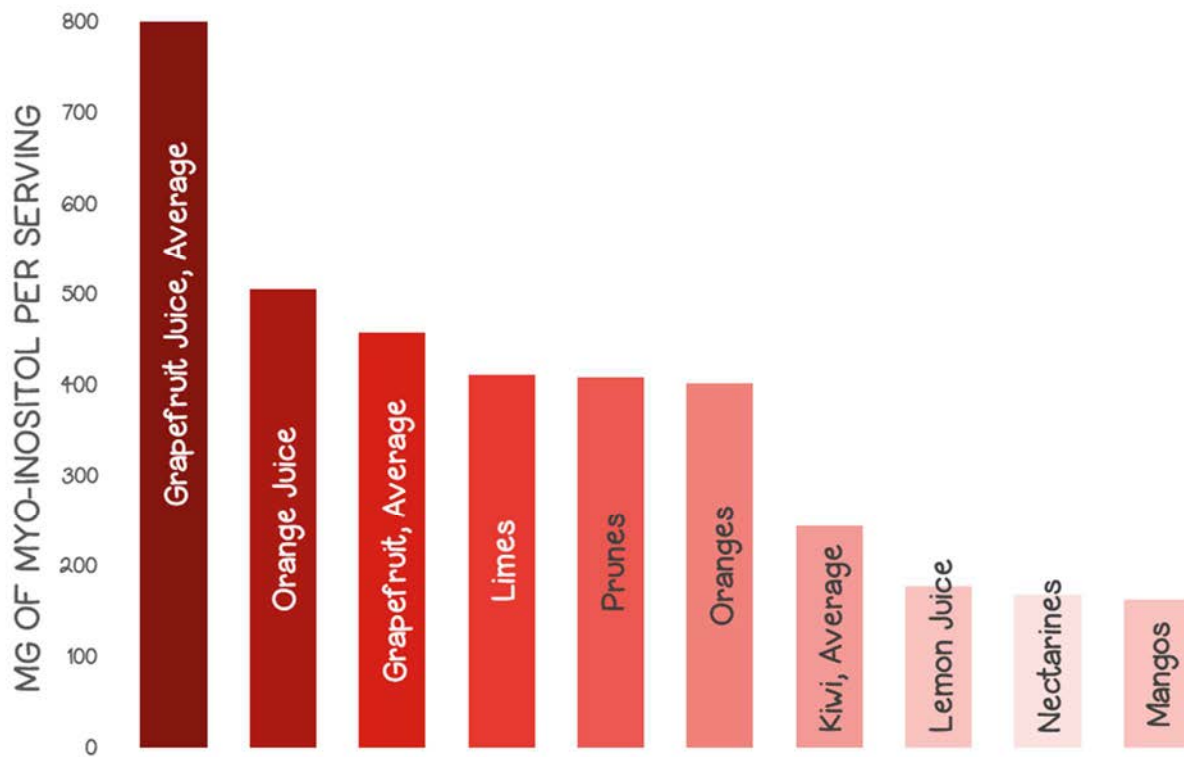


Top Common Food Sources of Myo-Inositol

Rank	Food	Nutrivore Score	Serving Size (Raw)	Myo-Inositol (mg/serving)	% RT
1	Grapefruit Juice, Average	290	1 cup	938.6	63
2	Orange Juice	301	1 cup	505.9	34
3	Grapefruit, Average	338	1 cup, sections	457.7	31
4	Limes	344	1 cup	411.3	27
5	Prunes	176	1/2 cup, pitted	408.9	27
6	Oranges	418	1 cup	402.2	27
7	Kiwi, Average	476	1 cup, sliced	244.8	16
8	Lemon Juice	339	1 cup	178.1	12
9	Nectarines	222	1 cup, slices	168.7	11
10	Mangos	342	1 cup	163.4	11
11	Potatoes, Flesh and Skin	272	1 cup, diced	120.5	8
12	Sweet Potato	379	1 cup	116.9	8
13	Tomato Juice, Canned, w/o salt added	1568	1 cup	116.6	8
14	Dates, Average	75	1/2 cup	111.7	7
15	Green Beans	605	1 cup, chopped	105.0	7
16	Pears	145	1 cup, sliced	102.2	7
17	Artichokes, (Globe or French)	771	1 cup	100.8	7
18	Great Northern Beans, Mature	419	1/6 cup	99.7	7
19	Tomatoes, Red, Ripe	983	1 cup	97.2	6
20	Butternut Squash	670	1 cup, cubes	92.4	6
21	Kidney Beans, Red, Mature	413	1/5 cup	92.1	6
22	Peaches, Yellow	295	1 cup	89.3	6
23	Liver, Average	4192	3.5 oz / 100 g	86.1	6
24	Pigeon Peas, Immature Seeds	250	1/2 cup	84.7	6
25	Soybeans, Mature	326	1/2 cup	81.8	5

Top Nutrivore Score Common Foods that Are a Good Source of Myo-Inositol

Rank	Food	Nutrivore Score	% RT
1	Tomatoes, Sun-Dried	655	14
2	Kiwi, Average	476	16
3	Oranges	418	27
4	Limes	344	27
5	Mangos	342	11
6	Lemon Juice	339	12
7	Grapefruit, Average	338	31
8	Orange Juice	301	34
9	Grapefruit Juice, Average	290	63
10	Nectarines	222	11
11	Prunes	176	27



Vitamin A

[Vitamin A](#) is actually a group of fat-soluble retinoids with vitamin A activity in the body. This nutrient is essential for a number of physiological functions—particularly vision, reproduction, thyroid health, immunity, and cellular communication. Getting enough vitamin A helps protect against some vision disorders (like night blindness and macular degeneration), supports a healthy menstrual cycle and sperm production, reduces infection risk, and allows for proper growth and development from the fetal years through childhood.



Top Common Food Sources of Vitamin A

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit A (µg RAE/serving)	% DV
1	Liver, Average	4192	3.5 oz / 100 g	10696.8	1189
2	Giblets, Average	1319	3.5 oz / 100 g	3400.4	378
3	Eel, Mixed Species	385	4 oz / 100 g	1199.5	133
4	Carrots	899	1 cup	1068.8	119
5	Sweet Potato	379	1 cup	943.0	105
6	Butternut Squash	670	1 cup, cubes	744.8	83
7	Turnip Greens	6370	2 cups	636.9	71
8	Dandelion Greens	2815	2 cups	558.8	62
9	Pumpkin	1036	1 cup, 1 " cubes	494.2	55
10	Spinach	4548	2 cups	281.4	31
11	Cantaloupe	457	1 cup, diced	270.4	30
12	Tuna, Average	752	4 oz / 100 g	264.1	29
13	Lettuce, Average	1953	2 cups	244.8	27
14	Tigernut	192	1 oz / 28 g	243.6	27
15	Beet Greens	3259	2 cups	240.2	27
16	Chard, Average	6386	2 cups	220.3	24
17	Fiddlehead Ferns	1721	1 cup	212.9	24
18	Nori (Laver) Seaweed	3910	1 cup	208.0	23
19	Kidney, Average	2558	3.5 oz / 100 g	191.0	21
20	Peas, Green	431	1/2 cup	189.1	21
21	Collard Greens (Collards)	3323	2 cups	180.7	20
22	Mustard Greens	5464	2 cups	169.1	19
23	Paprika	847	1 tbs	167.5	19
24	Chicken Egg, Whole	355	100 g / 2 large	160.0	18
25	Bok Choy	3428	1 cup, shredded	156.1	17

Top Nutrivore Score Common Foods that Are a Good Source of Vitamin A

Rank	Food	Nutrivore Score	% DV
1	Watercress	6929	12
2	Chard, Average	6386	24
3	Turnip Greens	6370	71
4	Mustard Greens	5464	19
5	Spinach	4548	31
6	Kale	4233	13
7	Liver, Average	4192	1189
8	Nori (Laver) Seaweed	3910	23
9	Bok Choy	3428	17
10	Collard Greens (Collards)	3323	20
11	Beet Greens	3259	27
12	Dandelion Greens	2815	62
13	Kidney, Average	2558	21
14	Endive	2390	12
15	Lettuce, Average	1953	27
16	Fiddlehead Ferns	1721	24
17	Peppers, Sweet, Red	1358	16
18	Giblets, Average	1319	378
19	Clams, Mixed Species	1046	12
20	Pumpkin	1036	55
21	Carrots	899	119
22	Paprika	847	19
23	Tuna, Average	752	29
24	Red or Cayenne Pepper	689	12
25	Butternut Squash	670	83

1/10TH OF A GRAM?
THAT'S BEAR-LY ANY!

★ DID YOU KNOW...

It's possible to ingest enough vitamin A to induce toxicity? Although it is rarely seen in the context of whole foods, the one exception is polar bear liver! Just 1/10th of a gram supplies the entire RDA for vitamin A.



Vitamin B1 (Thiamin)

[Thiamin](#) (sometimes spelled thiamine, and also called vitamin B1) is a water-soluble vitamin. In its active form of thiamin pyrophosphate, it serves as a cofactor for a variety of enzymes involved in carbohydrate and amino acid metabolism, RNA and DNA production, and generating energy for the Krebs cycle. Research suggests vitamin B1 could help prevent blood sugar and insulin increases in people with disordered glucose metabolism, reduce the risk of cataracts, and improve health and mortality outcomes in patients with sepsis. Because aggressive tumors have high thiamin demands, it's uncertain whether supplementing with thiamin while having cancer is beneficial due to preventing deficiency, or harmful due to providing more fuel for tumor growth. Insufficient thiamin may increase the risk of Alzheimer's disease, and when chronic, leads to a deficiency disease called beriberi.



Top Common Food Sources of Vitamin B1

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B1 (µg/serving)	% DV
1	Yeast Extract Spread	2964	1 tbsp	4207.5	351
2	Soybeans, Mature	326	1/2 cup	812.8	68
3	Tigernut	192	1 oz / 28 g	666.4	56
4	Pigeon Peas (Red Gram), Mature	211	1/2 cup	659.1	55
5	Pork, Average	287	3.5 oz / 100 g	623.1	52
6	Cassava	224	1 cup	576.8	48
7	Soybeans, Green (Edamame)	359	1/2 cup	556.8	46
8	Tamarinds	77	1 cup, pulp	513.6	43
9	Flaxseed	515	1 oz / 28 g	460.3	38
10	Kidney, Average	2558	3.5 oz / 100 g	439.0	37
11	Liver, Average	4192	3.5 oz / 100 g	420.1	35
12	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	414.4	35
13	Trout, Mixed Species	710	4 oz / 115 g	402.5	34
14	Edible-Podded Peas	669	1 cup, chopped	392.0	33
15	Deer, Average	560	3.5 oz / 100 g	383.5	32
16	Hemp Seeds, Hulled	415	1 oz / 28 g	361.5	30
17	Black Beans, Mature	446	1/5 cup	351.0	29
18	Lentils	489	1/5 cup	334.6	28
19	Macadamia Nuts	167	1 oz / 28 g	331.0	28
20	Duck, Average	238	3.5 oz / 100 g	322.4	28
21	Navy Beans, Mature	269	1/5 cup	308.0	27
22	Sweet Corn, White	191	1 cup, kernels	300.0	26
23	Jerusalem-Artichokes	195	1 cup, slices	297.6	25

24	Oats	208	1/4 cup	280.4	25
25	Peas, Green, Split, Mature	274	1/5 cup	278.1	23

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B1

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	35
2	Yeast Extract Spread	2964	351
3	Kidney, Average	2558	37
4	Tomato Juice, Canned, w/o salt added	1568	20
5	Trout, Mixed Species	710	34
6	Atlantic Salmon, Farmed	673	20
7	Deer, Average	560	32
8	Emu, Ostrich, Average	551	20
9	Game Meat, Average	528	21
10	Flaxseed	515	38
11	Lentil, Average	466	22
12	Black Beans, Mature	446	29
13	Catfish, Average	432	11
14	Hemp Seeds, Hulled	415	30
15	Pinto Beans, Mature	390	23
16	Soybeans, Green (Edamame)	359	46
17	Sunflower Seeds, Shelled, Dried	340	35
18	Soybeans, Mature	326	68
19	Pea Sprouts	310	23
20	Pork, Average	287	52
21	Peas, Green, Split, Mature	274	23
22	Navy Beans, Mature	269	27
23	Pistachios	265	20
24	Pigeon Peas, Immature Seeds	250	24
25	Mung Beans, Mature	249	22

★ THE SURPRISING #1 SOURCE OF VITAMIN B1? YOU EITHER LOVE IT OR HATE IT.



