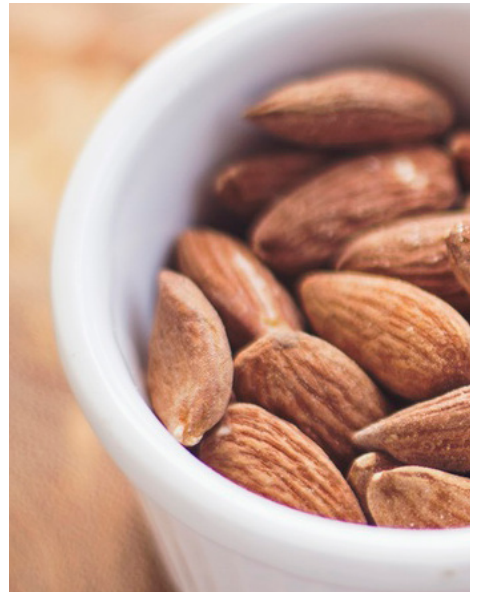


HealthAliciousNess.com

# The Most Nutritious Foods Lists








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*Thank you to everyone who  
made this book possible.*

This book is the result of a 6 year journey creating HealthAliciousNess.com. The goal of the site is to empower people to find the best foods for their diet and health, and also to encourage people to try new foods.

HealthAliciousNess.com has grown thanks to the support, feedback, comments, and suggestions of its readers. Thank you to everyone who has interacted with the site and helped to make it better.

The site also could not have been possible without the writing of Daisy Whitbread, who contributed her nutritional expertise and British perspective, helping to make the foods of the site more international.

The book was designed by Helena Gaspar and Ljiljana Pavkov who spent countless hours and revisions to create the beautiful formats and page layouts.

It was produced by Paul House in San Francisco, CA.





*"The best six doctors anywhere  
And no one can deny it  
Are sunshine, water, rest, and air  
Exercise and diet.  
These six will gladly you attend  
If only you are willing  
Your mind they'll ease  
Your will they'll mend  
And charge you not a shilling."*

## What are the best foods to eat?

Ultimately all people are different. The way their body reacts to food is different. Some people may eat cheese without having any problems, while others will see a large jump in their cholesterol levels. Some people may feel more energetic on a vegetarian diet, while others will feel a lack of energy. Finding the best diet for you involves trying new foods till you find something that gives you the most energy and keeps your body in a healthy weight range.

## What are the general guidelines?

**1. Choose whole foods over processed** - A simple rule in theory, but more difficult in practice. Choosing whole foods will help you achieve a healthier diet, and follow the remaining guidelines. While everyone needs to discover the best diet for their body, **it is unlikely your best diet involves processed foods.** In some cases commercial cereals or other processed foods may be recommended in the top 10 lists. This is because for certain nutrients there are few other choices. For example, Vitamin B12 is naturally found exclusively in animal foods, leaving vegans no other choice but processed fortified foods, or supplements. Vitamin D is naturally manufactured in our bodies using sunlight. However, for those needing more, few foods provide them. Again, processed fortified foods have to be recommended.

**2. Avoid sugar** - While all people are different, the empty calories in sugar are never good for anyone. Avoiding sugar is much easier if you are choosing whole foods over processed.

**3. Avoid trans-fats** - This man made fat was created due to its ability to stay solid (not liquid like oil) at room temperature. It has been widely used in processed foods ever since. Despite its commercial benefit, this fat is known to increase the risk of heart disease, and is best avoided by everyone. Again, choosing whole foods over processed will solve this problem.

**4. Eat nutrient dense foods** - While there are a select few people out there who actually need to gain weight, most of us are overweight, or at least on the high-end of a healthy Body Mass Index (BMI). As such, we should aim to make every calorie count. Eating the most nutrient dense foods (the most nutrients per calorie) should be our goal. The lists in this book are designed to give you the most nutrient dense foods per calorie.

**5. Try new foods** - Too often we get into routines of eating the same things over and over, yet there are thousands of edible foods most people simply overlook. Trying new foods like flax seeds, quinoa, buckwheat, chia seeds, etc...can be an excellent source of nutrients while keeping eating fun.





## What is the difference between the RDI and DV?

According to Office of Dietary Supplements RDIs are recommended daily intakes of a nutrient for healthy people. They tell you how much of that nutrient you should get on average each day. RDIs are developed by the Food and Nutrition Board at the Institute of Medicine of the National Academies. They vary by age, gender, and whether a woman is pregnant or breast-feeding; so there are many different RDIs for each nutrient.

Daily Values (%DV), established by the U.S. Food and Drug Administration (FDA), are used on food and dietary supplement labels. For each nutrient, there is one DV for all people ages 4 years and older. Therefore, DVs aren't recommended intakes, but suggest how much of a nutrient a serving of the food or supplement provides in the context of a total daily diet. Daily Values create a one size fits all standard for nutrients. DVs often match or exceed the RDIs for most people, but not in all cases. When the DV exceeds the RDI it ensures you will eat plenty of each nutrient.

Daily Values are presented on food and supplement labels as a percentage. They help you compare one product with another. As an example, the %DV for calcium on a food label might say 20%. This means it has 200 mg (milligrams) of calcium in one serving because the DV for calcium is 1,000 mg/day. If another food has 40% of the DV for calcium, it's easy to see that it provides much more calcium than the first food.

## What about Oxalates and Phytic Acid?

Oxalates and Phytic Acid are typically found in plant foods and have been shown to slow absorption of certain nutrients. However, they are not really a concern in a normal balanced diet, and foods that contain them can still be good sources of a nutrient. For example, spinach can still be a good source of calcium, even though it is high in oxalates. The single largest factor affecting absorption of a nutrient is your own body's level of that nutrient, and internal regulation of levels. This self-imposed balance of nutrients is vital to survival.



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# Vitamin A

## COOKING TIPS

Vitamin A is fat soluble, consuming it with fat increases absorption.

## HEALTH BENEFITS

Boosts immune function.  
Great for skin health.  
Cancer protection.

## DEFICIENCY SYMPTOMS

Blindness, Viral Infection.  
\*Usually only a problem in developing countries

## TOXICITY SYMPTOMS





Jaundice, Nausea, Loss of Appetite, Irritability, Vomiting

## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholism** — Excessive consumption of alcohol can deplete levels of vitamin A in the body, and even moderate consumption can interfere with vitamin A absorption.

**People with Long Term Problems Absorbing Fat** — Problems absorbing fat in the long term can lead to diarrhea and vitamin A deficiency. This includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

## Recommended Daily Allowances (RDAs)

					
0-6 months	400 mcg (27% DV)	400 mcg (27% DV)			
7-12 months	500 mcg (33% DV)	500 mcg (33% DV)			
1-3 years	300 mcg (20% DV)	300 mcg (20% DV)			
4-8 years	400 mcg (27% DV)	400 mcg (27% DV)			
9-13 years	600 mcg (40% DV)	600 mcg (40% DV)			
14-18 years	900 mcg (60% DV)	700 mcg (47% DV)	14-18 years	750 mcg (50% DV)	1,200 mcg (80% DV)
19-50 years	900 mcg (60% DV)	700 mcg (47% DV)	19-50 years	770 mcg (51% DV)	1,300 mcg (87% DV)
51+ years	900 mcg (60% DV)	700 mcg (47% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

High doses of vitamin A from supplements may increase the risk of lung cancer in people who smoke cigarettes.

# The Top 10 Foods Highest in Vitamin A

5000IU = 100% DV for Vitamin A

01

## Sweet Potatoes

- 1 cup of **baked sweet potato** (200g) provides 769% DV
- An **average baked sweet potato** (114g) provides 438% DV



02

## Carrots

- 1 cup of **sliced cooked carrots** (156g) provides 532% DV
- An **average cooked carrot** (46g) provides 157% DV
- 1 cup of **sliced raw carrots** (122g) provides 408% DV



03

## Dark Leafy Greens

Vitamin A per cup cooked (~130g):

- **Spinach** (377%) • **Kale** (354%)
- **Dandelion Greens** (305%) • **Collards** (289%)
- **Beet and Turnip Greens** (220%)
- **Swiss Chard** (214%)
- **Pak Choi** (144%)



04

## Squash

Vitamin A per cup cooked and cubed (~205g):

- **Butternut** (457%)
- **Pumpkin (Mashed)** (282%)
- **Hubbard** (275%)
- **Average Winter Squash** (214%)



05

## Lettuce

Vitamin A per cup shredded (~50g):

- **Cos or Romaine** (82%)
- **Green Leaf** (53%) • **Red Leaf** (42%)
- **Butterhead** (36%)
- **Chicory** (33%)



06

## Dried Fruit

Vitamin A per cup (~130g):

- **Dried Apricots** (302%)
- **Prunes** (24%)
- **Dried Peaches** (17%)



07

## Cantaloupe

- A cup (160g) of **cubed melon** provides 108% DV
- A **wedge** (69g) of **cantaloupe** provides 47% DV



08

## Sweet Bell Peppers

- 1 **large red pepper** (164g) provides 103% DV
- 1 **large green pepper** provides 12% DV
- 1 **large yellow pepper** provides 7% DV
- 1 cup of **chopped red peppers** (149g) provides 93% DV



09

## Tuna Fish

Vitamin A per 3oz filet (~85g):

- **Bluefin Tuna** (43%)
- **Sturgeon** (15%) • **Mackerel** (14%)
- **Oysters** (8%)



10

## Tropical Fruit

- An average **mango** (336g) provides 73% DV
- A small **papaya** (157g) provides 30% DV





# Beta Carotene

## COOKING TIPS

Beta-carotene is fat soluble, consuming it with fat increases absorption.

## HEALTH BENEFITS

Boosts immune function. As an antioxidant, it protects against cancer & aging.

## DEFICIENCY SYMPTOMS

Blindness, Viral Infection,  
\*Usually only a problem in developing countries





## TOXICITY SYMPTOMS

Carotenosis - Orange skin color

## ABSORPTION FACTORS AND AT RISK GROUPS

**People with Long Term Problems Absorbing Fat** — Beta Carotene is fat soluble, being able to absorb fat is essential to absorb the nutrient. Problems absorbing fat includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

No Recommended Daily Intakes exist for Beta Carotene, so the RDAs for Vitamin A are shown below.

					
0-6 months	400 mcg (27% DV)	400 mcg (27% DV)			
7-12 months	500 mcg (33% DV)	500 mcg (33% DV)			
1-3 years	300 mcg (20% DV)	300 mcg (20% DV)			
4-8 years	400 mcg (27% DV)	400 mcg (27% DV)			
9-13 years	600 mcg (40% DV)	600 mcg (40% DV)			
14-18 years	900 mcg (60% DV)	700 mcg (47% DV)	14-18 years	750 mcg (50% DV)	1,200 mcg (80% DV)
19-50 years	900 mcg (60% DV)	700 mcg (47% DV)	19-50 years	770 mcg (51% DV)	1,300 mcg (87% DV)
51+ years	900 mcg (60% DV)	700 mcg (47% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

High doses of Beta Carotene Supplements may increase the risk of lung cancer in people who smoke cigarettes.