Vitamin B2 (Riboflavin)

[Riboflavin](#) (or vitamin B2) is a vitamin that helps form two important coenzymes involved in oxidation-reduction reactions: flavin mononucleotide (FMN), and flavin adenine dinucleotide (FAD). Collectively, these coenzymes are involved in antibody production, energy production, growth and development, skin and hair health, and the metabolism of several other nutrients (vitamin B6, niacin, folate, and iron). Research suggests a role for riboflavin in preventing or treating migraine headaches, cardiovascular disease, cataracts, and preeclampsia during pregnancy. It also possesses some anti-cancer properties due to its involvement in folate metabolism and MTHFR activity.



Top Common Food Sources of Vitamin B2

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B2 (mg/serving)	% DV
1	Muscadine Grapes	644	1 cup	3.4	258
2	Yeast Extract Spread	2964	1 tbsp	3.2	242
3	Liver, Average	4192	3.5 oz / 100 g	2.4	186
4	Kidney, Average	2558	3.5 oz / 100 g	2.3	174
5	Giblets, Average	1319	3.5 oz / 100 g	1.1	83
6	Soybeans, Mature	326	1/2 cup	0.8	62
7	Yogurt, Average	208	1 cup	0.5	41
8	Goat	525	3.5 oz / 100 g	0.5	38
9	Squid, Mixed Species	890	4 oz / 115 g	0.5	36
10	Chicken Egg, Whole	355	100 g / 2 large	0.5	35
11	Milk, Average	245	1 cup	0.4	34
12	European Anchovies, Canned in Oil	736	4 oz / 115 g	0.4	32
13	Deer, Average	560	3.5 oz / 100 g	0.4	30
14	Trout, Mixed Species	710	4 oz / 115 g	0.4	29
15	Game Meat, Average	528	3.5 oz / 100 g	0.4	29
16	Atlantic Mackerel	922	4 oz / 115 g	0.4	28
17	Nori (Laver) Seaweed	3910	1 cup	0.4	27
18	Feta Cheese	189	1.5 oz / 40 g	0.4	27
19	Emu, Ostrich, Average	551	3.5 oz / 100 g	0.4	27
20	Kefir, Low-Fat, Plain	296	1 cup	0.3	25
21	Almonds	234	1 oz / 28 g	0.3	25
22	Kimchi (Cabbage)	1097	1 cup	0.3	24
23	Duck, Average	238	3.5 oz / 100 g	0.3	24
24	White Mushroom, Average	1878	1 cup, whole	0.3	24
25	Passion-Fruit, Purple	261	1 cup	0.3	24

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B2

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	186
2	Nori (Laver) Seaweed	3910	27
3	Yeast Extract Spread	2964	242
4	Dandelion Greens	2815	22
5	Kidney, Average	2558	174
6	Oyster Mushrooms	2550	23
7	Pacific Oysters	2255	21
8	White Mushroom, Average	1878	24
9	GIBLETS, Average	1319	83
10	Kimchi (Cabbage)	1097	24
11	Atlantic Herring	996	21
12	Bluefin Tuna	970	22
13	Atlantic Mackerel	922	28
14	Squid, Mixed Species	890	36
15	European Anchovies, Canned in Oil	736	32
16	Trout, Mixed Species	710	29
17	Atlantic Sardines, Canned in Oil, w/ bone	654	20
18	Muscadine Grapes	644	258
19	Deer, Average	560	30
20	Emu, Ostrich, Average	551	27
21	Game Meat, Average	528	29
22	Goat	525	38
23	Chicken Egg, Whole	355	35
24	Lotus Root	344	20
25	Soybeans, Mature Seeds	326	62

★ GIBLETS GENERALLY REFER TO THE HEART, LIVER AND GIZZARD (WHICH IS KIND OF LIKE A SECOND STOMACH) IN POULTRY. ALTHOUGH THE NECK IS OFTEN PACKAGED WITH THE OTHER INTERNAL ORGANS, IT IS NOT TECHNICALLY CLASSIFIED AS A GIBLET.



Vitamin B3 (Niacin)

[Niacin](#) is a water-soluble B complex vitamin (vitamin B3) that's needed to produce two very important coenzymes: nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide phosphate (NADP). NAD and NADP are needed for over 400 enzymes involved in DNA repair, fatty acid synthesis, antioxidant systems, detoxification, and hormone synthesis, as well as the breakdown of fat, carbohydrate, protein, and alcohol. Niacin has therapeutic potential for cardiovascular disease and hyperlipidemia and may also be protective against cancer and type 1 diabetes. Some research suggests it could benefit health outcomes for patients with HIV or schizophrenia as well.



Top Common Food Sources of Vitamin B3

Rank	Food	Nutrivore Score	Serving Size (Raw)	Myo-Inositol (mg/serving)	% DV
1	Yeast Extract Spread	2964	1 tbsp	23.0	143
2	European Anchovies, Canned in Oil	736	4 oz / 115 g	22.9	143
3	Tuna, Average	752	4 oz / 115 g	16.3	102
4	Liver, Average	4192	3.5 oz / 100 g	11.8	74
5	Atlantic Mackerel	922	4 oz / 115 g	10.4	65
6	Salmon, Average	712	4 oz / 115 g	9.0	56
7	Swordfish	557	4 oz / 115 g	8.9	56
8	Kidney, Average	2558	3.5 oz / 100 g	7.9	49
9	Turkey, Whole, Average	334	3.5 oz / 100 g	7.9	49
10	Atlantic and Pacific Halibut	523	4 oz / 115 g	7.5	47
11	Giblets, Average	1319	3.5 oz / 100 g	7.4	46
12	Chicken, Whole, Average	273	3.5 oz / 100 g	7.3	46
13	Mahimahi	416	4 oz / 115 g	7.0	44
14	Veal, Average	326	3.5 oz / 100 g	6.9	43
15	Rabbit, Average	414	3.5 oz / 100 g	6.9	43
16	Albacore Tuna, Canned in Water	544	4 oz / 115 g	6.7	42
17	Deer, Average	560	3.5 oz / 100 g	6.0	38
18	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	6.0	38
19	Pork, Average	287	3.5 oz / 100 g	5.9	37
20	Fiddlehead Ferns	1721	1 cup	5.9	37
21	Game Meat, Average	528	3.5 oz / 100 g	5.8	36
22	Emu, Ostrich, Average	551	3.5 oz / 100 g	5.8	36
23	Lamb, Average	263	3.5 oz / 100 g	5.5	35
24	Beef, Lean, Average	321	3.5 oz / 100 g	5.2	33
25	Trout, Mixed Species	710	4 oz / 115 g	5.2	32

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B3

Rank	Food	Nutrivore Score	% DV
1	Enoki Mushrooms	4434	29
2	Shiitake Mushrooms	4343	21
3	Liver, Average	4192	74
4	Maitake Mushrooms	3551	32
5	Yeast Extract Spread	2964	143
6	Kidney, Average	2558	49
7	Oyster Mushrooms	2550	27
8	White Mushroom, Average	1878	22
9	Fiddlehead Ferns	1721	37
10	GIBLETS, Average	1319	46
11	Atlantic Mackerel	922	65
12	Herring, Average	876	20
13	Tuna, Average	752	102
14	Fish Broth	742	21
15	European Anchovies, Canned in Oil	736	143
16	Salmon, Average	712	56
17	Trout, Mixed Species	710	32
18	Whitefish, Mixed Species	663	22
19	Sardines, Canned in Oil, w/ bone	654	38
20	Deer, Average	560	38
21	Swordfish	557	56
22	Emu, Ostrich, Average	551	36
23	Albacore Tuna, Canned in Water	544	42
24	Game Meat, Average	528	36
25	Goat	525	23

★ FIDDLEHEAD FERNS ARE SUPER UNIQUE LOOKING, AND EQUALLY UNIQUE IN THEIR AVAILABILITY AND FLAVOR. THEY COULD BE DESCRIBED AS BROCCOLI, ASPARAGUS, SPINACH OR GREEN BEAN TASTING; HOWEVER, THE BEST DESCRIPTION WOULD BE SIMPLY: **DELICIOUSLY GREEN!**



Vitamin B5 (Pantothenic Acid)

[Pantothenic acid](#) (or vitamin B5) is a water-soluble vitamin that serves as a cofactor for coenzyme A—which itself is critical for metabolizing many drugs and toxins, as well as forming derivatives (acetyl-CoA and succinyl-CoA) that participate in the synthesis of cholesterol, fatty acids, melatonin, the neurotransmitter acetylcholine, steroid hormones, heme, and vitamins A and D. Coenzyme A is also needed in the Krebs cycle, giving pantothenic acid a role in energy metabolism. Research suggests that a pantothenic acid derivative (pantethine) can help improve blood lipid profiles and reduce fatty streak formation and lipid deposition in the arteries, giving it a cardio-protective role. Additional research shows that pantothenic acid can accelerate wound healing, boost cellular production of the important antioxidant glutathione, and possibly help improve symptoms of rheumatoid arthritis.



Top Common Food Sources of Vitamin B5

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B5 (mg/serving)	% DV
1	Liver, Average	4192	3.5 oz / 100 g	6.7	134
2	Kidney, Average	2558	3.5 oz / 100 g	3.8	75
3	Giblets, Average	1319	3.5 oz / 100 g	3.3	67
4	Trout, Mixed Species	710	4 oz / 115 g	2.2	45
5	Emu, Ostrich, Average	551	3.5 oz / 100 g	1.8	35
6	Game Meat, Average	528	3.5 oz / 100 g	1.8	35
7	Northern Lobster	839	4 oz / 115 g	1.7	33
8	Goose, Average	230	3.5 oz / 100 g	1.6	33
9	Chicken Egg, Whole	355	100 g / 2 large	1.5	31
10	Pigeon Peas (Red Gram), Mature	211	1/2 cup	1.3	26
11	Shiitake Mushrooms	4343	1 cup, sliced	1.3	26
12	Salmon, Average	712	4 oz / 115 g	1.3	25
13	White Mushroom, Average	1878	1 cup	1.2	25
14	Oyster Mushrooms	2550	1 cup, sliced	1.1	22
15	Yogurt, Average	208	1 cup	1.1	22
16	Sweet Corn, Average	197	1 cup, kernels	1.1	22
17	Turkey, Dark, Average	326	3.5 oz / 100 g	1.1	21
18	Sweet Potato	379	1 cup	1.1	21
19	Veal, Average	326	3.5 oz / 100 g	1.1	21
20	European Anchovies, Canned in Oil	736	4 oz / 115 g	1.0	21
21	Duck, Average	238	3.5 oz / 100 g	1.0	20
22	Chicken, Whole, Average	273	3.5 oz / 100 g	1.0	20
23	Californian Avocados	251	1/4 cup	1.0	20

24	Atlantic Mackerel	922	4 oz / 115 g	1.0	20
25	Kefir, Low-Fat, Plain	296	1 cup	0.9	19

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B5

Rank	Food	Nutrivore Score	% DV
1	Shiitake Mushrooms	4343	26
2	Liver, Average	4192	134
3	Kidney, Average	2558	75
4	Oyster Mushrooms	2550	22
5	White Mushroom, Average	1878	25
6	Giblets, Average	1319	67
7	Bluefin Tuna	970	24
8	Atlantic Mackerel	922	20
9	Northern Lobster	839	33
10	Pacific Herring	755	23
11	European Anchovies, Canned in Oil	736	21
12	Salmon, Average	712	25
13	Trout, Mixed Species	710	45
14	Emu, Ostrich, Average	551	35
15	Game Meat, Average	528	35
16	Sweet Potato	379	21
17	Chicken Egg, Whole	355	31
18	Turkey, Dark, Average	326	21
19	Veal, Average	326	21
20	Pea Sprouts	310	25
21	Chicken, Whole, Average	273	20
22	Yogurt, Plain, Skim Milk	263	31
23	Californian Avocados	251	20
24	Duck, Average	238	20
25	Goose, Average	230	33

★ **DID YOU KNOW:** White button mushrooms, along with cremini and portabella mushrooms are in fact all the same variety of mushroom – *Agaricus bisporus*! The difference between the three is essentially age. Immature mushrooms, which are white, are known as white button mushrooms. When still immature and brown, they are known as cremini mushrooms and when fully-grown and mature, they are known as portabella mushrooms.



Vitamin B6 (Pyridoxine)

[Vitamin B6](#) (pyridoxine) is a group of six water-soluble compounds with a similar chemical structure, all of which can be converted into their active form of pyridoxal 5'-phosphate (PLP). Over 100 different enzymes require vitamin B6 in order to carry out their various functions in protein metabolism, fatty acid metabolism, neurotransmitter production, gluconeogenesis, hemoglobin synthesis, the release of glucose from glycogen, and energy metabolism (particularly the production of ATP in the Krebs cycle). Research suggests vitamin B6 may help protect against cardiovascular disease and certain cancers, could reduce the risk of depression among the elderly, and even reduce symptoms of morning sickness and PMS.

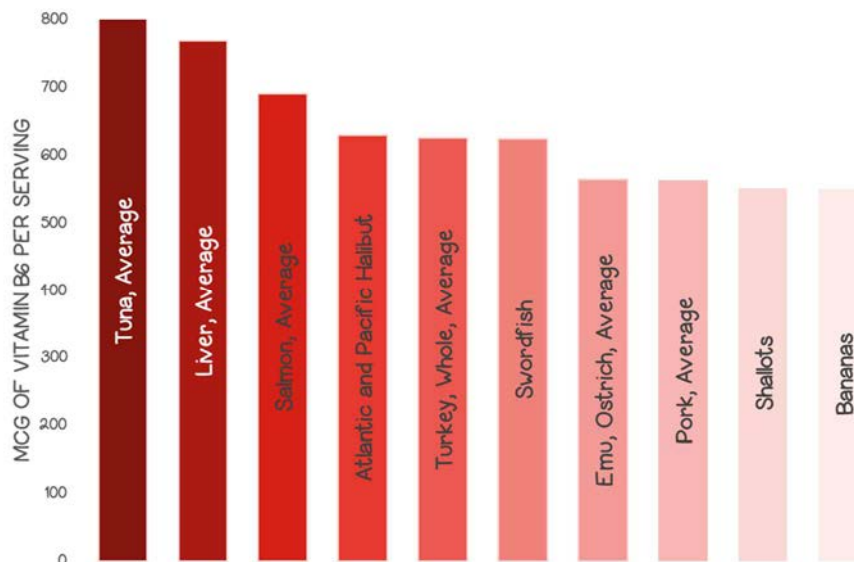


Top Common Food Sources of Vitamin B6

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B6 (µg/serving)	% DV
1	Tuna, Average	752	4 oz / 115 g	857.9	50
2	Liver, Average	4192	3.5 oz / 100 g	768.9	45
3	Salmon, Average	712	4 oz / 115 g	690.7	41
4	Atlantic and Pacific Halibut	523	4 oz / 115 g	630.2	37
5	Turkey, Whole, Average	334	3.5 oz / 100 g	625.5	37
6	Swordfish	557	4 oz / 115 g	624.5	37
7	Emu, Ostrich, Average	551	3.5 oz / 100 g	564.9	33
8	Pork, Average	287	3.5 oz / 100 g	562.8	33
9	Shallots	740	1 cup	552.0	32
10	Bananas	185	1 cup	550.5	32
11	Pacific Herring	755	4 oz / 115 g	517.5	30
12	Goose, Average	230	3.5 oz / 100 g	515.0	30
13	Chicken, Light Meat, Average	239	3.5 oz / 100 g	505.9	30
14	Beef, Average	293	3.5 oz / 100 g	487.9	29
15	Giblets, Average	1319	3.5 oz / 100 g	484.8	29
16	Pistachios	265	1 oz / 28 g	476.0	28
17	Raisins, Golden, Seedless	103	1/2 cup	468.4	28
18	Rainbow Trout, Wild	645	4 oz / 115 g	466.9	27
19	Mahimahi	416	4 oz / 115 g	460.0	27
20	Sea Bass, Mixed Species	575	4 oz / 115 g	460.0	27
21	Snapper, Mixed Species	548	4 oz / 115 g	460.0	27
22	Atlantic Mackerel	922	4 oz / 115 g	458.9	27
23	Potatoes, Flesh and Skin	272	1 cup, diced	447.0	26
24	Veal, Average	326	3.5 oz / 100 g	441.6	26
25	Yam	167	1 cup, cubes	440	26

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B6

Rank	Food	Nutrivore Score	% DV
1	Liver, Average	4192	45
2	Kidney, Average	2558	26
3	Octopus, Common	1618	24
4	Giblets, Average	1319	29
5	Atlantic Mackerel	922	27
6	Herring, Average	876	25
7	Tuna, Average	752	50
8	Shallots	740	32
9	Salmon, Average	712	41
10	Sea Bass, Average	680	24
11	Whitefish, Mixed Species	663	20
12	Rainbow Trout, Wild	645	27
13	Deer, Average	560	25
14	Swordfish	557	37
15	Emu, Ostrich, Average	551	33
16	Snapper, Mixed Species	548	27
17	Atlantic and Pacific Halibut	523	37
18	Mahimahi	416	27
19	Rabbit, Average	414	21
20	Grouper, Mixed Species	400	20
21	Bison, Average	367	20
22	Chicken Egg, Yolk	342	21
23	Sunflower Seeds, Shelled, Dried	340	22
24	Turkey, Whole, Average	334	37
25	Soybeans, Mature	326	21



Vitamin B7 (Biotin)

[Biotin](#) is a water-soluble B vitamin, also known as vitamin B7. Like other B vitamins, it plays an important role in energy metabolism (serving as a coenzyme for five carboxylase enzymes), neurotransmitter production, cellular function, and the function of various organs. Getting enough biotin can help support healthy nail and hair growth. It's also particularly important during pregnancy, with low intakes increasing the risk of premature delivery and birth defects. There's even some evidence biotin can benefit diabetics and reduce functional disabilities in people with multiple sclerosis.



Top Common Food Sources of Vitamin B7

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B7 (µg/serving)	% DV
1	Liver, Average	4192	3.5 oz / 100 g	156.5	522
2	Kidney, Average	2558	3.5 oz / 100 g	89.7	299
3	Giblets, Average	1319	3.5 oz / 100 g	51.1	170
4	Flatfish (Flounder and Sole)	749	4 oz / 115 g	51.1	170
5	Oysters, Average	2759	4 oz / 115 g	47.2	157
6	Soybeans, Green (Edamame)	359	1/2 cup	41.5	138
7	Soybeans, Mature	326	1/2 cup	31.2	104
8	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	27.6	92
9	Blue Mussels	1564	4 oz / 115 g	26.1	87
10	Clams, Mixed Species	1046	4 oz / 115 g	26.1	87
11	Chicken Egg, Whole	355	100 g / 2 large	25.0	83
12	Hazelnuts (Filberts)	292	1 oz / 28 g	24.6	82
13	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	22.4	75
14	European Anchovies, Canned in Oil	736	4 oz / 115 g	21.0	70
15	Maitake Mushrooms	3551	1 cup, diced	19.4	65
16	Cauliflower	1585	1 cup, chopped	18.2	61
17	Kale	4233	2 cups	18.0	60
18	Barley, Pearled	158	1/4 cup	15.5	52
19	Tomatoes, Sun-Dried	655	1/2 cup	15.5	52
20	Quinoa	227	1/4 cup	14.4	48
21	White Mushroom, Average	1878	1 cup	14.3	48
22	Water Chestnuts, Chinese (Matai)	257	1 cup, sliced	14.0	47
23	Molasses	367	1 tbsp	13.6	45
24	Almonds	234	1 oz / 28 g	13.5	45
25	Peanuts, All Types	219	1 oz / 28 g	12.2	41

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B7

Rank	Food	Nutrivore Score	% DV
1	Enoki Mushrooms	4434	23
2	Kale	4233	60
3	Liver, Average	4192	522
4	Nori (Laver) Seaweed	1520	29
5	Maitake Mushrooms	3551	65
6	Broccoli	2833	28
7	Oysters, Average	2759	157
8	Kidney, Average	2558	299
9	Oyster Mushrooms	2550	34
10	Mustard Seed, Ground	1904	33
11	White Mushroom, Average	1878	48
12	Cauliflower	1585	61
13	Tomato Juice, Canned, w/o salt added	1568	34
14	Blue Mussels	1564	87
15	Giblets, Average	1319	170
16	Clams, Mixed Species	1046	87
17	Cocoa Powder, Unsweetened	1024	25
18	Tomatoes, Red, Ripe	983	24
19	Atlantic Mackerel	922	27
20	Carrots	899	21
21	Herring, Average	876	38
22	Okra	859	20
23	Strawberries	762	20
24	Sockeye Salmon	750	39
25	Flatfish (Flounder and Sole)	749	170



★ THERE IS A GREAT BALANCE OF BOTH PLANT FOODS AND ANIMAL FOODS THAT ARE EXCELLENT SOURCES OF VITAMIN B7 IN THE ABOVE LISTS.

Vitamin B9 (Folate)

[Vitamin B9 \(folate\)](#) is an essential B vitamin that plays roles in blood cell production, the formation of genetic material (including DNA), and cell growth and function. It's particularly important during pregnancy, when folate demands increase due to the rapid creation of new cells and DNA. Along with helping protect against fetal development problems, folate can support cardiovascular health, potentially protect against certain cancers, and reduce the risk of cognitive and neurological disorders later in life.