# The Top 10 Foods Highest in Beta Carotene

01

## Sweet Potatoes

- 1 cup of **baked sweet potato** (200g) provides 23018µg
- An **average baked sweet potato** (114g) provides 13120µg



02

## Carrots

- 1 cup of **cooked carrots** (156g) provides 12998µg
- An **average cooked carrot** (46g) provides 3833µg



03

## Dark Leafy Greens

Beta-Carotene per cup cooked (~180g):

- **Spinach** (11318µg) • **Kale** (10625µg)
- **Mustard Greens** (10360µg) • **Collards** (8575µg)
- **Beet Greens** (6610µg)
- **Turnip Greens** (6588µg)
- **Swiss Chard** (6391µg) • **Pak Choi** (4333µg)



04

## Lettuce

Beta-Carotene per cup shredded (~50g):

- **Cos or Romaine** (2456µg)
- **Green Leaf** (1599µg) • **Red Leaf** (1259µg)
- **Butterhead** (1093µg)
- **Chicory** (995µg)



05

## Squash

Beta-Carotene per cup cooked (~200g):

- **Butternut** (9369µg)
- **Hubbard** (7339µg)
- **Pumpkin** (5135µg)



06

## Cantaloupe

- A cup (177g) of **melon balls** provides 3575µg
- A **wedge** (69g) of **Cantaloupe** provides 1394µg



07

## Sweet Bell Peppers

- 1 **large red pepper** (164g) provides 2663µg
- 1 **large green pepper** provides 341µg
- 1 **large yellow pepper** provides 223µg
- 1 cup of **chopped red peppers** (149g) provides 2420µg



08

## Dried Fruit

Beta-Carotene per cup (~130g):

- **Dried Apricots** (2812µg)
- **Dried Peaches** (1718µg)
- **Prunes** (685µg)



09

## Peas

- 1 cup of **cooked peas** (160g) provides 2000µg
- 1 package of **cooked peas** (253g) provides 3163µg



10

## Broccoli

- 1 cup of **cooked broccoli** (156g) provides 1450µg
- 1 large stalk (head) of **cooked broccoli** (180g) provides 1672µg





# Vitamin B1

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B1, since it is water soluble.

## HEALTH BENEFITS

Energy production, high doses can enhance brain function.

## DEFICIENCY SYMPTOMS

Severe Fatigue, Beriberi, Organ degeneration.

## TOXICITY SYMPTOMS

None known

## ABSORPTION FACTORS AND AT RISK GROUPS

**Sulfites** — Sulfites are often used as a preservative in foods and wines, and can inhibit absorption of Vitamin B1 (Thiamin).





**Alcoholism** — Alcoholism is the most common cause of thiamin deficiency in developed countries. Up to 80% of alcoholics develop thiamin deficiency because ethanol reduces gastrointestinal absorption of thiamin and thiamin stores in the liver.

**Older Adults** — An estimated 20-30% of older adults are deficient in thiamin. The body naturally absorbs less thiamin as you age, so older adults should consume more thiamin.

**HIV AIDS** — Thiamin deficiency in this group is likely due to malnutrition from treatments.

**People with diabetes** — Thiamin levels are 50-80% lower in people with diabetes, possibly due to greater clearance through the kidneys.

## Recommended Daily Allowances (RDAs)

					
0-6 months	0.2 mg (14% DV)	0.2 mg (14% DV)			
7-12 months	0.3 mg (21% DV)	0.3 mg (21% DV)			
1-3 years	0.5 mg (36% DV)	0.5 mg (36% DV)			
4-8 years	0.6 mg (43% DV)	0.6 mg (43% DV)			
9-13 years	0.9 mg (64% DV)	0.9 mg (64% DV)			
14-18 years	1.2 mg (86% DV)	1.0 mg (71% DV)	14-18 years	1.4 mg (100% DV)	1.4 mg (100% DV)
19-50 years	1.2 mg (86% DV)	1.1 mg (79% DV)	19-50 years	1.4 mg (100% DV)	1.4 mg (100% DV)
51+ years	1.2 mg (86% DV)	1.1 mg (79% DV)			

The Percent Daily Value (%DV) differs from the RDI, since it accounts for absorption factors in foods. The RDIs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Vitamin B1 (Thiamin)

1.4mg = 100% DV for Vitamin B1

01

## Fish

Vitamin B1 per 3oz filet (~85g):

- **Trout** (24% DV)
- **Salmon** (19%) • **Tuna** (16%)
- **Shad** (10%) • **Mackerel** (9%)



02

## Pork

- An average **3oz (85g) serving of lean pork loin, tenderloin, and chops** provides 51%-63% DV



03

## Seeds

Vitamin B1 per ounce (28g, ~1 handful):

- **Flax** (31%) • **Sunflower** (28%)
- **Sesame** (22%) • **Chia** (16%)
- **Pumpkin and Squash** (5%)



04

## Nuts

Vitamin B1 per ounce (28g, ~1 handful):

- **Macadamia** (13%) • **Pistachio** (13%)
- **Brazil Nuts** (12%) • **Pecans** (9%)
- **Cashews** (7%)



05

## Bread

Vitamin B1 per slice/piece (~29g):

- **Whole Wheat Bread** (9%)
- **Wheat Bagel** (26%)
- **Whole Wheat English Muffin** (16%)
- **Rye Bread** (9%)



06

## Green Peas

- A cup (160g) of **green peas** provides 30% DV
- A cup (165g) of **sweet corn** provides 19% DV



07

## Squash

Vitamin B1 per cup cubes (~205g):

- **Acorn Squash** (23%)
- **Hubbard** (10%)
- **Butternut** (10%)



08

## Asparagus

- 1 cup of **Asparagus** (180g) provides 20% DV
- 4 spears of **Asparagus** (60g) provide 6% DV



09

## Roasted Soybeans

- 1 cup (93g) of **Dry Roasted Soybeans** has 26% DV
- 1 ounce (28g, a handful) of **Dry Roasted Soybeans** provides 6% DV



10

## Beans

Vitamin B1 per cup cooked (182g):

- **Navy Beans** (29%) • **Pink Beans** (29%)
- **Black Beans** (28%) • **Mung Beans** (22%)





# Vitamin B2

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B2, since it is water soluble.

## HEALTH BENEFITS

Energy production and ensuring a proper metabolism.

## DEFICIENCY SYMPTOMS

Mouth Ulcers, Cracked Lips  
Sore throat, Iron deficiency  
Anemia.





## TOXICITY SYMPTOMS

None known

## ABSORPTION FACTORS AND AT RISK GROUPS

**Vegetarian Athletes** — Exercise disrupts the usual pathway for Riboflavin absorption. Since riboflavin is more commonly found in animal foods and meats, vegetarians should be sure to increase their intake.

### Recommended Daily Allowances (RDAs)

					
0-6 months	0.3 mg (18% DV)	0.3 mg (18% DV)			
7-12 months	0.4 mg (24% DV)	0.4 mg (24% DV)			
1-3 years	0.5 mg (29% DV)	0.5 mg (29% DV)			
4-8 years	0.6 mg (35% DV)	0.6 mg (35% DV)			
9-13 years	0.9 mg (53% DV)	0.9 mg (53% DV)			
14-18 years	1.3 mg (76% DV)	1.0 mg (59% DV)	14-18 years	1.4 mg (82% DV)	1.6 mg (94% DV)
19-50 years	1.3 mg (76% DV)	1.1 mg (65% DV)	19-50 years	1.4 mg (82% DV)	1.6 mg (94% DV)
51+ years	1.3 mg (76% DV)	1.1 mg (65% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Vitamin B2 (Riboflavin)

1.7mg = 100% DV for Vitamin B2

01

## Cheese

Vitamin B2 per ounce (28g):

- **Gjetost** (23%) • **Hard Goat Cheese** (20%)
- **Feta** (14%) • **Roquefort** (10%)
- **Brie** (9%) • **Camembert** (8%)
- **Parmesan** (8%)



02

## Nuts

Vitamin B2 per ounce (28g):

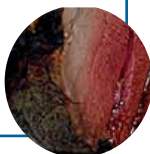
- **Almonds** (17%) • **Mixed Nuts** (8%)
- **Pistachios** (4%) • **Pine Nuts** (4%)
- **Cashews** (4%)



03

## Beef and Lamb

- An **average steak** (175g) provides 89% DV
- A 3oz (85g) **steak** provides 43% DV
- A 3oz portion of **lamb leg** provides 21% DV
- A 3oz portion of **veal** provides 20% DV



04

## Fish

Vitamin B2 per 3 ounce fillet (85g):

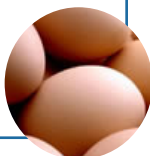
- **Mackerel** (29%) • **Wild Salmon** (24%)
- **Trout** (21%) • **Tuna** (15%)
- **Herring** (15%) • **Salmon** (11%)



05

## Eggs

- A cup (136g) of **chopped hard boiled** has 41% DV
- A **hard boiled egg** provides 15% DV
- **Raw, fried, or scrambled egg** has 13% DV
- A **poached egg** contains 11% DV



06

## Pork

Vitamin B2 per 3 ounce serving (85g):

- **Sirloin** (26%) • **Ground Pork** (24%)
- **Shoulder** (23%) • **Loin** (22%)
- A **single pork chop** (169g) has (38%)



07

## Mushrooms

- 1 cup (108g) of cooked **white mushrooms** - 29%
- 1 cup (121g) of cooked **portabellas** - 29%
- 8 (30g) **dried shiitake mushrooms** - 22%
- 1 cup (72g) of **raw brown criminis** - 21%



08

## Seeds

Vitamin B2 per ounce (28g, about a handful):

- **Sesame** (8%) • **Sunflower** (6%)
- **Chia** (3%) • **Pumpkin Seeds** (3%)
- **Squash Seeds** (3%) • **Flax** (3%)



09

## Seafood

Vitamin B2 per 3oz portion (~85g):

- **Squid** (23%) • **Oysters** (22%)
- **Clams** (21%) • **Mussels** (21%)



10

## Vegetables

Vitamin B2 per cup cooked (~180g):

- **Spinach** (25%) • **Beet Greens** (24%)
- **Asparagus** (14%) • **Drumstick leaves** (13%)
- **Collards** (12%) • **Dandelion** (11%)
- **Chinese Broccoli** (8%)





# Vitamin B3

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B3, since it is water soluble.

## HEALTH BENEFITS

Lowers cholesterol, regulates blood sugar, energy production.

## DEFICIENCY SYMPTOMS

Pellegra, irritability, poor concentration, anxiety, apathy, and depression

## TOXICITY SYMPTOMS





Itching skin flush.  
Digestive maladies.

## ABSORPTION FACTORS AND AT RISK GROUPS

**People with AIDS** — The body's immune system creates a specific cytokine, interferon gamma, which breaks down tryptophan, a precursor of niacin. Studies show that HIV patients who take increased levels of niacin slow the progression of AIDS

**People who eat high amounts of refined foods** — Whole grains are high in vitamin B3 which is typically lost during the refining process. Anyone who eats high amounts of white bread, white rice, corn syrup, or other refined products will not receive adequate amounts of niacin. Even though most of these foods are now fortified, it is still best to eat unrefined food products.

### Recommended Daily Allowances (RDAs)

					
0-6 months	2mg (10% DV)	2mg (10% DV)			
7-12 months	4mg (20% DV)	4mg (20% DV)			
1-3 years	6mg (30% DV)	5mg (25% DV)			
4-8 years	8mg (40% DV)	6mg (30% DV)			
9-13 years	12mg (60% DV)	12mg (60% DV)			
14-18 years	16mg (80% DV)	14mg (70% DV)	14-18 years	18mg (90% DV)	17 mg (85% DV)
19-50 years	16mg (80% DV)	14mg (70% DV)	19-50 years	18mg (90% DV)	17 mg (85% DV)
51+ years	16mg (80% DV)	14mg (70% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

While rare, long term overconsumption of niacin can lead to liver damage, elevated blood sugar levels, type II diabetes, and birth defects.

# The Top 10 Foods Highest in Vitamin B3 (Niacin)

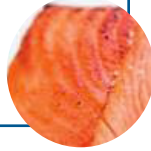
20mg = 100% DV for Vitamin B3

01

## Fish

Vitamin B3 per 3oz filet (~85g):

- **Skipjack Tuna** (80% DV) • **Mackerel** (45%)
- **Bluefin Tuna** (45%) • **Wild Salmon** (43%)
- **Swordfish** (39%) • **Farmed Salmon** (34%)
- **Halibut** (34%)



02

## Chicken And Turkey

- 3 ounces (85g, or half a **chicken breast**) provides 63% DV
- 3 ounces (85g) of **turkey** provides 50% DV



03

## Pork

Vitamin B3 per 3 ounce serving (85g):

- **Lean chop** (46%) • **Lean mince** (44%)
- **Sirloin** (35%)
- A **boneless pork chop** (142g) has 77%

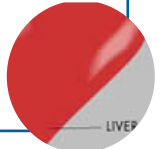


04

## Liver

Vitamin B3 per 3 ounce serving (85g):

- **Beef** (75%) • **Lamb** (71%)
- **Veal** (61%) • **Chicken** (57%)
- **Pork** (36%)



05

## Peanuts

- 1 cup (144g) of **chopped peanuts** provides 100% DV
- 1 ounce (28g) of **chopped peanuts** provides 19% DV
- 2 tablespoons (32g) of **peanut butter** provides 22% DV



06

## Beef

Vitamin B3 per 3oz serving (~85g):

- **Lean Rib** (39%) • **Lean Sirloin Steak** (38%)
- **Beef Fillet** (37%) • **Tenderloin** (36%)



07

## Mushrooms

Vitamin B3 per cup sliced (70g-120g):

- **Grilled Portobello** (38%) • **Cooked White** (35%)
- **Raw Oyster** (21%) • **Raw Brown** (14%)
- **Raw Chanterelle** (11%)



08

## Green Peas

- 1 cup (160g) of **cooked green peas** provides 16% DV



09

## Seeds

Vitamin B3 per ounce (28g):

- **Sunflower seeds** (12%) • **Chia** (12%)
- **Sesame** (8%) • **Pumpkin and Squash** (7%)



10

## Avocados

- 1 cup of cubed **avocado** (150g) provides 13% DV
- An average **avocado** (201g) provides 17% DV





# Vitamin B5

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B5, since it is water soluble.

## HEALTH BENEFITS

Wound healing and lowering blood cholesterol. Great for skin health and hair.

## DEFICIENCY SYMPTOMS

Low energy, fatigue, apathy





## TOXICITY SYMPTOMS

None known

## ABSORPTION FACTORS AND AT RISK GROUPS

**Greater intake** - As part of normal regulation in the body, consuming too much pantothenic acid leads to lower absorption.

### Recommended Daily Allowances (RDAs)

					
0-6 months	1.7mg (17% DV)	1.7mg (17% DV)			
7-12 months	1.8mg (18% DV)	1.8mg (18% DV)			
1-3 years	2mg (20% DV)	2mg (20% DV)			
4-8 years	3mg (30% DV)	3mg (30% DV)			
9-13 years	4mg (40% DV)	4mg (40% DV)			
14-18 years	5mg (50% DV)	5mg (50% DV)	14-18 years	6mg (60% DV)	7 mg (70% DV)
19-50 years	5mg (50% DV)	5mg (50% DV)	19-50 years	6mg (60% DV)	7 mg (70% DV)
51+ years	5mg (50% DV)	5mg (50% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Vitamin B5

10mg = 100% DV for Vitamin B5

01

## Mushrooms

Vitamin B5 per cup sliced (70g-120g):

- **Cooked Shiitake** (52%) • **Cooked White** (34%)
- **Cooked Portobello** (15%) • **Raw Brown** (11%)
- **Raw Oyster** (11%)
- **Raw Chanterelle** (6%)



02

## Cheese

Vitamin B5 per ounce (28g):

- **Gjetost** (9%) • **Roquefort** (5%)
- **Blue Cheese** (5%) • **Camembert** (4%)
- **Feta** (3%)



03

## Fish

Vitamin B5 per 3 ounce fillet (85g):

- **Trout** (19%) • **Rainbow Trout** (17%)
- **Wild Salmon** (16%) • **Farmed Salmon** (13%)
- **Tuna** (12%)



04

## Avocados

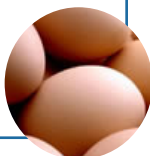
- 1 cup of cubed **avocado** (150g) provides 21% DV
- An average **avocado** (201g) provides 28% DV



05

## Eggs

- 1 large egg (50g) provides 7% DV
- 1 large egg yolk (17g) provides 6% DV
- 1 large egg white (33g) provides 1% DV



06

## Lean Pork

Vitamin B5 per 3 ounce serving (85g):

- **Sirloin** (14%) • **Lean Ribs** (14%)
- **Lean Loin** (14%) • **Lean Shoulder** (12%)
- **Ground Pork** (7%)
- A **boneless pork chop** (142g) has 20%



07

## Beef and Veal

Vitamin B5 per 3oz serving (~85g):

- **Veal Shoulder** (14%) • **Rib of Veal** (12%)
- **Lean Beef Steak** (12%) • **Veal Sirloin** (11%)



08

## Chicken and Turkey

Vitamin B5 per 3oz serving (~85g):

- **Chicken Leg, Thigh, and Drumstick** (11%)
- **Turkey Leg** (10%) • **Chicken Breast** (9%)
- **Turkey Light Meat** (8%)
- A **Chicken Drumstick** (96g) has 11%



09

## Seeds

Vitamin B5 per ounce (28g):

- **Sunflower Seeds** (20%) • **Flax** (12%)
- **Pumpkin and Squash** (2%)



10

## Sweet Potato

- 1 cup of baked **sweet potato** (200g) provides 18%
- An average **sweet potato** (114g) provides 10% DV





# Vitamin B6

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B6, since it is water soluble.

## HEALTH BENEFITS

Reduced risk of cardiovascular disease and cancer.

## DEFICIENCY SYMPTOMS

Anemia, cracked lips, weakened immune function.

## TOXICITY SYMPTOMS

None known





## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholism** — Alcohol produces acetaldehyde, which hampers vitamin B6 absorption.

**People with digestive diseases** — Patients with celiac disease, Crohn's disease, ulcerative colitis, inflammatory bowel disease, and other malabsorptive autoimmune disorders tend to have low Vitamin B6 levels

**Poor Renal Function** — Dialysis and poor kidney function can lead to Vitamin B6 deficiency

## Recommended Daily Allowances (RDAs)

					
0–6 months	0.1 mg* (5% DV)	0.1 mg* (5% DV)			
7–12 months	0.1 mg* (5% DV)	0.3 mg* (15% DV)			
1–3 years	0.5 mg (25% DV)	0.5 mg (25% DV)			
4–8 years	0.6 mg (30% DV)	0.6 mg (30% DV)			
9–13 years	1.0 mg (50% DV)	1.0 mg (50% DV)			
14–18 years	1.3 mg (65% DV)	1.2 mg (60% DV)	14–18 years	1.9 mg (95% DV)	2.0 mg (100% DV)
19–50 years	1.3 mg (65% DV)	1.3 mg (65% DV)	19–50 years	1.9 mg (95% DV)	2.0 mg (100% DV)
51+ years	1.7 mg (85% DV)	1.5 mg (75% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Dried fruits are high in sugar.

# The Top 10 Foods Highest in Vitamin B6

2mg = 100% DV for Vitamin B6

01

## Seeds

Vitamin B6 per ounce (28g):

- **Sunflower Seeds** (19% DV) • **Sesame** (11%)
- **Flax** (7%) • **Pumpkin and Squash** (2%)



02

## Nuts

Vitamin B6 per ounce (28g):

- **Pistachios** (16%) • **Hazelnuts** (9%)
- **Walnuts** (8%) • **Peanuts** (6%)
- **Macadamia** (5%) • **Cashews** (4%)



03

## Fish

Vitamin B6 per 3 ounce fillet (85g):

- **Tuna** (44%) • **Wild Salmon** (40%)
- **Farmed Salmon** (29%) • **Halibut** (27%)
- **Swordfish** (26%) • **Herring** (22%)



04

## Turkey and Chicken

Vitamin B6 per 3oz serving (~85g):

- **Turkey Light Meat** (34%)
- **Fat Free Ground Turkey** (46%)
- **Chicken Breast** (28%)
- **Chicken Wings** (26%)
- **A Chicken Drumstick** (96g) has 20%



05

## Lean Pork

Vitamin B6 per 3 ounce serving (85g):

- **Ground Pork** (36%) • **Sirloin** (33%)
- **Tenderloin** (31%) • **Chops** (30%)
- **A boneless pork chop** (145g) has 52%

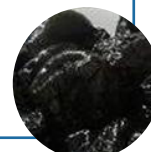


06

## Dried Fruit

Vitamin B6 per half cup (~60g):

- **Prunes** (26%)
- **Dried Apricots** (16%)
- **Raisins** (14%)



07

## Lean Beef

Vitamin B6 per 3oz serving (~85g):

- **Lean Ribs** (30%) • **Sirloin Steak** (29%)
- **Filet steak** (28%) • **Rib Eye** (28%)



08

## Bananas

- 1 cup of mashed **bananas** (225g) provides 41% DV
- An average **banana** (118g) provides 22% DV



09

## Avocados

- 1 cup of **Puréed California Avocado** (230g) provides 33% DV
- An average **California Avocado** (136g) provides 20% DV
- An average **Avocado** (201g) provides 13%



10

## Spinach

- 1 cup of cooked spinach (180g) provides 22% DV
- 1 cup of raw spinach (30g) provides 3% DV\*

\*Raw spinach provides less due to having more water and being less concentrated.