Top Common Food Sources of Vitamin B9

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B9 (µg/serving)	% DV
1	Yeast Extract Spread	2964	1 tbsp	681.5	170
2	Pigeon Peas (Red Gram), Mature	211	1/2 cup	467.4	117
3	Liver, Average	4192	3.5 oz / 100 g	449.8	112
4	Soybeans, Mature	326	1/2 cup	348.8	87
5	Giblets, Average	1319	3.5 oz / 100 g	339.2	85
6	Mung Beans, Mature	249	1/5 cup	262.5	66
7	Chickpeas (Garbanzo Beans), Mature	454	1/5 cup	222.8	56
8	Turnip Greens	6370	2 cups	213.4	53
9	Soybeans, Green (Edamame)	359	1/2 cup	211.2	53
10	Pinto Beans, Mature	390	1/5 cup	204.8	51
11	Adzuki Beans, Mature Seeds	576	1/6 cup	204.2	51
12	Cowpeas, Common (Blackeyed Peas), Mature	238	1/6 cup	176.2	44
13	Black Beans, Mature	446	1/5 cup	173.2	43
14	Edible-Podded Peas	669	1 cup, chopped	169.5	42
15	Wakame Seaweed	841	1 cup	156.8	39
16	Navy Beans, Mature	269	1/5 cup	151.4	38
17	Beets	2013	1 cup	148.2	37
18	Great Northern Beans, Mature	419	1/6 cup	147.0	37
19	Chicken Egg, Yolk	342	100 g / 6 eggs	146.0	37
20	Kidney Beans, All Types, Mature	217	1/5 cup	145.0	36
21	Kelp Seaweed	700	1 cup	144.0	36
22	Lima Beans, Large, Mature	304	1/5 cup	142.2	36
23	Endive	2390	2 cups	142.0	36
24	Lentil, Average	466	1/5 cup	132.6	33
25	Romaine (Cos) Lettuce	2128	2 cups	127.8	32

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B9

Rank	Food	Nutrivore Score	% DV
1	Turnip Greens	6370	53
2	Spinach	4548	29
3	Liver, Average	4192	112
4	Nori (Laver) Seaweed	3910	29
5	Collard Greens (Collards)	3323	23
6	Yeast Extract Spread	2964	170
7	Chinese Broccoli	2431	24
8	Endive	2390	36
9	Romaine (Cos) Lettuce	2128	32
10	Beets	2013	37
11	Butterhead Lettuce (incl. Boston and Bibb Types)	1934	20
12	Giblets, Average	1319	85
13	Wakame Seaweed	841	39
14	Artichokes, (Globe or French)	771	29
15	Guavas, Common	761	20
16	Kelp Seaweed	700	36
17	Adzuki Beans, Mature Seeds	576	51
18	Lentil, Average	466	33
19	Chickpeas (Garbanzo Beans), Mature Seeds	454	56
20	Black Beans, Mature Seeds	446	43
21	Broad Beans (Fava Beans), Mature	442	32
22	Great Northern Beans, Mature Seeds	419	37
23	Kidney Beans, Red, Mature Seeds	413	36
24	Pinto Beans, Mature Seeds	390	51
25	Parsnips	372	22

★ LEGUMES ARE SOME OF THE BEST FOOD SOURCES OF VITAMIN B9. IF YOU SUFFER FROM TUMMY UPSET WITH BEANS OR OTHER LEGUMES, TRY PRESSURE COOKING TO MAKE THEM A LITTLE EASIER TO DIGEST.



CRANBERRY BEANS



LENTILS



NAVY BEANS

Vitamin B12 (Cobalamin)

[Vitamin B12](#) (cobalamin) is a water-soluble vitamin that serves as a cofactor for enzymes involved in energy metabolism, red blood cell production, DNA synthesis, neurotransmitter production, nervous system health, and folate metabolism. As a result of these roles, vitamin B12 is vital for maintaining brain and nervous system health, and may have a protective effect against dementia, Alzheimer's disease, and depression. There's also some evidence vitamin B12 may be cancer-protective, possibly through supporting folate metabolism (which then assists in repairing DNA damage).



Top Common Food Sources of Vitamin B12

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit B12 (µg/serving)	% DV
1	Liver, Average	4192	3.5 oz / 100 g	52.3	2179
2	Kidney, Average	2558	3.5 oz / 100 g	29.5	1228
3	Octopus, Common	1618	4 oz / 115 g	23.0	958
4	Nori (Laver) Seaweed	3910	1 cup	16.1	669
5	Oysters, Average	2759	4 oz / 115 g	15.7	654
6	Blue Mussels	1564	4 oz / 115 g	13.8	575
7	Herring, Average	876	4 oz / 115 g	13.6	567
8	Clams, Mixed Species	1046	4 oz / 115 g	13.0	541
9	Clam Juice, Canned	14744	1 cup	12.0	500
10	Giblets, Average	1319	3.5 oz / 100 g	11.5	480
11	Crab, Average	1096	4 oz / 115 g	10.4	431
12	Atlantic Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	10.3	428
13	Atlantic Mackerel	922	4 oz / 115 g	10.0	417
14	Trout, Mixed Species	710	4 oz / 115 g	9.0	373
15	Rabbit, Average	414	3.5 oz / 100 g	5.7	239
16	Emu, Ostrich, Average	551	3.5 oz / 100 g	5.2	216
17	Tuna, Average	752	4 oz / 115 g	5.1	214
18	Deer, Average	560	3.5 oz / 100 g	4.1	170
19	Game Meat, Average	528	3.5 oz / 100 g	4.0	167
20	Salmon, Average	712	4 oz / 115 g	3.8	158
21	Snapper, Mixed Species	548	4 oz / 115 g	3.5	144
22	Eel, Mixed Species	385	4 oz / 115 g	3.5	144
23	Catfish, Average	432	4 oz / 115 g	2.9	122
24	Lamb, Average	263	3.5 oz / 100 g	2.4	98
25	Crayfish, Average	597	4 oz / 115 g	2.4	98

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin B12

Rank	Food	Nutrivore Score	% DV
1	Clam Juice, Canned	14744	500
2	Liver, Average	4192	2179
3	Nori (Laver) Seaweed	3910	669
4	Oysters, Average	2759	654
5	Kidney, Average	2558	1228
6	Octopus, Common	1618	958
7	Blue Mussels	1564	575
8	Giblets, Average	1319	480
9	Crab, Average	1096	431
10	Clams, Mixed Species	1046	541
11	Atlantic Mackerel	922	417
12	Squid, Mixed Species	890	62
13	Herring, Average	876	567
14	Northern Lobster	839	60
15	Tuna, Average	752	214
16	Flatfish (Flounder and Sole)	749	54
17	European Anchovies, Canned in Oil	736	42
18	Salmon, Average	712	158
19	Trout, Mixed Species	710	373
20	Whitefish, Mixed Species	663	48
21	Atlantic Sardines, Canned in Oil, w/ bone	654	428
22	Scallops, Mixed Species	645	68
23	Crayfish, Average	597	98
24	Deer, Average	560	170
25	Swordfish	557	81

★ THE ONLY PLANT-BASED SOURCE OF VITAMIN B12 IS NORI (LAVER) SEAWEED!

Not only is it the third best source of vitamin B12, but it is also rich in iodine, polyphenols, vitamin C, manganese, vitamin B7 (biotin), vitamin B9 (folate), carotenoids, vitamin B2 (riboflavin), EPA + DHA, copper, and vitamin A.



Vitamin C

[Vitamin C](#) is a water-soluble vitamin that has powerful antioxidant properties (meaning it can help combat oxidative damage from free radicals and reactive oxygen species) and that serves as an enzyme cofactor (meaning it's needed for enzymes to do their job, for example vitamin C is necessary for collagen synthesis, which is essential for bones, joints, teeth, blood vessels, skin and eyes) and playing important roles in immune system and skin health. Higher intakes of vitamin C are linked to reduced risk of heart disease, some forms of cancer, type 2 diabetes, cataracts, age-related macular degeneration, and gout. Vitamin C can also help regulate the stress response and reduce anxiety, and there's preliminary evidence that it may also help prevent Alzheimer's disease.



Top Common Food Sources of Vitamin C

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit C (mg/serving)	% DV
1	Guavas, Common	761	1 cup	376.7	419
2	Kiwi, Average	476	1 cup, sliced	228.6	254
3	Persimmons, Japanese	537	1 cup, diced	212.5	236
4	Currants, European Black	811	1 cup	202.7	225
5	Tomato Juice, Canned, w/o salt added	1568	1 cup	170.3	189
6	Longans	264	1 cup	159.6	177
7	Chinese Broccoli	2431	1 cup	141.8	158
8	Lychee	319	1 cup	135.9	151
9	Orange Juice	301	1 cup	124.0	138
10	Papaya	636	1 cup, 1 " pieces	123.1	137
11	Sweet Pepper, Average	1201	1 cup, sliced	120.1	133
12	Pomelo	273	1 cup, sections	115.9	129
13	Lemons, w/o peel	477	1 cup	112.4	125
14	Passion-Fruit, Purple	261	1 cup	104.8	116
15	Cassava	224	1 cup	103.0	114
16	Kumquats	381	1 cup	98.8	110
17	Clementines	291	1 cup	97.1	108
18	Lemon Juice	339	1 cup	94.4	105
19	Grapefruit Juice, Average	290	1 cup	93.9	104
20	Peppers, Hot Chili, Green	1234	¼ cup, chopped	90.9	101
21	Strawberries	762	1 cup	89.4	99
22	Kohlrabi	2497	1 cup	83.7	93
23	Broccoli	2833	1 cup	81.2	90
24	Pineapple	358	1 cup, chunks	78.9	88
25	Mustard Greens	5464	2 cups	78.4	87

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin C

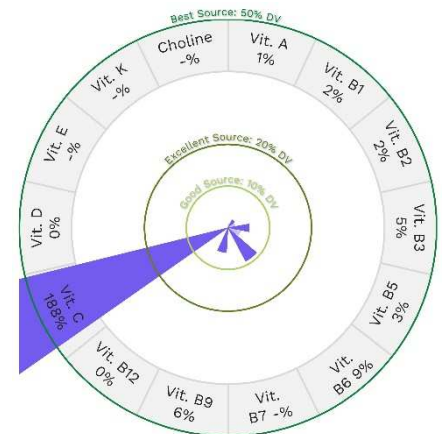
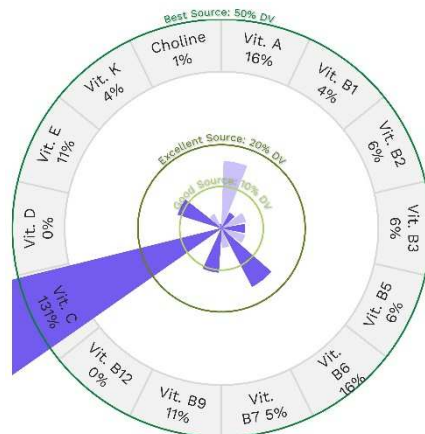
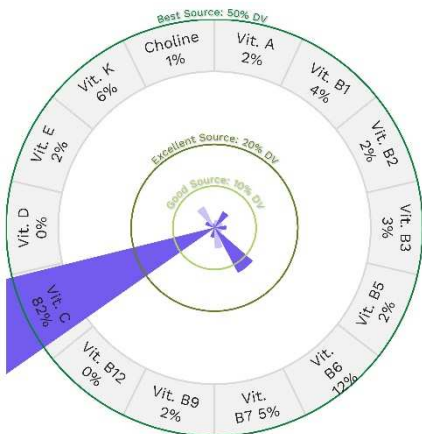
Rank	Food	Nutrivore Score	% DV
1	Watercress	6929	32
2	Chard, Average	6386	24
3	Turnip Greens	6370	73
4	Parsley	5491	22
5	Mustard Greens	5464	87
6	Daikon Radish	5149	28
7	Kale	4233	54
8	Nori (Laver) Seaweed	1520	35
9	Bok Choy	3428	35
10	Collard Greens (Collards)	3323	28
11	Beet Greens	3259	25
12	Broccoli	2833	90
13	Brussels Sprouts	2817	83
14	Dandelion Greens	2815	43
15	Kohlrabi	2497	93
16	Chinese Broccoli	2431	158
17	Turnips	1954	30
18	Cabbage, Average	1936	38
19	Fiddlehead Ferns	1721	35
20	Summer Squash, All Varieties	1596	21
21	Cauliflower	1585	57
22	Tomato Juice, Canned, w/o salt added	1568	189
23	Zucchini, w/ skin	1477	22
24	Sweet Pepper, Average	1201	133
25	Hot Pepper, Average	1111	64

★ Sweet peppers are averaged, however each color has a unique profile and slightly different %DV's for vitamin C. For example:

GREEN SWEET PEPPER: 82% DV

RED SWEET PEPPER: 131% DV

YELLOW SWEET PEPPER: 188% DV



Vitamin D

Rather than being a “true” vitamin, [vitamin D](#) is a group of fat-soluble steroid hormones that can be either obtained from the diet or synthesized from sun exposure. (For this reason, it sometimes nicknamed “the sunshine vitamin”.) It plays a major role in cellular differentiation, immune function, endocrine health, cardiovascular health, and even the intestinal absorption of several other nutrients (namely calcium, magnesium, and phosphorus). As a result of these diverse functions, getting enough vitamin D is important for protecting against chronic disease (including diabetes, cancer, and degenerative neurological conditions), maintaining good gut health, and keeping a healthy immune system (including protecting against both infectious disease and autoimmunity).