# Vitamin B9

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B9, since it is water soluble.

## HEALTH BENEFITS

Reduced risk of cancer, cardiovascular disease, Alzheimer's and cognitive decline

## DEFICIENCY SYMPTOMS

Megaloblastic anemia, weakness, tongue ulcers, headaches

## TOXICITY SYMPTOMS





Very high doses can mask a Vitamin B12 deficiency

## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholism** — Alcohol interferes with vitamin B9 (folate) absorption.

**Pregnant Women** — Folate levels can often decline during pregnancy, which is why pregnant women have to consume 150%-200% of the daily value for vitamin B9.

### Recommended Daily Allowances (RDAs)

					
0-6 months	65 mcg (14% DV)	65 mcg (14% DV)			
7-12 months	80 mcg (20% DV)	80 mcg (20% DV)			
1-3 years	150 mcg (38% DV)	150 mcg (38% DV)			
4-8 years	200 mcg (50% DV)	200 mcg (50% DV)			
9-13 years	300 mcg (75% DV)	300 mcg (75% DV)			
14-18 years	400 mcg (100% DV)	400 mcg (100% DV)	14-18 years	600 mcg (150% DV)	500 mcg (125% DV)
19+ years	400 mcg (100% DV)	400 mcg (100% DV)	19+ years	600 mcg (150% DV)	500 mcg (125% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.



# The Top 10 Foods Highest in Vitamin B9 (Folate)

400mcg (micrograms, µg) = 100% DV for Vitamin B9

01

## Beans

Vitamin B9 per cup cooked (~170g):

- **Black Eyed Peas** (89%) • **Mung Beans** (80%)
- **Pintos** (74%) • **Chickpeas** (71%)
- **Pink Beans** (71%) • **Limas** (68%)
- **Black Beans** (64%) • **Navy Beans** (64%)
- **Kidney Beans** (58%) • **Pak Choi** (144%)



02

## Lentils

- 1 cup (198g) of cooked **lentils** provides 90% DV
- 1 tablespoon (12g) of cooked **lentils** provides 5% DV



03

## Dark Leafy Greens

Vitamin B9 per cup cooked (~180g):

- **Spinach** (66%) • **Turnip Greens** (42%)
- **Pak Choi** (17%) • **Savoy Cabbage** (17%)
- **Collard Greens** (8%)



04

## Asparagus

- Half a cup (90g) of **asparagus** provides 34% DV
- 4 spears (60g) of **asparagus** provides 22% DV



05

## Lettuce

Vitamin B9 per cup shredded (~50g):

- **Endive** (18%) • **Cos or Romaine** (16%)
- **Butterhead** (10%) • **Salad Cress** (10%)
- **Chicory** (8%) • **Arugula (Rocket)** (10%)



06

## Avocado

- 1 cup (150g) of cubed **avocado** provides 30% DV
- An average **avocado** (201g) provides 41% DV



07

## Broccoli

Vitamin B9 per cup cooked (~160g):

- **Broccoli** (42%) • **Chinese Broccoli** (22%)
- **Broccoli Raab** (15%) • **Cauliflower** (14%)
- 1 head of **Broccoli** (180g) provides 49%



08

## Tropical Fruits

Vitamin B9 per fruit (70-340g):

- **Mango** (36%) • **Pomegranate** (27%)
- **Papaya** (15%) • **Guava** (7%)
- **Kiwi** (7%) • **Banana** (6%)



09

## Oranges

- 1 cup (180g) of **orange** segments provides 18% DV
- An average **orange** (121g) provides 12% DV



10

## Bread

Vitamin B9 per cup slice/piece (~30g):

- **Whole Wheat** (6%) • **French Bread** (24%)
- **Italian Bread** (14%) • **Wheat Germ Bread** (8%)



# Vitamin B12

## COOKING TIPS

Cooking in water can reduce the amount of vitamin B12, since it is water soluble.

## HEALTH BENEFITS

Protects against cognitive decline, heart disease, and aging. Boosts energy levels.

## DEFICIENCY SYMPTOMS

Anemia, fatigue, depression. Damage to central nervous system.

## TOXICITY SYMPTOMS

None known





## ABSORPTION FACTORS AND AT RISK GROUPS

**Vegans and Vegetarians** — Vitamin B12 is naturally found in animal foods. Vegans and vegetarians should consider supplements or fortified foods.

**Older Adults** — Atrophic gastritis, a condition affecting 30-50% of adults over age 50 and hampers their ability to absorb vitamin B12 from natural foods.

**Pernicious Anemia** — Pernicious Anemia affects 1-2% of adults and should be treated with vitamin B12 injections.

### Recommended Daily Allowances (RDAs)

		
0–6 months	0.4 mcg (7% DV)	0.4 mcg (7% DV)
7–12 months	0.5 mcg (8% DV)	0.5 mcg (8% DV)
1–3 years	0.9 mcg (15% DV)	0.9 mcg (15% DV)
4–8 years	1.2 mcg (20% DV)	1.2 mcg (20% DV)
9–13 years	1.8 mcg (30% DV)	1.8 mcg (30% DV)
14+years	2.4 mcg (40% DV)	2.4 mcg (40% DV)
		 
		14–18 years 2.6 mcg (43% DV) 2.8 mcg (46% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Cheese, liver, and shellfish are **high cholesterol foods** which should be eaten in moderate amounts and avoided by people at risk of heart disease.

# The Top 10 Foods Highest in Vitamin B12

5000IU = 100% DV for Vitamin A

01

## Shellfish

Vitamin B12 per 3oz serving (85g):

- **Clams** (1401%) • **Oysters** (408%)
- **Mussels** (340%)
- **20 Small Clams** (190g) provide 3132% DV



02

## Liver

Vitamin B12 per 3oz serving (85g):

- **Beef Liver** (1178%)
- **Liverwurst Sausage** (189%)
- **Chicken Liver Pâté** (114%)



03

## Fish

Vitamin B12 per 3oz filet (85g):

- **Mackerel** (317%) • **Smoked Salmon** (257%)
- **Herring** (186%) • **Tuna** (154%)
- **Canned Sardines** (126%)
- **Trout** (106%)



04

## Crustaceans

Vitamin B12 per 3oz (85g) serving:

- **Crab** (163%) • **Crayfish** (44%)
- **Shrimp** (24%) • **Lobster** (20%)



05

## Fortified Soy Products

- 3 ounces (85g) of **Fortified Tofu** provides 34% DV
- 1 cup (243g) of **Fortified Soymilk** provides 50% DV



06

## Fortified Cereals

Most **fortified cereals** provide 10-300% DV per 3oz (85g) serving. Check nutrition labels for more info.



07

## Red Meat

- A 3oz (85g) serving of **beef** typically provides 85% DV
- 3oz (85g) of **lamb** typically provides 45% DV



08

## Low Fat Dairy

Vitamin B12 per cup (~245g):

- **Nonfat Yogurt** (25%)
- **Low-Fat Milk** (22%)
- **Skim (Non-Fat) Milk** (21%)
- **Whole Milk** (18%) • **Full Fat Yogurt** (15%)

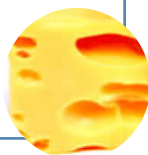


09

## Cheese

Vitamin B12 per ounce (28g):

- **Swiss** (16%) • **Low-Fat Mozzarella** (11%)
- **Parmesan** (11%) • **Gjetost** (11%)
- **Tilsit** (10%) • **Feta** (8%)

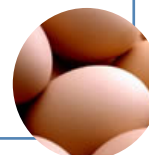


10

## Eggs

Vitamin B12 per whole egg (~50-100g):

- **Chicken Eggs** (6%) • **Goose** (122%)
- **Duck** (63%) • **Turkey** (22%)
- **Quail** (2%)





# Vitamin C

## COOKING TIPS

Heat degrades vitamin C, so raw foods are best. Vitamin C is water soluble.

## HEALTH BENEFITS

Prevents oxidative stress, lowers cancer risk, maintains cartilage and skin.

## DEFICIENCY SYMPTOMS

Scurvy, swollen bleeding gums, joint pain, reduced iron absorption.

## TOXICITY SYMPTOMS





Toxicity is rare but may lead to gastrointestinal disturbances

## ABSORPTION FACTORS AND AT RISK GROUPS

**Smokers and Passive Smokers** — Studies show that smokers have lower levels of vitamin C in their blood than non-smokers, and this is thought to be due to increased oxidative stress. Similarly, those regularly exposed to passive smoke have lower levels of vitamin C in their blood. People in these groups are advised to consume more vitamin C, up to 35mg (50%) more than non-smokers.

**Infants given boiled or evaporated milk** — Boiling and evaporating milk destroys the vitamin C content.

### Recommended Daily Allowances (RDAs)

					
0–6 months	40 mg* (67% DV)	40 mg* (67% DV)			
7–12 months	50 mg* (83% DV)	50 mg* (83% DV)			
1–3 years	15 mg (25% DV)	15 mg (25% DV)			
4–8 years	25 mg (42% DV)	25 mg (42% DV)			
9–13 years	45 mg (75% DV)	45 mg (75% DV)			
14–18 years	75 mg (125% DV)	65 mg (108% DV)	14–18 years	80 mg (133% DV)	115 mg (192% DV)
19+ years	90 mg (150% DV)	75 mg (125% DV)	19+ years	85 mg (142% DV)	120 mg (200% DV)
Smokers	Individuals who smoke require 35 mg/day more vitamin C than nonsmokers.				

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Over-consumption of vitamin C from supplements can lead to over-absorption of iron, and high iron levels.