Top Common Food Sources of Vitamin D

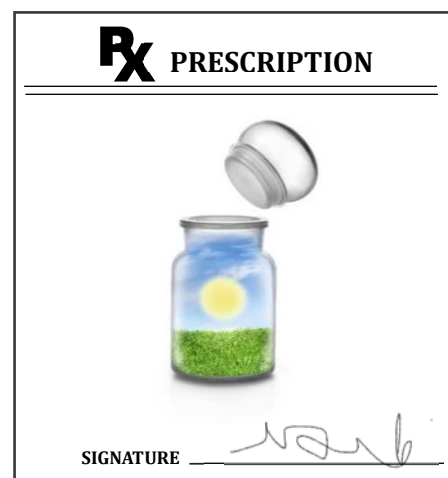
Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit D (µg/serving)	% DV
1	Eel, Mixed Species	385	4 oz / 115 g	26.8	134
2	Maitake Mushrooms	3551	1 cup, diced	21.6	108
3	Atlantic Mackerel	922	4 oz / 115 g	18.5	93
4	Swordfish	557	4 oz / 115 g	16.0	80
5	Salmon, Average	712	4 oz / 115 g	14.2	71
6	Whitefish, Mixed Species	663	4 oz / 115 g	13.8	69
7	Snapper, Mixed Species	548	4 oz / 115 g	11.7	59
8	Catfish, Average	432	4 oz / 115 g	7.3	37
9	Sea Bass, Average	680	4 oz / 115 g	6.4	32
10	Fresh Water Bass, Mixed Species	555	4 oz / 115 g	6.4	32
11	Tigernut	192	1 oz / 28 g	6.4	32
12	Sardines, Canned in Oil, w/ bone	654	4 oz / 115 g	5.5	28
13	Atlantic and Pacific Halibut	523	4 oz / 115 g	5.4	27
14	Herring, Average	876	4 oz / 115 g	5.4	27
15	Trout, Mixed Species	710	4 oz / 115 g	4.5	22
16	Tuna, Average	752	4 oz / 115 g	3.9	20
17	Tilapia	409	4 oz / 115 g	3.6	18
18	Flatfish (Flounder and Sole)	749	4 oz / 115 g	3.2	16
19	Chanterelle Mushrooms	1555	1 cup	2.9	14
20	Albacore Tuna, Canned in Water	544	4 oz / 115 g	2.3	12
21	Chicken Egg, Whole	355	100 g / 2 large	2.0	10
22	European Anchovies, Canned in Oil	736	4 oz / 115 g	2.0	10
23	Beef Liver	4021	3.5 oz / 100 g	1.2	6

24	Pacific Oysters	2255	4 oz / 115 g	1.2	6
25	Beef Kidney	2543	3.5 oz / 100 g	1.1	6

Top Nutrivore Score Common Foods that Are a Good Source of Vitamin D

Rank	Food	Nutrivore Score	% DV
1	Maitake Mushrooms	3551	108
2	Chanterelle Mushrooms	1555	14
3	Atlantic Mackerel	922	93
4	Herring, Average	876	27
5	Tuna, Average	752	20
6	Flatfish (Flounder and Sole)	749	16
7	European Anchovies, Canned in Oil	736	10
8	Salmon, Average	712	71
9	Trout, Mixed Species	710	22
10	Sea Bass, Average	680	32
11	Whitefish, Mixed Species	663	69
12	Sardines, Canned in Oil, w/ bone	654	28
13	Swordfish	557	80
14	Fresh Water Bass, Mixed Species	555	32
15	Snapper, Mixed Species	548	59
16	Albacore Tuna, Canned in Water	544	12
17	Atlantic and Pacific Halibut	523	27
18	Catfish, Average	432	36
19	Tilapia	409	18
20	Eel, Mixed Species	385	134
21	Chicken Egg, Whole	355	10
22	Tigernut	192	32

★ Nearly 75% of westerners are deficient in vitamin D. If you are deficient, it can be tough to get enough vitamin D3 from sun exposure and food (fatty fish is one of the only natural food sources), so you might consider checking with your doctor for testing and supplementation recommendations.



Vitamin E

[Vitamin E](#) is actually a group of eight different vitamins, though the form alpha-tocopherol is the most biologically important. Its most significant role is as a fat-soluble antioxidant, protecting the lipids in cell membranes from oxidative damage. Its free radical-scavenging abilities make vitamin E helpful for cardiovascular health, cancer protection, neurological health (including slowing the progression of Alzheimer's disease), and any situations where oxidative stress increases (such as during pregnancy). There's even evidence that getting enough vitamin E can reduce the risk of the common cold.



Top Common Food Sources of Vitamin E

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit E (mg/serving)	% DV
1	Almond Milk, Unsweetened	688	1 cup	18.1	121
2	Pumpkin Seeds, Shelled, Dried	271	1 oz / 28 g	10.6	71
3	Sunflower Seeds, Shelled, Dried	340	1 oz / 28 g	10.3	69
4	Sunflower Oil, High-Oleic	105	1 tbsp	8.7	58
5	Pecans	221	1 oz / 28 g	7.5	50
6	Almonds	234	1 oz / 28 g	7.4	50
7	Pistachios	265	1 oz / 28 g	7.2	48
8	Walnuts	303	1 oz / 28 g	6.6	44
9	Canola Oil	176	1 tbsp	6.4	43
10	Extra-Virgin Olive Oil	139	1 tbsp	6.2	41
11	Soy milk, Unsweetened, Plain	425	1 cup	6.0	40
12	Pine Nuts, Dried	222	1 oz / 28 g	5.9	40
13	Flaxseed	515	1 oz / 28 g	5.8	38
14	Blackberries	743	1 cup	5.0	33
15	Safflower Oil, High Oleic	82	1 tbsp	4.6	31
16	Eel, Mixed Species	385	4 oz / 115 g	4.6	31
17	Atlantic Salmon, Farmed	673	4 oz / 115 g	4.6	30
18	Flaxseed Oil, Cold Pressed	428	1 tbsp	4.5	30
19	Peanut Oil	90	1 tbsp	4.5	30
20	Brazil Nuts, Dried	694	1 oz / 28 g	4.5	30
21	Hazelnuts (Filberts)	292	1 oz / 28 g	4.3	29
22	Raspberries	491	1 cup	4.2	28
23	Chicken Egg, Yolk	342	100 g / 6 eggs	4.1	27
24	European Anchovies, Canned in Oil	736	4 oz / 115 g	4.0	27
25	Chili Powder	660	1 tbsp	3.8	25

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin E

Rank	Food	Nutrivore Score	% DV
1	Turnip Greens	6370	22
2	Dandelion Greens	2815	25
3	Goji Berries, Dried	780	24
4	Blackberries	743	33
5	European Anchovies, Canned in Oil	736	27
6	Brazil Nuts, Dried	694	30
7	Almond Milk, Unsweetened	688	121
8	Atlantic Salmon, Farmed	673	30
9	Chili Powder	660	25
10	Crayfish, Average	597	22
11	Flaxseed	515	38
12	Raspberries	491	28
13	Flaxseed Oil, Cold Pressed	428	30
14	Soy Milk, Unsweetened, Plain	425	40
15	Eel, Mixed Species	385	31
16	Chicken Egg, Yolk	342	27
17	Sunflower Seeds, Shelled, Dried	340	69
18	Walnuts	303	44
19	Hazelnuts (Filberts)	292	29
20	Pumpkin Seeds, Shelled, Dried	271	71
21	Pistachios	265	48
22	Almonds	234	50
23	Quinoa	227	21
24	Pine Nuts, Dried	222	40
25	Pecans	221	50

★ Vitamin E is not only important for internal biological functions, but it also is often found in skincare products in the form tocopherol acetate, or simply tocopherol, for topical use. In addition to its oxidative properties, vitamin E is a very hydrating molecule. Fun fact: eating vitamin E ALSO helps improve your skin!



Vitamin K

[Vitamin K](#) is actually a group of fat-soluble vitamins with a similar molecular structure, existing as K1, multiple isoforms of K2, and the synthetic form K3. This nutrient plays a vital role in coagulation, due to serving as a cofactor for proteins needed for blood clotting; it's also essential for bone metabolism, cellular function, and the prevention of soft tissue calcification. Getting enough vitamin K2 can help protect against cardiovascular disease, may improve bone mineral density and skeletal health, and may even support endocrine function and brain health; there's also some limited evidence it has anti-cancer and anti-inflammatory properties.

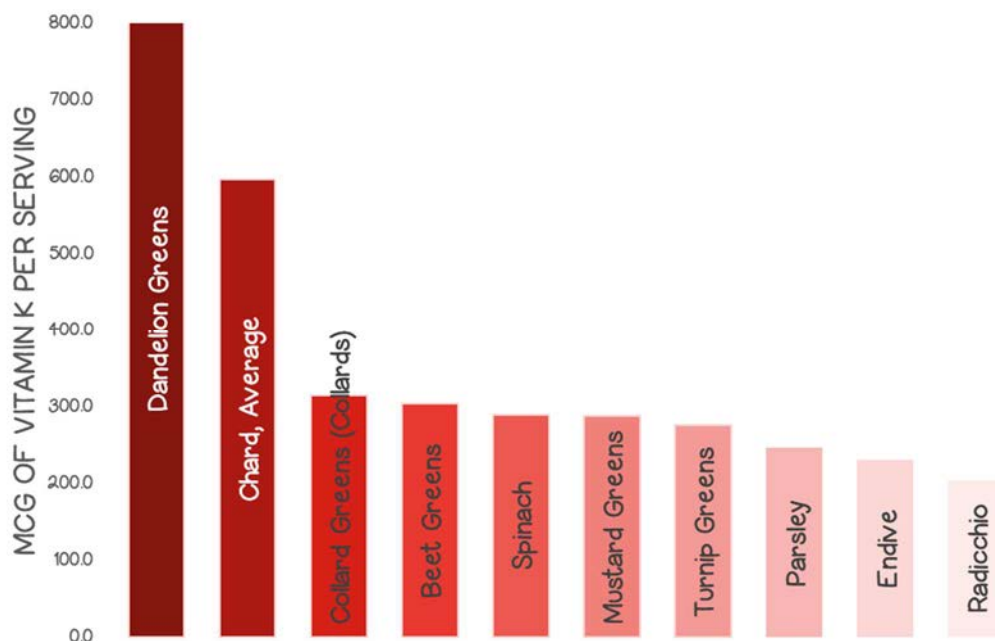


Top Common Food Sources of Vitamin K

Rank	Food	Nutrivore Score	Serving Size (Raw)	Vit K (µg/serving)	% DV
1	Dandelion Greens	2815	2 cups	856.2	714
2	Chard, Average	6386	2 cups	597.6	498
3	Collard Greens (Collards)	3323	2 cups	314.7	262
4	Beet Greens	3259	2 cups	304.0	253
5	Spinach	4548	2 cups	289.7	241
6	Mustard Greens	5464	2 cups	288.4	240
7	Turnip Greens	6370	2 cups	276.1	230
8	Parsley	5491	1/4 cup	246.0	205
9	Endive	2390	2 cups	231.0	193
10	Radicchio	2471	2 cups	204.2	170
11	Kale	4233	2 cups	194.8	162
12	Watercress	6929	2 cups	170.0	142
13	Brussels Sprouts	2817	1 cup	155.8	130
14	Broccoli	2833	1 cup	92.5	77
15	Broccoli Raab (Rapini)	4155	1 cup, chopped	89.6	75
16	Lettuce, Average	1953	2 cups	88.4	74
17	Chinese Broccoli	2431	1 cup	81.1	68
18	Sour Pickles	702	1 cup	72.9	61
19	Kiwi, Green	453	1 cup, sliced	72.5	60
20	Green Cabbage	2034	1 cup, chopped	67.6	56
21	Kimchi (Cabbage)	1097	1 cup	65.4	55
22	Celeriac	345	1 cup	64.0	53
23	Fennel, Bulb	663	1 cup, sliced	55.9	47
24	Asparagus	1385	1 cup	55.7	46
25	Kelp Seaweed	700	1 cup	52.8	44

Top Nutrivore Score Common Foods that Are an Excellent Source of Vitamin K

Rank	Food	Nutrivore Score	% DV
1	Watercress	6929	142
2	Chard, Average	6386	498
3	Turnip Greens	6370	230
4	Parsley	5491	205
5	Spinach	4548	241
6	Kale	4233	162
7	Broccoli Raab (Rapini)	4155	75
8	Chives	3531	21
9	Bok Choy	3428	27
10	Basil	3381	21
11	Collard Greens (Collards)	3323	262
12	Beet Greens	3259	253
13	Broccoli	2833	77
14	Brussels Sprouts	2817	130
15	Dandelion Greens	2815	714
16	Cilantro (Coriander Leaves)	2609	21
17	Radicchio	2471	170
18	Chinese Broccoli	2431	68
19	Endive	2390	193
20	Green Onions (Tops Only)	2097	23
21	Arugula	2019	36
22	Lettuce, Average	1953	74
23	Cabbage, Average	1936	38
24	Asparagus	1385	46
25	Leeks (Bulb and Lower Leaf-Portion)	1128	35



“Common” Nutrient Super Stars

As we were preparing the information for this book, it became apparent that there were many foods that kept appearing over and over on different lists for various nutrients. As a result, we decided that we would curate a list of the “Nutrient Super Star” foods. That is, foods that show up as a top nutrient source, and appear again and again on multiple nutrient lists! For example, mature soybeans show up on an impressive 22 different nutrient lists: alpha-linolenic acid (ALA), calcium, choline, copper, coQ10, fiber, iron, linoleic acid, magnesium, manganese, monounsaturated fatty acids (MUFAs), myo-inositol, phosphorus, phytosterols, potassium, protein, vitamin B1 (thiamin), vitamin B2 (riboflavin), vitamin B6 (pyridoxine), vitamin B7 (biotin), vitamin B9 (folate), and zinc!

Overall, 58 foods made this common food honor roll list! They can be broadly categorized into 5 groups and I’m sure it will come as no surprise which food groups were most highly represented. Nutrient super star foods included seafood (23 foods), plant foods (15 foods), meat & dairy - including organ meat, red meat, poultry, and eggs (12 foods), nuts and seeds (6 foods), and an “other” category (2 foods).

Top Common Foods that Show Up on Multiple Nutrient Lists

NUTRIENT SUPER STAR FOOD	NUMBER OF LISTS FOOD APPEARS ON	FOOD GROUP
Soybeans, Mature Seeds	22	Plant Food
Liver, Average	22	Meat & Dairy
European Anchovies, Canned	20	Seafood
Atlantic Mackerel	19	Seafood
Sardines, Canned in Oil, w/ bone	19	Seafood
Giblets, Average	16	Meat & Dairy
Salmon, Average	16	Seafood
Trout	16	Seafood
Kidney, Average	15	Meat & Dairy
Pigeon Peas (Red Gram), Mature	13	Plant Food
Herring, Average	13	Seafood
Tuna, Average	13	Seafood
Blue Mussels	12	Seafood
Oysters, Average	12	Seafood
Swordfish	12	Seafood
Whitefish	12	Seafood
Nori (Laver) Seaweed	12	Plant Food
Soybeans, Green (Edamame)	11	Plant Food
Flatfish (Flounder & Sole)	11	Seafood
Atlantic and Pacific Halibut	11	Seafood
Northern Lobster	11	Seafood
Octopus	11	Seafood

NUTRIENT SUPER STAR FOOD	NUMBER OF LISTS FOOD APPEARS ON	FOOD GROUP
Chicken Egg, Yolk	10	Meat & Dairy
Clams	10	Seafood
Crab, Average	10	Seafood
Eel	10	Seafood
Mustard Greens	10	Plant Food
Turnip Greens	10	Plant Food
Kale	10	Plant Food
Lamb, Average	10	Meat & Dairy
Squid	10	Seafood
Beef, Average	9	Meat & Dairy
Artichokes, (Globe or French)	9	Plant Food
Collard Greens	9	Plant Food
Dandelion Greens	9	Plant Food
Deer, Average	9	Meat & Dairy
Emu & Ostrich Average	9	Meat & Dairy
Hemp Seeds, Hulled	9	Nuts & Seeds
Scallops	9	Seafood
Sesame Seeds	9	Nuts & Seeds
Sunflower Seeds	9	Nuts & Seeds
Almonds	8	Nuts & Seeds
Sea Bass, Average	8	Seafood
Beet Greens	8	Plant Food
Cassava	8	Plant Food
Chicken Egg, Whole	8	Meat & Dairy
Cocoa Powder, Unsweetened	8	Other
Coconut Cream, Raw	8	Other
Crayfish, Average	8	Seafood
Duck, Average	8	Meat & Dairy
Fiddlehead Ferns	8	Plant Food
Game Meat, Average	8	Meat & Dairy
White Mushrooms, Average	8	Plant Food
Pistachios	8	Nuts & Seeds
Pork, Average	8	Meat & Dairy
Pumpkin Seeds, Shelled, Dried	8	Nuts & Seeds
Snapper	8	Seafood
Spinach	8	Plant Food



Nutrient Super Star Food Groups



SEAFOOD

FOOD	# LISTS
European Anchovies, Canned	20
Atlantic Mackerel	19
Sardines, Canned in Oil, w/ bone	19
Salmon, Average	16
Trout	16
Herring, Average	13
Tuna, Average	13
Blue Mussels	12
Oysters, Average	12
Swordfish	12
Whitefish	12
Flatfish (Flounder & Sole)	11
Atlantic and Pacific Halibut	11
Northern Lobster	11
Octopus	11
Clams	10
Crab, Average	10
Eel	10
Squid	10
Scallops	9
Sea Bass, Average	8
Crayfish, Average	8
Snapper	8

NUTS & SEEDS

FOOD	# LISTS
Hemp Seeds, Hulled	9
Sesame Seeds	9
Sunflower Seeds	9
Almonds	8
Pistachios	8
Pumpkin Seeds, Shelled	8

PLANT FOODS

FOOD	# LISTS
Soybeans, Mature Seeds	22
Pigeon Peas, Mature Seeds	13
Nori (Laver) Seaweed	12
Soybeans, Green (Edamame)	11
Mustard Greens	10
Turnip Greens	10
Kale	10
Artichokes, (Globe or French)	9
Collard Greens	9
Dandelion Greens	9
Beet Greens	8
Cassava	8
Fiddlehead Ferns	8
White Mushrooms, Average	8
Spinach	8

MEAT & DAIRY

FOOD	# LISTS
Liver, Average	22
Giblets, Average	16
Kidney, Average	15
Chicken Egg, Yolk	10
Lamb, Average	10
Beef, Average	9
Deer, Average	9
Emu & Ostrich Average	9
Chicken Egg, Whole	8
Duck, Average	8
Game Meat, Average	8
Pork, Average	8

OTHER

FOOD	# LISTS
Cocoa Powder, Unsweetened	8
Coconut Cream, Raw	8

Appendix A: Additional RDA Guidelines

The following terms are recommendations for daily nutrient targets based on age, gender, pregnancy, and lactation. We've including this handy cheat sheet for a quick reference!

ADEQUATE INTAKE (AI): Represents an amount of a nutrient assumed to ensure nutritional adequacy for everyone in the demographic group when there isn't sufficient information to develop an RDA.

PERCENT DAILY VALUE (%DV): Shows how much of a nutrient is provided in relation to the total amount of the nutrient that is needed daily. Based on the reference daily intake (RDI), which is a subset of the RDA set forth by the Food and Drug Administration (FDA).

RECOMMENDED DIETARY ALLOWANCE (RDA): Represents the dietary intake level of a specific nutrient considered sufficient to meet the needs of 97.5% of healthy individuals. These values should be considered *minimum* daily targets.

RECOMMENDED TARGET (RT): Represents targets for nonessential nutrients developed based on Team Nutrivore's review of the scientific literature established with the aim of providing improvements for overall health and reduction in chronic disease risk.

UPPER LIMITS (UL): The maximum level of daily nutrient intake that is likely to pose no risk of adverse effects. The upper limit differs from toxicity which is typically only seen in the context of supplementation and not from dietary intake of whole foods.

Infants (0 months – < 12 months)

Nutrient	0 Months Through 6 Months		6 Months Through 11 Months		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	Not Applicable		Not Applicable		Not established
Vit A (µg RE)		400		500	600
Vit B1 (mg)		0.2		0.3	Not established
Vit B2 (mg)		0.3		0.4	Not established
Vit B3 (mg)		2		4	*Not determinable
Vit B5 (mg)		1.7		1.8	Not established
Vit B6 (mg)		0.1		0.3	*Not determinable
Vit B7 (µg)		5		6	Not established
Vit B9 (µg)		65		80	*Not determinable
Vit B12 (µg)		0.4		0.5	Not established
Vit C (mg)		40		50	*Not determinable
Vit D (IU/µg)		400 IU 10 µg		400 IU 10 µg	1000 IU / 25 µg (0-6 mo) 1500 IU / 37.5 µg (6-12 mo)
Vit E (mg)		4		5	*Not determinable
Vit K (µg)		2.0		2.5	Not established
Choline (mg)		125		150	*Not determinable
Calcium (mg)		200		260	1000 (0-6mo) 1500 (6-12 mo)
Chromium (µg)		0.2		5.5	Not established
Copper (µg)		200		220	*Not determinable
Iodine (µg)		110		130	*Not determinable
Iron (mg)		0.27	11		40
Magnesium (mg)		30		75	*Not determinable
Manganese (mg)		0.003		0.6	*Not determinable
Phosphorous (mg)		100		275	*Not determinable
Potassium (mg)		400		860	Not established
Selenium (µg)		15		20	45 (0-6 mo) 60 (7-12 mo)
Zinc (mg)		2	3		4 (0-6 mo) 5 (7-12 mo)
ALA (g)		0.5**		0.5**	Not established
EPA + DHA (mg)				100 (DHA only)	Not established
Linoleic acid (g)		4.4***		4.6***	Not established
Protein (g)	2.1g/100 kcal		11		Not established

*Not determinable due to lack of data of adverse effects in this age group and concern with regard to lack of ability to handle excess amounts. Source of intake should be from food and formula only to prevent high levels of intake.