# The Top 10 Foods Highest in Vitamin C

60mg = 100% DV for Vitamin C

01

## Bell Peppers

Vitamin C per large pepper (~190g):

- **Yellow Bell Peppers** (569% DV)
- **Red Bell Peppers** (305%)
- **Green Bell Peppers** (220%)
- 10 strips (52g) of **Yellow Bell Peppers** provide (159% DV)
- **Pak Choi** (144%)



02

## Guavas

- 1 cup (165g) of **Guavas** provides 628% DV
- A single **Guava** (55g) provides 209% DV



03

## Dark Leafy Greens

Vitamin C per cup chopped (70g):

- **Kale** (134%) • **Turnip Greens** (55%)
- **Swiss Chard** (18%)
- **Spinach** (14%)



04

## Kiwifruit

- 1 cup (180g) of **sliced Green Kiwifruit** has 278% DV
- A single **Green Kiwifruit** (69g) has 107% DV
- A **Gold Kiwifruit** (86g) provides 151% DV



05

## Broccoli

Vitamin C per cup (~90g):

- **Broccoli** (135%) • **Brussels Sprouts** (125%)
- **Green Cauliflower** (94%) • **Cauliflower** (86%)
- **Red Cabbage** (85%) • **Cabbage** (60%)



06

## Berries

Vitamin C per cup (~160g):

- **Strawberries** (163%) • **Raspberries** (54%)
- **Blackberries** (50%) • **Blueberries** (24%)
- 1 large **Strawberry** (18g) provides 18% DV



07

## Citrus Fruits

Vitamin C per fruit (75g~600g):

- **Orange** (116%) • **Pummelo** (619%) • **Lemon** (74%)
- **Grapefruit** (114%) • **Clementine** (60%)
- 1 cup (180) of orange sections - 160% DV



08

## Tomatoes

- 1 cup (240g) of **Tomatoes** provides 91% DV
- A medium **Tomato** (123g) provides 93% DV



09

## Peas

- 1 cup (63g) of **Podded Peas** provides 63% DV
- 10 pods (34g) provide 34% DV
- 1 cup (63g) of **Green Peas** provides 97% DV



10

## Papaya and Other Fruit

Vitamin C per cup chunks or balls (~150g):

- **Papaya** (147%) • **Mango** (100%) • **Pineapple** (131%)
- **Cantaloupe** (108%) • **Honeydew** (53%)
- A small **papaya** (157g) provides 15% DV



# Vitamin D

## COOKING TIPS

Vitamin D is fat soluble. Exposing mushrooms to light increases their vitamin D.

## HEALTH BENEFITS

Osteoporosis protection, decreased cancer risk, supports immune system.

## DEFICIENCY SYMPTOMS

Rickets, and weak bones. Depression.

## TOXICITY SYMPTOMS

Excess calcium absorption that leads to risk of kidney stones and heart disease





## ABSORPTION FACTORS AND AT RISK GROUPS

**People With Little Sun Exposure on the Skin** — Wearing sunscreen, or lots of clothing, hampers the creation of vitamin D from the sun. People with darker skin also have Melanin, a pigment found in skin, which reduces the body's ability to manufacture vitamin D from the sun. Further, parts of the world do not receive enough sunlight for adequate vitamin D production.

**People with Long Term Problems Absorbing Fat** — Problems absorbing fat in the long term can lead to diarrhea and vitamin D deficiency.

**Older Adults** — As skin ages it is less and less able to make vitamin D from the sun, so vitamin D has to be attained from foods or supplements.

### Recommended Daily Allowances (RDAs)

					
0–6 months	400IU (67% DV)	400IU (67% DV)			
7–12 months	400IU (67% DV)	400IU (67% DV)			
1–3 years	600IU (100% DV)	600IU (100% DV)			
4–8 years	600IU (100% DV)	600IU (100% DV)			
9–13 years	600IU (100% DV)	600IU (100% DV)			
14–18 years	600IU (100% DV)	600IU (100% DV)	14–18 years	600IU (100% DV)	600IU (100% DV)
19–70 years	600IU (100% DV)	600IU (100% DV)	19–50 years	600IU (100% DV)	600IU (100% DV)
71+ years	800IU (133% DV)	800IU (133% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Consuming too much vitamin D from food or supplements can lead to anorexia, heart arrhythmias, kidney stones, and increased risk of heart attacks.



# The Top 10 Foods Highest in Vitamin D

600IU = 100% of the Daily Value (%DV) for Vitamin D

01

## Cod Liver Oil

- 1667% DV in 100 grams
- 233% DV per tablespoon (14g)
- 83% DV per teaspoon (5g)



02

## Oily Fish

%DV per 3 ounce serving (85g, or an average fillet):

- Trout (108%) • Smoked Salmon (97%)
- Swordfish (94%) • Canned Trout (86%) • Salmon (75%)
- Mackerel (65%) • Tuna Canned in Oil (38%)
- Halibut (33%) • Herring (30%)
- Sardine (27%) • Tilapia (21%)
- Sole & Flounder (20%) • Tuna Steak (12%)



03

## Mushrooms

Vitamin D per cup (~86g):

- Maitake (131%) • Portabello (64%) • Morel (23%)
- Chanterelle (19%) • Oyster (4%) • White (1%).

Mushrooms exposed to sunlight when growing, or before eating, provide much more vitamin D.



04

## Fortified Cereals

Vitamin D per 3/4 cup (~30g):

- Whole Grain Total (17%) • Total Raisin Bran (17%)
- Kellogg's Raisin Bran (15%)
- Kellogg's All Bran (9%)
- Kellogg's All-Bran Complete Wheat Flakes & Special K (7%)



05

## Tofu

Vitamin D per 3 ounces (85g, ~a cup):

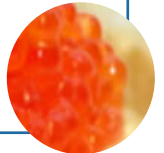
- Lite Silken Tofu (21%)
- Sprouted Tofu, Extra Firm Tofu & Firm Tofu (14%)
- Soy Yogurt (3%)



06

## Caviar

- 20% DV per 100g
- 6% DV per ounce (28g)
- 3% DV per tablespoon (16g)



07

## Dairy Products

Vitamin D per cup:

- Butter (23%) • Queso Fresco (22%)
- Buttermilk, Fortified Low Fat Fruit Yogurt, Fortified Milk & Fortified Goat's Milk (21%)
- Fortified Semi-Skimmed Milk (20%)
- Fortified Skimmed Milk (19%)



08

## Pork

Vitamin D per 3 ounce serving (85g):

- Spare Ribs (15%) • Extra Lean Ham (12%)
- Turkey & Pork Sausage (12%)
- Pork Shoulder (9%)
- Pork Loin (8%)

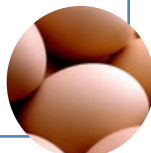


09

## Eggs

Vitamin D per egg:

- Raw, Scrambled, Hard Boiled, Poached and Omelet (7%)
- Duck Egg (8%)
- Goose Egg (16%)



10

## Dairy Alternatives

Vitamin D per cup:

- Soy Yogurt (22%)
- Soymilk (20%)
- Almond Milk, Chocolate Almond Milk, Nonsoy Imitation Milk, Rice Drink (17%)



# Vitamin E

## COOKING TIPS

Vitamin E is fat soluble, consuming it with fat increases absorption.

## HEALTH BENEFITS

Reduced risk of heart disease, alleviation of chronic inflammation.

## DEFICIENCY SYMPTOMS

None known.

## TOXICITY SYMPTOMS




Too many supplements thin the blood and can lead to excessive bleeding

## ABSORPTION FACTORS AND AT RISK GROUPS

**People on Low Fat Diets** — A diet very low in fat may not allow for enough vitamin E to be absorbed. Consuming high fat sources of vitamin E, like nuts and seeds, can help counteract this problem.

**People with Long Term Problems Absorbing Fat** — Problems absorbing fat in the long term can lead to diarrhea and vitamin E deficiency. This includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

## Recommended Daily Allowances (RDAs)

				
0–6 months	4 mg (6 IU) (20% DV)	4 mg (6 IU) (20% DV)		
7–12 months	5 mg (7.5 IU) (25% DV)	5 mg (7.5 IU) (25% DV)		
1–3 years	6 mg (9 IU) (30% DV)	6 mg (9 IU) (30% DV)		
4–8 years	7 mg (10.4 IU) (35% DV)	7 mg (10.4 IU) (35% DV)		
9–13 years	11 mg (16.4 IU) (55% DV)	11 mg (16.4 IU) (55% DV)		
14+ years	15 mg (22.4 IU) (75% DV)	15 mg (22.4 IU) (75% DV)	14+ years	15 mg (22.4 IU) (75% DV) 19 mg (95% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Vitamin E

20mg = 100% DV for Vitamin E

01

## Dark Leafy Greens

Vitamin E per cup cooked (~180g):

- **Spinach** (18% DV) • **Swiss Chard** (16%)
- **Turnip Greens** (13%) • **Collards** (8%)
- **Kale** (5%)



02

## Nuts

Vitamin E per ounce (28g, 1 handful):

- **Almonds** (35% DV) • **Hazlenuts** (21%)
- **Pistachios** (3%) • **Pecans** (2%)
- **Walnuts** (2%)



03

## Seeds

Vitamin E per ounce (28g, 1 handful):

- **Sunflower Seeds** (49% DV)
- **Pumpkin and Squash Seeds** (3%)
- **Sesame Seeds** (3%)



04

## Avocados

- 1 cup (150g) of **cubed avocado** provides 15% DV
- 1 **avocado** (201g) provides 20% DV



05

## Shellfish

Vitamin E per 3 ounces (85g):

- **Shrimp** (9% DV)
- **Oysters** (7%)
- **Crayfish** (6%)



06

## Fish

Vitamin E per 3 ounce fillet (85g):

- **Rainbow Trout** (11% DV) • **Swordfish** (10%)
- **Herring** (6%) • **Salmon** (5%)



07

## Plant Oils

Vitamin E per Tablespoon (~14g):

- **Olive Oil** (10% DV) • **Wheat Germ** (101%)
- **Sunflower** (28%) • **Grapeseed** (19%)
- **Canola** (12%) • **Corn Oil** (10%)



08

## Broccoli

- 1 cup (156g) of **chopped Broccoli** provides 10% DV
- 1 **head or stalk of Broccoli** (180g) provides 13% DV



09

## Squash and Pumpkin

Vitamin E per cup (~140g):

- **Butternut Squash** (13% DV)
- **Mashed Sweet Potato** (15%)
- **Pumpkin** (9%)



10

## Fruits

Vitamin E per cup (180g):

- **Kiwi Fruit** (13% DV) • **Mamey Sapote** (18%)
- **Blackberries** (8%) • **Mangoes** (7%)
- **Peaches** (7%) • **Apricots** (7%)
- **Guavas** (6%) • **Raspberries** (5%)





# Vitamin K

## COOKING TIPS

Vitamin K is fat soluble, consuming it with fat increases absorption.

## HEALTH BENEFITS

Helps blood clot. Reduces risk of osteoporosis, and Alzheimer's disease.

## DEFICIENCY SYMPTOMS

Excessive bleeding.





## TOXICITY SYMPTOMS

None known.

## ABSORPTION FACTORS AND AT RISK GROUPS

**People with Long Term Problems Absorbing Fat** — Problems absorbing fat in the long term can lead to diarrhea and vitamin K deficiency. This includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

### Recommended Daily Allowances (RDAs)

					
0–6 months	2.0 mcg (3% DV)	2.0 mcg (3% DV)			
7–12 months	2.5 mcg (3% DV)	2.5 mcg (3% DV)			
1–3 years	30 mcg (38% DV)	30 mcg (38% DV)			
4–8 years	55 mcg (69% DV)	55 mcg (69% DV)			
9–13 years	60 mcg (75% DV)	60 mcg (75% DV)			
14–18 years	75 mcg (94% DV)	75 mcg (94% DV)	14–18 years	75 mcg (94% DV)	75 mcg (94% DV)
19+ years	120 mcg (150% DV)	90 mcg (113% DV)	19+ years	90 mcg (113% DV)	90 mcg (113% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Vitamin K consumption should be regulated by people taking Warfarin (Coumadin) since it significantly interferes with the medication.