**All omega-3 polyunsaturated fatty acids present in human milk can contribute to the AI for infants. These include ALA, EPA, and DHA.

***Various omega-6 polyunsaturated fatty acids present in human milk can contribute to the AI for infants.

Children (1 year – 3 years)

Nutrient	1 yr - 3 yrs		Upper Limit
	RDA	AI	
Fiber (g)		19 (12-23 mo)	Not established
	14 (14g/1000 kcal) 2-3 yrs		
Vit A (µg RE)	300		600
Vit B1 (mg)	0.5		Not established
Vit B2 (mg)	0.5		Not established
Vit B3 (mg)	6		10 (from supplemental forms)
Vit B5 (mg)		2	Not established
Vit B6 (mg)	0.5		30
Vit B7 (µg)		8	Not established
Vit B9 (µg)	150		300 (from supplemental forms)
Vit B12 (µg)	0.9		Not established
Vit C (mg)	15		400
Vit D (IU/µg)	600 IU		2500 IU
	15 µg		62.5 µg
Vit E (mg)	6		200 (from supplemental forms)
Vit K (µg)		30	Not established
Choline (mg)		200	1000
Calcium (mg)	700		2500
Chromium (µg)		11	Not established
Copper (µg)	340		1000
Iodine (µg)	90		200
Iron (mg)	7		40
Magnesium (mg)	80		65 (from supplemental forms)
Manganese (mg)		1.2	2
Phosphorous (mg)	460		3000
Potassium (mg)		2000	Not established
Selenium (µg)	20		90
Zinc (mg)	3		7
ALA (g)		0.7	Not established
EPA + DHA (mg)		100 (DHA only) 1yr 250 (2-3 yrs)	Not established
Linoleic acid (g)		7	Not established
Protein (g)	13		Not established

Children (4 years - 8 years)

Nutrient	4-8 Female		4-8 Male		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	17 (14g/1000 kcal)		20 (14g/1000 kcal)		Not established
Vit A (µg RE)	400		400		900
Vit B1 (mg)	0.6		0.6		Not established
Vit B2 (mg)	0.6		0.6		Not established
Vit B3 (mg)	8		8		15 (from supplemental forms)
Vit B5 (mg)		3		3	Not established
Vit B6 (mg)	0.6		0.6		40
Vit B7 (µg)		12		12	Not established
Vit B9 (µg)	200		200		400 (from supplemental forms)
Vit B12 (µg)	1.2		1.2		Not established
Vit C (mg)	25		25		650
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		3000 IU 75 µg
Vit E (mg)	7		7		300 (from supplemental forms)
Vit K (µg)		55		55	Not established
Choline (mg)		250		250	1000
Calcium (mg)	1000		1000		2500
Chromium (µg)		15		15	Not established
Copper (µg)	440		440		3000
Iodine (µg)	90		90		300
Iron (mg)	10		10		40
Magnesium (mg)	130		130		110 (from supplemental forms)
Manganese (mg)		1.5		1.5	3
Phosphorous (mg)	500		500		3000
Potassium (mg)		2300		2300	Not established
Selenium (µg)	30		30		150
Zinc (mg)	5		5		12
ALA (g)		0.9		0.9	Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		10		10	Not established
Protein (g)	19		19		Not established

Children (9 years - 13 years)

Nutrient	9-13 Female		9-13 Male		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	22 (14g/1000 kcal)		25 (14g/1000 kcal)		Not established
Vit A (µg RE)	600		600		1700
Vit B1 (mg)	0.9		0.9		Not established
Vit B2 (mg)	0.9		0.9		Not established
Vit B3 (mg)	12		12		20 (from supplemental forms)
Vit B5 (mg)		4		4	Not established
Vit B6 (mg)	1.0		1.0		60
Vit B7 (µg)		20		20	Not established
Vit B9 (µg)	300		300		600 (from supplemental forms)
Vit B12 (µg)	1.8		1.8		Not established
Vit C (mg)	45		45		1200
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	11		11		600 (from supplemental forms)
Vit K (µg)		60		60	Not established
Choline (mg)		375		375	2000
Calcium (mg)	1300		1300		3000
Chromium (µg)		21		25	Not established
Copper (µg)	700		700		5000
Iodine (µg)	120		120		600
Iron (mg)	8		8		40
Magnesium (mg)	240		240		350 (from supplemental forms)
Manganese (mg)		1.6		1.9	6
Phosphorous (mg)	1250		1250		4000
Potassium (mg)		2300		2500	Not established
Selenium (µg)	40		40		280
Zinc (mg)	8		8		23
ALA (g)		1.0		1.2	Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		10		12	Not established
Protein (g)	34		34		Not established

Adolescents (14 years - 18 years)

Nutrient	14-18 Female		14-18 Male		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	25 (14g/1000 kcal)		31 (14g/1000 kcal)		Not established
Vit A (µg RE)	700		900		2800
Vit B1 (mg)	1.0		1.2		Not established
Vit B2 (mg)	1.0		1.3		Not established
Vit B3 (mg)	14		16		30 (from supplemental forms)
Vit B5 (mg)		5		5	Not established
Vit B6 (mg)	1.2		1.3		80
Vit B7 (µg)		25		25	Not established
Vit B9 (µg)	400		400		800 (from supplemental forms)
Vit B12 (µg)	2.4		2.4		Not established
Vit C (mg)	65		75		1800
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	15		15		800 (from supplemental forms)
Vit K (µg)		75		75	Not established
Choline (mg)		400		550	3000
Calcium (mg)	1300		1300		3000
Chromium (µg)		24		35	Not established
Copper (µg)	890		890		8000
Iodine (µg)	150		150		900
Iron (mg)	15		11		45
Magnesium (mg)	360		410		350 (from supplemental forms)
Manganese (mg)		1.6		2.2	9
Phosphorous (mg)	1250		1250		4000
Potassium (mg)		2300		3000	Not established
Selenium (µg)	55		55		400
Zinc (mg)	9		11		34
ALA (g)		1.1		1.6	Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		11		16	Not established
Protein (g)	46		52		Not established

Adults (19 years – 50 years)

Nutrient	19-50 Female		19-50 Male		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	28 (14g/1000 kcal) 19-30 years 25 (14g/1000kcal) 31-50 years		34 (14g/1000 kcal) 19-30 years 31 (14g/1000kcal) 31-50 years		Not established
Vit A (µg RE)	700		900		3000
Vit B1 (mg)	1.1		1.2		Not established
Vit B2 (mg)	1.1		1.3		Not established
Vit B3 (mg)	14		16		35 (from supplemental forms)
Vit B5 (mg)		5		5	Not established
Vit B6 (mg)	1.3		1.3		100
Vit B7 (µg)		30		30	Not established
Vit B9 (µg)	400		400		1000 (from supplemental forms)
Vit B12 (µg)	2.4		2.4		Not established
Vit C (mg)	75		90		2000
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	15		15		1000 (from supplemental forms)
Vit K (µg)		90		120	Not established
Choline (mg)		425		550	3500.0
*CoQ10 (mg)	6		6		Not established
*Myo-Inositol (mg)	1500		1500		Not established
Calcium (mg)	1000		1000		2500
Chromium (µg)		25		35	Not established
Copper (µg)	900		900		10,000
Iodine (µg)	150		150		1100
Iron (mg)	18		8		45
Magnesium (mg)	310 (19-30 years) 320 (31-50 years)		400 (19-30 years) 420 (31-50 years)		350 (from supplemental forms)
Manganese (mg)		1.8		2.3	11
Phosphorous (mg)	700		700		4000
Potassium (mg)		2600		3400	Not established
Selenium (µg)	55		55		400
Zinc (mg)	8		11		40
*Betain (mg)	25		25		Not established
*Carotenoids (µg)	9000		9000		Not established

Nutrient	19-50 Female		19-50 Male		Upper Limit
	RDA	AI	RDA	AI	
*Glucosinolates (mg)	60		60		Not established
*Phytosterols (mg)	1300		1300		Not established
*Polyphenols (mg)	800		800		Not established
*Thiosulfinates (mg)	12		12		Not established
ALA (g)		1.1		1.6	Not established
*CLA (g)	0.7		0.7		Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		12		17	Not established
*MUFAs (g)	20		20		Not established
*MCTs (g)	6		6		Not established
*Ergothioneine (mg)	2.25		2.25		Not established
*Taurine (mg)	400		400		Not established
Protein (g)	46		56		Not established

*Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health.

Mature Adults (51+ years)

Nutrient	51+ Female		51+ Male		Upper Limit
	RDA	AI	RDA	AI	
Fiber (g)	22 (14g/1000 kcal)		28 (14g/1000 kcal)		Not established
Vit A (µg RE)	700		900		3000
Vit B1 (mg)	1.1		1.2		Not established
Vit B2 (mg)	1.1		1.3		Not established
Vit B3 (mg)	14		16		35 (from supplemental forms)
Vit B5 (mg)		5		5	Not established
Vit B6 (mg)	1.5		1.7		100
Vit B7 (µg)		30		30	Not established
Vit B9 (µg)	400		400		1000 (from supplemental forms)
Vit B12 (µg)	2.4		2.4		Not established
Vit C (mg)	75		90		2000
Vit D (IU/µg)	600 IU/15 µg (51-70 yrs) 800 IU/20 µg (71+ yrs)		600 IU/15 µg (51-70 yrs) 800 IU/20 µg (71+ yrs)		4000 IU 100 µg
Vit E (mg)	15		15		1000 (from supplemental forms)
Vit K (µg)		90		120	Not established
Choline (mg)		425		550	3500
*CoQ10 (mg)	6		6		Not established
*Myo-Inositol (mg)	1500		1500		Not established
Calcium (mg)	1200		1000 (51-70 yrs) 1200 (71+ yrs)		2000
Chromium (µg)		20		30	Not established
Copper (µg)	900		900		10,000
Iodine (µg)	150		150		1100
Iron (mg)	8		8		45
Magnesium (mg)	320		420		350 (from supplemental forms)
Manganese (mg)		1.8		2.3	11
Phosphorous (mg)	700		700		4000 (51-70 yrs) 3000 (>70 yrs)
Potassium (mg)		2600		3400	Not established
Selenium (µg)	55		55		400
Zinc (mg)	8		11		40
*Betain (mg)	25		25		Not established
*Carotenoids (µg)	9000		9000		Not established

Nutrient	51+ Female		51+ Male		Upper Limit
	RDA	AI	RDA	AI	
*Glucosinolates (mg)	60		60		Not established
*Phytosterols (mg)	1300		1300		Not established
*Polyphenols (mg)	800		800		Not established
*Thiosulfinates (mg)	12		12		Not established
ALA (g)		1.1		1.6	Not established
*CLA (g)	0.7		0.7		Not established
EPA + DHA (mg)		250		250	Not established
Linoleic acid (g)		11		14	Not established
*MUFAs (g)	20		20		Not established
*MCTs (g)	6		6		Not established
*Ergothioneine (mg)	2.25		2.25		Not established
*Taurine (mg)	400		400		Not established
Protein (g)	46		56		Not established

* Currently there are no established guidelines for these nutrients. Based on scientific studies the recommendations listed represent good targets for overall health and reduction of chronic disease risk.