# The Top 10 Foods Highest in Vitamin K

80mcg (micrograms, µg) = 100% DV for Vitamin K

01

## Herbs

Vitamin K per tablespoon (5g):

- **Dried Basil, Dried Sage, Dried Thyme** (107%)
- **Fresh Parsley** (82%) • **Dried Parsley** (34%)
- **Dried Coriander (Cilantro)** (34%)
- **Dried Marjoram** (16%) • **Fresh Basil** (13%)
- **Fresh Chives** (8%)



02

## Dark Leafy Greens

Vitamin K per cup cooked (~130g):

- **Kale** (1433% DV) • **Spinach** (1284%)
- **Mustard Greens** (1037%)
- **Collards** (966%) • **Beet Greens** (871%)
- **Swiss Chard** (716%)
- **Turnip Greens** (662%) • **Rapini** (272%)
- **Dandelion Greens** (471%) • **Fresh Chives** (8%)

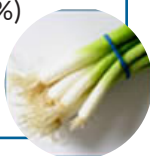


03

## Salad Vegetables

Vitamin K per cup (~100g):

- **Spring Onions** (259%) • **Garden Cress** (339%)
- **Endive** (144%) • **Radicchio** (128%)
- **Chicory Greens** (108%) • **Watercress** (106%)
- **Romaine (Cos) Lettuce** (60%)
- **Celery** (37%) • **Arugula (Rocket)** (25%)
- **Iceburg Lettuce** (22%) • **Cucumber** (22%)



04

## Brassica Vegetables

Vitamin K per cup cooked (~150g):

- **Broccoli** (276% DV) • **Brussels Sprouts** (274%)
- **Cabbage** (204%) • **Chinese Broccoli** (93%)
- **Red Cabbage** (90%) • **Pak Choi** (72%)
- **Savoy Cabbage (Raw)** (60%)
- **Cauliflower** (22%)



05

## Chili Powder and Spices

Vitamin K per tablespoon (8g):

- **Chili Powder** (11% DV)
- **Curry Powder** (7%) • **Paprika** (7%)
- **Cayenne Pepper** (5%)



06

## Side Vegetables

Vitamin K per cup cooked (~180g):

- **Leeks** (152% DV) • **Asparagus** (114%)
- **Okra** (80%) • **Fennel (Raw)** (68%)



07

## Pickles

Vitamin K per cup (~170g):

- **Pickled Cucumbers** (163% DV)
- **Dill Pickles** (54%) • **Sour Pickles** (38%)
- **Sweet Relish** (16%)



08

## Soybeans

Vitamin K per cup (~100g):

- **Raw Soybeans** (109% DV)
- **Roasted Soybeans** (109%)
- **Cooked Soybeans** (83%)



09

## Vegetable Oil

Vitamin K per tablespoon (14g):

- **Soybean Oil** (32% DV)
- **Canola (Rapeseed) Oil** (12%)
- **Olive Oil** (11%) • **Sesame Oil** (2%)



10

## Dried Fruit

Vitamin K per cup (~170g):

- **Prunes** (129% DV) • **Dried Blackberries** (120%)
- **Dried Pears** (46%) • **Dried Peaches** (31%)
- **Dried Figs** (29%) • **Dried Currants** (15%)



# Lycopene

## COOKING TIPS

Cooking concentrates the amount of lycopene.

## HEALTH BENEFITS

Reduced risk of cancer, heart disease, and macular degeneration.

## DEFICIENCY SYMPTOMS

None known.

## TOXICITY SYMPTOMS

Orange skin color

## ABSORPTION FACTORS AND AT RISK GROUPS

Lycopene is not soluble in water, and consuming it with vegetable fats will likely increase absorption.

## Recommended Daily Allowances (RDAs)

There is no recommended daily intake for Lycopene.

# The Top 10 Foods Highest in Lycopene

Lycopene is measured in mcg (micrograms, µg)

## 01 Strawberry (Pink) Guavas

- 1 cup (165g) of **Guava** provides 8587mcg of Lycopene
- 1 **Guava** (55g) provides 2862mcg



## 02 Watermelon

- 1 cup (152g) of **Diced Watermelon** provides 6889mcg of Lycopene
- 1 **Wedge** (286g) of **Watermelon** provides 12692mcg



## 03 Tomatoes

- 1 cup (240g) of **Tomatoes** provides 7298mcg of Lycopene
- 1 **Tomato** (123g) provides 3741mcg



## 04 Papaya

- 1 cup (145g) of **Papaya Pieces** provides 2651mcg of Lycopene
- 1 **Small Papaya** (157g) provides 2870mcg



## 05 Grapefruit

- 1 cup (230g) of **Grapefruit Sections** provides 2611mcg of Lycopene
- 1 **Grapefruit** (256g) provides 2906mcg



## 06 Red Bell Peppers

- 1 cup (206g) of **Cooked Red Bell Peppers** provides 513mcg of Lycopene



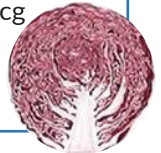
## 07 Asparagus

- A cup (180g) of **Cooked Asparagus** provides 54mcg of Lycopene
- 4 **Spears** (60g) of **Asparagus** provide 18mcg



## 08 Purple Cabbage

- A cup (89g) of **Chopped Purple Cabbage** provides 18mcg of Lycopene
- A **Small Red Cabbage** (567g) provides 113mcg



## 09 Mango

- A cup (165g) of **Mango Pieces** provides 5mcg of Lycopene
- A **Mango** (336g) provides 10mcg



## 10 Carrots

- A cup (128g) of **Chopped Carrots** provides 1.3mcg of Lycopene
- A **Carrot** (61g) provides 0.6mcg





# Calcium

## COOKING TIPS

Calcium is soluble in water, so using less water in cooking is advised.

## HEALTH BENEFITS

Osteoporosis protection, blood pressure regulation.

## DEFICIENCY SYMPTOMS

Numbness in extremities, muscle cramps, abnormal heart rhythms, osteoporosis.

## TOXICITY SYMPTOMS

Constipation, vascular and soft tissue calcification, kidney stones.

## ABSORPTION FACTORS AND AT RISK GROUPS



**Oxalic and Phytic Acids** — Oxalic and Phytic acids are found in plant foods such as dark leafy greens, nuts, and seeds. While these acids do reduce absorption of calcium and other nutrients, people eating a balanced diet are unlikely to be affected. People who only eat plant foods, such as vegans, should monitor their calcium level, and eat more if necessary.

**Age** — Children absorb about 60% of the calcium from foods, while adults absorb only 20%. Calcium absorption decreases with age and people over 50 should eat more calcium.



**Pregnancy** — Pregnancy increases calcium absorption.

**Vitamin D** — Vitamin D increases calcium absorption.

### Recommended Daily Allowances (RDAs)

		
0–6 months	200 mg (20% DV)	200 mg (20% DV)
7–12 months	260 mg (26% DV)	260 mg (26% DV)
1–3 years	700 mg (70% DV)	700 mg (70% DV)
4–8 years	1,000 mg (100% DV)	1,000 mg (100% DV)
9–13 years	1,300 mg (130% DV)	1,300 mg (130% DV)
14–18 years	1,300 mg (130% DV)	1,300 mg (130% DV)
19–50 years	1,000 mg (100% DV)	1,000 mg (100% DV)
51–70 years	1,000 mg (100% DV)	1,200 mg (120% DV)
71+ years	1,200 mg (120% DV)	1,200 mg (120% DV)

		
14–18 years	1,300 mg (130% DV)	1,300 mg (130% DV)
19–50 years	1,000 mg (100% DV)	1,000 mg (100% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Over consumption of calcium from supplements can lead to impairment of the kidneys, kidney stones, and a higher risk of cardiovascular disease.

# The Top 10 Foods Highest in Calcium

1000mg = 100% DV for Calcium

01

## Dark Leafy Greens

Calcium per cup chopped and raw (35g):

- **Watercress** (12% DV) • **Curly Kale** (14%)
- **Dandelion Greens** (10%)
- **Turnip Greens** (10%)
- **Arugula** (6%) • **Collards** (5%)
- **Pak Choi** (144%)



02

## Low Fat Cheese

Calcium per ounce (28g):

- **Nonfat Mozzarella** (27% DV)
- **Reduced Fat Parmesan** (31%)
- **Low Fat Swiss** (27%)
- **Full Fat (Regular) Swiss** (22%)
- **Full Fat (Regular) Cheddar** (22%)



03

## Low Fat Milk and Yogurt

Calcium per cup (245g):

- **Non-fat Yogurt** (49% DV)
- **Low-fat Yogurt** (45%) • **Full-Fat Yogurt** (30%)
- **Non-fat Milk** (31%) • **Low-Fat Milk** (30%)
- **Full-Fat Whole Milk** (28%)



04

## Chinese Cabbage

Calcium per cup cooked (70g):

- **Pak Choi (Bok Choy)** (7% DV)
- **Green Cabbage** (4%)
- **Red Leaf Cabbage** (3%)



05

## Fortified Soy Products

Calcium per cup (~245g):

- **Calcium Fortified Tofu** (86% DV)
- **Calcium Fortified Soymilk** (25%)



06

## Okra

- A cup (160g) of **Cooked Okra** provides 12% DV
- 8 Pods (Pieces) (85g) of **Okra** provide 7% DV



07

## Broccoli

- A cup (91g) of Chopped **Raw Broccoli** has 4% DV
- A cup (156g) of Chopped **Cooked Broccoli** has 6% DV
- A stalk (head) (151g) of **Raw Broccoli** has 7%



08

## Green Snap Beans

- A cup (110g) of **Raw Beans** provides 4% DV
- A cup (125g) of **Cooked Beans** has 6% DV



09

## Almonds

- A cup (143g) of **Whole Almonds** provides 38% DV
- An ounce (28g) of **Almonds** provides 7% DV



10

## Canned Fish

Calcium per ounce (28g):

- **Sardines** (11% DV)
- **Pink Salmon** (8%)
- **Anchovies** (6%)
- **Shrimp** (4%)



# Vegetables High in Calcium

1000mg = 100% DV for Calcium

<b>01</b> 	<b>Collard Greens</b> Calcium in 100g - <b>23% DV</b> Per cup, chopped (36g) - <b>8% DV</b> Per cup, cooked (190g) - <b>27% DV</b>	<b>02</b> 	<b>Curly (Scotch) Kale</b> Calcium in 100g - <b>21% DV</b> Per cup, chopped (67g) - <b>14% DV</b> Per cup, cooked (130g) - <b>17% DV</b>	<b>03</b> 	<b>Turnip Greens</b> Calcium in 100g - <b>19% DV</b> Per cup, chopped (55g) - <b>10% DV</b> Per cup, cooked (144g) - <b>20% DV</b>
<b>04</b> 	<b>Arugula (Rocket)</b> Calcium in 100g - <b>16% DV</b> Per ½ cup (10g) - <b>2% DV</b> Per leaf (2g) - <b>0% DV</b>	<b>05</b> 	<b>Kale</b> Calcium in 100g - <b>15% DV</b> Per cup, pieces (16g) - <b>2% DV</b> Per cup, cooked (130g) - <b>9% DV</b>	<b>06</b> 	<b>Spinach (Cooked)</b> Calcium in 100g - <b>14% DV</b> Per cup (180g) - <b>24% DV</b> Per cup, raw (30g) - <b>3% DV</b>
<b>07</b> 	<b>Watercress</b> Calcium in 100g - <b>12% DV</b> Per cup, chopped (34g) - <b>4% DV</b> Per 10 sprigs (25g) - <b>3% DV</b>	<b>08</b> 	<b>Mustard Greens (Cooked)</b> Calcium in 100g - <b>12% DV</b> Per cup, chopped (140g) - <b>17% DV</b> Per cup, raw (56g) - <b>6% DV</b>	<b>09</b> 	<b>Broccoli Raab (Cooked)</b> Calcium in 100g - <b>12% DV</b> Per serving (85g) - <b>10% DV</b> Per bunch (437g) - <b>52% DV</b>
<b>10</b> 	<b>Beet Greens</b> Calcium in 100g - <b>16% DV</b> Per cup (38g) - <b>4% DV</b> Per ½ cup (19g) - <b>2% DV</b>	<b>11</b> 	<b>Pak Choi (Chinese Cabbage)</b> Calcium in 100g - <b>11% DV</b> Per cup, shredded (70g) - <b>7% DV</b> Per head (840g) - <b>88% DV</b>	<b>12</b> 	<b>Okra</b> Calcium in 100g - <b>8% DV</b> Per cup (100g) - <b>8% DV</b> Per 8 pods (95g) - <b>8% DV</b>
<b>13</b> 	<b>Garden Cress</b> Calcium in 100g - <b>8% DV</b> Per cup (50g) - <b>4% DV</b> Per sprig (1g) - <b>0% DV</b>	<b>14</b> 	<b>Leeks</b> Calcium in 100g - <b>6% DV</b> Per leek (89g) - <b>5% DV</b> Per slice (6g) - <b>0% DV</b>	<b>15</b> 	<b>Swiss Chard (Cooked)</b> Calcium in 100g - <b>6% DV</b> Per cup, chopped (175g) - <b>10% DV</b> Per cup, raw (36g) - <b>2% DV</b>
<b>16</b> 	<b>Snap Beans (Cooked)</b> Calcium in 100g - <b>6% DV</b> Per cup, pieces (116g) - <b>6% DV</b> Per ½ cup, pieces (58g) - <b>3% DV</b>	<b>17</b> 	<b>Endive</b> Calcium in 100g - <b>5% DV</b> Per ½ cup, chopped (25g) - <b>1% DV</b> Per head (513g) - <b>27% DV</b>	<b>18</b> 	<b>Fennel</b> Calcium in 100g - <b>5% DV</b> Per cup, sliced (87g) - <b>4% DV</b> Per bulb (234g) - <b>11% DV</b>
<b>19</b> 	<b>Cabbage (Cooked)</b> Calcium in 100g - <b>5% DV</b> Per ½ cup, shredded (75g) - <b>4% DV</b> Per head (1262g) - <b>61% DV</b>	<b>20</b> 	<b>Butternut Squash</b> Calcium in 100g - <b>5% DV</b> Per cup, cubes (140g) - <b>7% DV</b> Per cup, cooked (205g) - <b>8% DV</b>	<b>21</b> 	<b>Broccoli</b> Calcium in 100g - <b>5% DV</b> Per cup, chopped (91g) - <b>4% DV</b> Per spear (31g) - <b>1% DV</b>
<b>22</b> 	<b>Artichokes (Globe)</b> Calcium in 100g - <b>4% DV</b> Per large artichoke (162g) - <b>7% DV</b> Per medium artichoke (128g) - <b>6% DV</b>	<b>23</b> 	<b>Rutabagas (Swede)</b> Calcium in 100g - <b>4% DV</b> Per cup, cubes (140g) - <b>6% DV</b> Per small Swede (192g) - <b>8% DV</b>	<b>24</b> 	<b>Brussels Sprouts</b> Calcium in 100g - <b>4% DV</b> Per cup (88g) - <b>4% DV</b> Per sprout (19g) - <b>1% DV</b>
<b>25</b> 	<b>Celery (Cooked)</b> Calcium in 100g - <b>4% DV</b> Per cup, diced (150g) - <b>6% DV</b> Per 2 stalks (75g) - <b>3% DV</b>	<b>26</b> 	<b>Sweet Potato</b> Calcium in 100g - <b>4% DV</b> Per cup (200g) - <b>8% DV</b> Per potato (114g) - <b>4% DV</b>	<b>27</b> 	<b>Lettuce (Green)</b> Calcium in 100g - <b>4% DV</b> Per cup, shredded (36g) - <b>1% DV</b> Per head (360g) - <b>13% DV</b>
<b>28</b> 	<b>Lima Beans</b> Calcium in 100g - <b>3% DV</b> Per cup (156g) - <b>5% DV</b> Per cup, cooked (170g) - <b>5% DV</b>	<b>29</b> 	<b>Carrots</b> Calcium in 100g - <b>3% DV</b> Per cup, sliced (122g) - <b>4% DV</b> Per carrot (61g) - <b>2% DV</b>	<b>30</b> 	<b>Turnips</b> Calcium in 100g - <b>3% DV</b> Per cup, cubes (156g) - <b>5% DV</b> Per cup, mashed (230g) - <b>8% DV</b>

# Fruits High in Calcium

1000mg = 100% DV for Calcium

 <b>01</b>	<b>Rhubarb</b> Calcium in 100g - <b>9% DV</b> Per cup, diced (122g) - <b>10% DV</b> Per stalk (51g) - <b>4% DV</b>	 <b>02</b>	<b>Kumquats</b> Calcium in 100g - <b>6% DV</b> Per 2 fruits (38g) - <b>2% DV</b> Per fruit (19g) - <b>1% DV</b>	 <b>03</b>	<b>Blackcurrants</b> Calcium in 100g - <b>6% DV</b> Per cup (112g) - <b>6% DV</b> Per 1/2 cup (56g) - <b>3% DV</b>
 <b>04</b>	<b>Oranges</b> Calcium in 100g - <b>4% DV</b> Per cup, sections (180g) - <b>7% DV</b> Per orange (131g) - <b>5% DV</b>	 <b>05</b>	<b>Tangerines</b> Calcium in 100g - <b>4% DV</b> Per cup, sections (195g) - <b>7% DV</b> Per tangerine (88g) - <b>3% DV</b>	 <b>06</b>	<b>Figs</b> Calcium in 100g - <b>4% DV</b> Per large fig (64g) - <b>2% DV</b> Per small fig (40g) - <b>1% DV</b>
 <b>07</b>	<b>Kiwi Fruit (Green)</b> Calcium in 100g - <b>3% DV</b> Per cup, sliced (180g) - <b>6% DV</b> Per fruit (69g) - <b>2% DV</b>	 <b>08</b>	<b>Limes</b> Calcium in 100g - <b>3% DV</b> Per 2 limes (134g) - <b>4% DV</b> Per lime (67g) - <b>2% DV</b>	 <b>09</b>	<b>Clementine</b> Calcium in 100g - <b>3% DV</b> Per 2 fruits (148g) - <b>4% DV</b> Per fruit (74g) - <b>2% DV</b>
 <b>10</b>	<b>Blackberries</b> Calcium in 100g - <b>3% DV</b> Per cup (144g) - <b>4% DV</b> Per 1/2 cup (72g) - <b>2% DV</b>	 <b>11</b>	<b>Persimmons</b> Calcium in 100g - <b>3% DV</b> Per 2 fruits (50g) - <b>2% DV</b> Per fruit (25g) - <b>1% DV</b>	 <b>12</b>	<b>Lemons</b> Calcium in 100g - <b>3% DV</b> Per cup, sections (212g) - <b>6% DV</b> Per lemon (84g) - <b>2% DV</b>
 <b>13</b>	<b>Raspberries</b> Calcium in 100g - <b>3% DV</b> Per cup (123g) - <b>3% DV</b> Per 10 fruits (19g) - <b>0% DV</b>	 <b>14</b>	<b>Pink Grapefruit</b> Calcium in 100g - <b>2% DV</b> Per cup, sections (230g) - <b>5% DV</b> Per half (123g) - <b>3% DV</b>	 <b>15</b>	<b>Papaya</b> Calcium in 100g - <b>2% DV</b> Per cup, pieces (145g) - <b>3% DV</b> Per small papaya (157g) - <b>3% DV</b>
 <b>16</b>	<b>Guavas</b> Calcium in 100g - <b>2% DV</b> Per cup (165g) - <b>3% DV</b> Per fruit (55g) - <b>1% DV</b>	 <b>17</b>	<b>Strawberries</b> Calcium in 100g - <b>2% DV</b> Per cup, halves (152g) - <b>2% DV</b> Per large strawberry (18g) - <b>0% DV</b>		



# Copper

## COOKING TIPS

Copper, like all minerals is not affected by heat.

## HEALTH BENEFITS

Bone and connective tissue maintenance. Melanin production.

## DEFICIENCY SYMPTOMS

Osteoporosis, joint pain, lowered immunity.

## TOXICITY SYMPTOMS





Cramps, diarrhea, schizophrenia, insomnia, depression.

## ABSORPTION FACTORS

**Vitamin C, Iron, and Zinc** — Vitamin C and Iron may reduce copper absorption. Zinc at high levels can also cause problems.

**Antacids, Milk, and Egg Proteins** — The stomach needs to be acidic to absorb copper. Antacids, milk, and egg proteins should be limited to boost copper levels.