Pregnancy

Nutrient	14-18 yrs		19-30 yrs		31-50 yrs		Upper Limit
	1st, 2nd, & 3rd Trimester		1st, 2nd, & 3rd Trimester		1st, 2nd, & 3rd Trimester		
	RDA	AI	RDA	AI	RDA	AI	
Fiber (g)	25 (14g/1000 kcal) 1st Trimester 31 (14g/1000 kcal) 2nd Trimester 34 (14g/1000 kcal) 3rd Trimester		28 (14g/1000 kcal) 1st Trimester 34 (14g/1000 kcal) 2nd Trimester 36 (14g/1000 kcal) 3rd Trimester		25 (14g/1000 kcal) 1st Trimester 31 (14g/1000 kcal) 2nd Trimester 34 (14g/1000 kcal) 3rd Trimester		Not established
Vit A (µg RE)	750		770		770		2800 (</= 18 yrs) 3000 (19-50 yrs)
Vit B1 (mg)	1.4		1.4		1.4		Not established
Vit B2 (mg)	1.4		1.4		1.4		Not established
Vit B3 (mg)	18		18		18		30 (from supplemental forms) </= 18 yrs 35 (from supplemental forms) 19-50 yrs
Vit B5 (mg)		6		6		6	Not established
Vit B6 (mg)	1.9		1.9		1.9		80 (</= 18 yrs) 100 (19-50 yrs)
Vit B7 (µg)		30		30		30	Not established
Vit B9 (µg)	600		600		600		800 (from supplemental forms) </= 18 yrs 1000 (from supplemental forms) 19-50 yrs
Vit B12 (µg)	2.6		2.6		2.6		Not established
Vit C (mg)	80		85		85		1800 (</= 18 yrs) 2000 (19-50 yrs)
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	15		15		15		800 (from supplemental forms) </= 18 yrs 1000 (from supplemental forms) 19-50 yrs
Vit K (µg)		75		90		90	Not established
Choline (mg)		450		450		450	3000 (</= 18 yrs) 3500 (19-50 yrs)
Calcium (mg)	1300		1000		1000		3000 (</= 18 yrs) 2500 (19-50 yrs)
Chromium (µg)		29		30		30	Not established

Nutrient	14-18 yrs		19-30 yrs		31-50 yrs		Upper Limit
	1st, 2nd, & 3rd Trimester		1st, 2nd, & 3rd Trimester		1st, 2nd, & 3rd Trimester		
	RDA	AI	RDA	AI	RDA	AI	
Copper (µg)	1000		1000		1000		8000 (</= 18 yrs) 10,000 (19-50 yrs)
Iodine (µg)	220		220		220		900 (</= 18 yrs) 1100 (19-50 yrs)
Iron (mg)	27		27		27		45
Magnesium (mg)	400		350		360		350 (from supplemental forms)
Manganese (mg)		2.0		2.0		2.0	9 (</= 18 yrs) 11 (19-50 yrs)
Phosphorous (mg)	1250		700		700		3500
Potassium (mg)		2600		2900		2900	Not established
Selenium (µg)	60		60		60		400
Zinc (mg)	12		11		11		34 (</= 18 yrs) 40 (19-50 yrs)
ALA (g)		1.4		1.4		1.4	Not established
EPA + DHA (mg)		450		450		450	Not established
Linoleic acid (g)		13		13		13	Not established
Protein (g)	71		71		71		Not established









Lactating

Nutrient	14-18 yrs		19-30 yrs		31-50 yrs		Upper Limit
	0-12 mo Postpartum		0-12 mo Postpartum		0-12 mo Postpartum		
	RDA	AI	RDA	AI	RDA	AI	
Fiber (g)	31 (14g/1000 kcal)		34 (14g/1000 kcal)		31 (14g/1000 kcal)		Not established
Vit A (µg RE)	1200		1300		1300		2800 (</= 18 yrs) 3000 (19-50 yrs)
Vit B1 (mg)	1.4		1.4		1.4		Not established
Vit B2 (mg)	1.6		1.6		1.6		Not established
Vit B3 (mg)	17		17		17		30 (from supplemental forms) </= 18 yrs 35 (from supplemental forms) 19-50 yrs
Vit B5 (mg)		7		7		7	Not established
Vit B6 (mg)	2		2		2		80 (</= 18 yrs) 100 (19-50 yrs)
Vit B7 (µg)		35		35		35	Not established
Vit B9 (µg)	500		500		500		800 (from supplemental forms) </= 18 yrs 1000 (from supplemental forms) 19-50 yrs
Vit B12 (µg)	2.8		2.8		2.8		Not established
Vit C (mg)	115		120		120		1800 (</= 18 yrs) 2000 (19-50 yrs)
Vit D (IU/µg)	600 IU 15 µg		600 IU 15 µg		600 IU 15 µg		4000 IU 100 µg
Vit E (mg)	19		19		19		800 (from supplemental forms) </= 18 yrs 1000 (from supplemental forms) 19-50 yrs
Vit K (µg)		75		90		90	Not established
Choline (mg)		550		550		550	3000 (</= 18 yrs) 3500 (19-50 yrs)
Calcium (mg)	1300		1000		1000		3000 (</= 18 yrs) 2500 (19-50 yrs)
Chromium (µg)		44		45		45	Not established

Nutrient	14-18 yrs		19-30 yrs		31-50 yrs		Upper Limit
	0-12 mo Postpartum		0-12 mo Postpartum		0-12 mo Postpartum		
	RDA	AI	RDA	AI	RDA	AI	
Copper (µg)	1300		1300		1300		8000 (</= 18 yrs) 10,000 (19-50 yrs)
Iodine (µg)	290		290		290		900 (</= 18 yrs) 1100 (19-50 yrs)
Iron (mg)	10		9		9		45
Magnesium (mg)	360		310		320		350 (from supplemental forms)
Manganese (mg)		2.6		2.6		2.6	9 (</= 18 yrs) 11 (19-50 yrs)
Phosphorous (mg)	1250		700		700		4000
Potassium (mg)		2500		2800		2800	Not established
Selenium (µg)	70		70		70		400
Zinc (mg)	13		12		12		34 (</= 18 yrs) 40 (19-50 yrs)
ALA (g)		1.3		1.3		1.3	Not established
EPA + DHA (mg)		450		450		450	Not established
Linoleic acid (g)		13		13		13	Not established
Protein (g)	71		71		71		Not established

Appendix B: Serving Sizes

Serving sizes aren't as big as you think! Here's a handy dandy cheat sheet with the serving size and visual approximation for each food.

AVOCADO	1/4 CUP		A rounded, cupped palm is approximately 1/4 Cup
BONE BROTH	1 CUP		The 4 fingers of a closed fist is approximately 1 Cup
CHEESE	1.5 OUNCES (40 GRAMS)		2 thumbs are approximately 1.5 OZ
COCONUT	1/4 CUP FRESH		A rounded, cupped palm is approximately 1/4 Cup
DRIED HERBS	1 TABLESPOON		The top half of the thumb is approximately 1 Tablespoon
FATS & OILS	1 TABLESPOON		The top half of the thumb is approximately 1 Tablespoon
DRIED FRUIT	1/2 CUP		The bottom 2 fingers of a closed fist is approximately 1/2 Cup
FRESH HERBS	1/4 CUP		A rounded, cupped palm is approximately 1/4 Cup

FRUIT	1 CUP RAW, CHOPPED
LEAFY VEGGIES	2 CUPS RAW, CHOPPED
LEGUMES	½ CUP COOKED
MEAT	3.5 OUNCES, RAW (100 GRAMS)
MILK	1 CUP
NUTS & SEEDS	1 OUNCE (28 GRAMS)
OLIVES	¼ CUP
ORGAN MEAT	3.5 OUNCES, RAW (100 GRAMS)
SEAFOOD	4 OUNCES, RAW (115 GRAMS)



4 fingers
of a fist

The 4 fingers of a closed fist is approximately 1 Cup



4 fingers
of a fist

The 4 fingers of 2 closed fists is approximately 2 Cups



bottom
2 fingers

The bottom 2 fingers of a closed fist is approximately 1/2 Cup



palm

The palm is approximately 3-4 OZ



4 fingers
of a fist

The 4 fingers of a closed fist is approximately 1 Cup



cupped palm: level

A level cupped palm is approximately 1 OZ



cupped palm: rounded

A rounded, cupped palm is approximately 1/4 Cup



palm

The palm is approximately 3-4 OZ



palm

The palm is approximately 3-4 OZ

SPICES	1 TABLESPOON
TOFU	¼ CUP RAW
VEGETABLES (MOST)	1 CUP RAW, CHOPPED
WHOLE GRAINS	½ CUP COOKED
YOGURT	1 CUP



top half of thumb

The top half of the thumb is approximately 1 Tablespoon



cupped palm: rounded

A rounded, cupped palm is approximately ¼ Cup



4 fingers of a fist

The 4 fingers of a closed fist is approximately 1 Cup



bottom 2 fingers

The bottom 2 fingers of a closed fist is approximately ½ Cup



4 fingers of a fist

The 4 fingers of a closed fist is approximately 1 Cup

About The Creators of this Book

Dr. Sarah Ballantyne, PhD

FOUNDER OF NUTRIVORE

Award-winning public speaker, New York Times bestselling author and world-renowned health expert, Dr. Sarah Ballantyne, PhD believes the key to improving public health is scientific literacy. She creates educational resources to help people improve their day-today diet and lifestyle choices, empowered and informed by the most current evidenced-based scientific research.



Lisa Hunter, MSc

CONTENT CREATOR AND RESEARCHER

Lisa has a Bachelor of Science degree in Chemistry and Biochemistry, a Master of Science degree in Biochemistry, and worked in the pharmaceutical industry developing bio-products for 7 years, prior to taking time off to raise her two children. On Nutrivore.com she is a researcher, writer, and content creator and is responsible for developing and maintaining the expanded Nutrivore Score database of over 7,500 foods (plus many of the nerdy puns sprinkled throughout the website!).



Jacqueline Leeflang, PEng

CONTENT CREATOR AND RESEARCHER

Jacqueline has a degree in Chemical Engineering (Bachelor of Applied Science) from the University of British Columbia in Canada, along with a master's degree in renewable energy technology from the United Kingdom. She has also achieved her Professional Engineering designation in her home province of Alberta, Canada. Jacqueline does a wide variety of tasks for Nutrivore including, article writing, data visualization, research, and content creation. She spends most of her days chasing and loving her two young boys, while spending as much time outside as possible.



Nicole Anouar, BA

GRAPHIC DESIGNER

Nicole Anouar has a B.A in graphic design from the University of San Francisco and specializes in branding and educational design for healers and health professionals in the online space. With 8+ years of education and practice in graphic design, content marketing and ancestral lifestyle tradition, Nicole expresses her passion for truth and her love for alternative living into the work she does every day.



Charissa Joy, AOS

CHIEF OPERATIONS OFFICER

Charissa Joy has over 15 years of experience working in the wellness space. Charissa has many roles on the team. She is Dr. Sarah's right hand and touches every part of Dr. Sarah's businesses. She manages all communications for Nutrivore, both external and internal. She is the project and team manager. She handles all internal and external marketing, as well as all brand/affiliate partnerships.



Denise Minger

CONTENT CREATOR AND RESEARCHER

Denise is a health researcher and author of the best-selling book, "Death By Food Pyramid"—an award-winning exposé of the forces that shaped our dietary guidelines and beliefs, and that's been featured in documentaries, UPenn medical writing curricula, the Nutritional Therapy Association certification program, and numerous other health education courses around the world.



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