## Recommended Daily Allowances (RDAs)

					
1-3 years	0.34 mg (17% DV)	0.34 mg (17% DV)			
4-8 years	0.44 mg (22% DV)	0.44 mg (22% DV)			
9-13 years	0.70 mg (35% DV)	0.70 mg (35% DV)			
14-18 years	0.89 mg (45% DV)	0.89 mg (45% DV)			
19-30 years	0.90 mg (45% DV)	0.90 mg (45% DV)			
31-70 years	0.90 mg (45% DV)	0.90 mg (45% DV)	14-18 years	1.3 mg (65% DV)	1.3 mg (65% DV)
70+ years	1 mg (50% DV)	1 mg (50% DV)	19+ years	1.3 mg (65% DV)	1.3 mg (65% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Copper

2mg = 100% DV for Copper

01

## Seafood

Copper per 3oz serving (85g, ~12 Small Oysters):

- **Oysters** (243% DV) • **Squid** (90%)
- **Lobster** (66%) • **Crab** (50%)
- **Octopus** (31%)



02

## Kale

- 1 cup (67g) of **Raw Chopped Kale** has 12% DV
- 1 cup (130g) of **Cooked Chopped Kale** has 10% DV



03

## Mushrooms

Copper per cup (~145g):

- **Shiitake** (65% DV)
- **White Button Mushrooms (Cooked)** (39%)
- **Raw Morels** (21%)
- **Raw Brown Italians (Criminis)** (18%)



04

## Seeds

Copper per ounce (28g, About a handful):

- **Sesame Seeds** (57% DV) • **Sunflower** (26%)
- **Pumpkin and Squash Seeds** (19%)
- **Flaxseeds** (17%)
- **Watermelon Seeds** (10%)



05

## Nuts

Copper per ounce (28g, About a handful):

- **Cashews** (31% DV) • **Hazelnuts** (25%)
- **Brazil Nuts** (24%) • **Walnuts** (22%)
- **Pine Nuts** (19%) • **Pistachios** (18%)
- **Pecans** (17%) • **Almonds** (14%)



06

## Beans

Copper per cup cooked (~165g):

- **Chickpeas (Garbanzos)** (29% DV)
- **Soybeans** (35%) • **Adzuki Beans** (34%)
- **Kidney Beans** (26%)
- **White Beans** (26%)



07

## Dried Fruit

Copper per half cup (~60g):

- **Prunes** (20% DV) • **Dried Apricots** (17%)
- **Currants** (17%) • **Dried Peaches** (16%)
- **Raisins** (15%) • **Dried Figs** (11%)



08

## Avocados

- 1 **Cup of Puréed Avocado** (230g) provides 22% DV
- 1 **Large Avocado** (201g) provides 19% DV



09

## Goat Cheese

- 1/2 a **Cup of Soft Goat Cheese** (112g) has 40% DV
- 1 **Ounce (28g) of Soft Goat Cheese** provides 10% DV



10

## Fermented Soy Foods

Copper per cup (~165g):

- **Tempeh** (47% DV)
- **Miso** (58%)
- **Fermented Tofu** (16%)



# Iron

## COOKING TIPS

Iron is water soluble and is not degraded by heat.

## HEALTH BENEFITS

Oxygen transport, energy production.

## DEFICIENCY SYMPTOMS

Anemia, short term. Organ failure long term.

## TOXICITY SYMPTOMS

Nausea, Abdominal Pain, Vomiting, Hemochromatosis

## ABSORPTION FACTORS





**Current Iron Level** — The most important factor is your existing iron level. A low iron level will increase absorption, while a high iron level will decrease absorption. In general, you absorb 10-15% of the iron in foods.

**Copper** — Copper is needed for iron absorption. Low copper intake will result in low iron levels.

**Vitamin C** — Vitamin C boosts iron absorption by as much as 85%.

**Black Teas, Herbal Teas, and Coffee** — Tannins, oxalates, polyphenols, and phytates found in tea and coffee can reduce the absorption of non-heme iron by up to 65%. Black tea reduces absorption more than green tea and coffee. Peppermint tea, cocoa, vervain, lime flower, chamomile, and most other herbal teas with polyphenols also inhibit iron absorption.

## Recommended Daily Allowances (RDAs)

					
0-6 months	0.27 mg (2% DV)	0.27 mg (2% DV)			
7-12 months	11 mg (61% DV)	11 mg (61% DV)			
1-3 years	7 mg (39% DV)	7 mg (39% DV)			
4-8 years	10 mg (56% DV)	10 mg (56% DV)			
9-13 years	8 mg (45% DV)	8 mg (45% DV)			
14-18 years	11 mg (61% DV)	15 mg (83% DV)	14-18 years	27 mg (150% DV)	10 mg (56% DV)
19-50 years	8 mg (45% DV)	18 mg (100% DV)	19-50 years	27 mg (150% DV)	9 mg (50% DV)
51+ years	8 mg (45% DV)	8 mg (45% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Iron

18mg = 100% DV for Iron

01

## Seeds

Iron per ounce (28g, About a handful):

- **Squash and Pumpkin Seeds** (23%)
- **Sesame Seeds** (23%)
- **Sunflower Seeds** (11%)
- **Flax Seeds** (9%)



02

## Liver

- 1 **Chicken Liver** (44g) provides 32% DV
- 1 tablespoon of **Chicken Liver Pâté** (13g) provides 7% DV
- One ounce of **Liverwurst Sausage** (28g) provides 10% DV



03

## Seafood

Iron per 3oz serving (85g, About 3 Medium Oysters):

- **Clams** (66%) • **Oysters** (43%)
- **Cuttlefish** (51%) • **Whelks** (48%)
- **Octopus** (45%) • **Mussels** (32%)
- **Abalone** (18%) • **Scallops** (14%)



04

## Nuts

Iron per 3oz serving (85g):

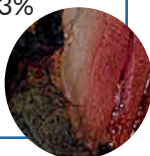
- **Cashews** (9%) • **Pine Nuts** (9%)
- **Hazlenuts** (7%) • **Peanuts** (7%)
- **Almonds** (7%) • **Pistachios** (7%)
- **Macadamia** (6%)



05

## Beef and Lamb

- A 3oz (85g) serving of **Lean Roast Beef** has 18% DV
- A **Rib-Eye Steak** (10oz, 281g) provides 41% DV
- A serving of **Lean Roast Lamb** (3oz, 85g) has 13%
- A **Lamb Chop** (4oz, 155g) provides 10% DV



06

## Beans

Iron per Cup Cooked (~180g):

- **Soybeans** (49%) • **White Beans** (37%)
- **Lentils** (37%) • **Kidney Beans** (29%)
- **Garbanzo Beans (Chickpeas)** (26%)
- **Lima Beans** (25%) • **Navy** (24%)
- **Black Beans (Frijoles Negros)** (20%)
- **Pinto** (20%) • **Black-Eyed Peas** (20%)



07

## Whole Grains\*

Iron per cup cooked (~180g):

- **Quinoa** (15%) • **Oatmeal** (12%)
- **Barley** (12%) • **Rice** (11%) • **Bulgur** (10%)
- **Buckwheat** (7%) • **Millet** (6%)
- **Fortified cereals** provide up to 140% DV of iron per cup, check box labels.



08

## Dark Leafy Greens

Iron per cup (~180g):

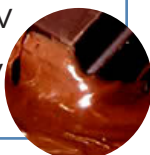
- **Cooked Spinach** (36%)
- **Cooked Swiss Chard** (22%)
- **Cooked Turnip Greens** (16%)
- **Raw Kale** (6%)
- **Raw Beet Greens** (5%)



09

## Dark Chocolate and Cocoa

- 1 cup of grated (132g) of **Unsweetened Chocolate** provides (128% DV)
- 1 cup (86g) of **Cocoa Powder** provides 66% DV
- A 1.5oz (44g) **Candy Chocolate Bar** has 6% DV



10

## Tofu

- 1 cup (126g) of **Firm Tofu** provides 19% DV
- 1/4 Block (81g) of **Firm Tofu** provides 12% DV
- 1 cup (243g) of **Soymilk** provides 6% DV





# Magnesium

## COOKING TIPS

Magnesium is water soluble and not degraded by heat.

## HEALTH BENEFITS

Maintaining nerve and muscle function. Better bone and immune system health.

## DEFICIENCY SYMPTOMS

Muscle spasms, and cramps. Anxiety, migraines, and osteoporosis.

## TOXICITY SYMPTOMS

Diarrhea, nausea, and abdominal cramps.

## ABSORPTION FACTORS AND AT RISK GROUPS

**Fermentable Carbohydrates** — Fermentable carbs like those found in grains, dairy, and fruit enhance absorption.

**Protein Foods** — High protein foods enhance magnesium absorption.





**Fermentable Carbohydrates** — Fermentable carbs like those found in grains, dairy, and fruit enhance absorption.

**Oxalic and Phytic Acids** — These acids found in plant foods may hinder absorption.

**Long distance athletes and dehydration** — Magnesium is often lost via sweat, so athletes should replenish their levels.

**The Elderly** — As we age the amount of magnesium we absorb decreases as the amount we excrete increases.

## Recommended Daily Allowances (RDAs)

					
0–6 months	30 mg (8% DV)	30 mg (8% DV)			
7–12 months	75 mg (19% DV)	75 mg (19% DV)			
1–3 years	80 mg (20% DV)	80 mg (20% DV)			
4–8 years	130 mg (33% DV)	130 mg (33% DV)			
9–13 years	240 mg (60% DV)	240 mg (60% DV)			
14–18 years	410 mg (103% DV)	360 mg (90% DV)	14–18 years	400 mg (100% DV)	360 mg (90% DV)
19–30 years	400 mg (100% DV)	310 mg (78% DV)	19–30 years	360 mg (90% DV)	310 mg (78% DV)
31–50 years	420 mg (105% DV)	320 mg (80% DV)	31–50 years	360 mg (90% DV)	320 mg (80% DV)
51+ years	420 mg (105% DV)	320 mg (80% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Dried fruits are high in sugar.

# The Top 10 Foods Highest in Magnesium

400mg = 100% of the Daily Value (%DV) for Magnesium

01

## Dark Leafy Greens

Magnesium per cup cooked (~180g):

- **Spinach** (39%) • **Swiss Chard** (38%)
- **Kale** (19%) • **Collard Greens** (13%)
- **Turnip Greens** (11%)



02

## Nuts and Seeds

Magnesium per half cup (~100g):

- **Squash and Pumpkin Seeds** (81%)
- **Sesame Seeds** (63%) • **Brazil Nuts** (63%)
- **Almonds** (48%) • **Cashews** (44%)
- **Pine Nuts** (43%) • **Mixed Nuts** (39%)
- **Peanuts** (31%) • **Pecans** (17%)
- **Walnuts** (16%)



03

## Fish

Magnesium per 3 ounce (85g) fillet:

- **Mackerel** (21%) • **Pollock** (18%)
- **Turbot** (14%) • **Tuna** (14%)
- **Average Fish** (8%)



04

## Beans and Lentils

Magnesium per cup cooked (~180g):

- **Soy Beans** (37%) • **White Beans** (28%)
- **French Beans** (25%) • **Black-Eyed Peas** (23%)
- **Kidney Beans** (21%)
- **Chickpeas (Garbanzo)** (20%)
- **Lentils** (18%) • **Pinto Beans** (16%)



05

## Whole Grains

Magnesium per cup cooked (~200g):

- **Quinoa** (26%) • **Brown Rice** (21%)
- **Millet** (19%) • **Bulgur** (15%)
- **Buckwheat** (13%) • **Wild Rice** (13%)
- **Whole Wheat Pasta** (11%)
- **Barley** (9%) • **Oats** (7%)



06

## Avocados

- An **Average Avocado** (201g) provides 15% DV
- 1/2 cup of **Puréed Avocado** (115g) provides 9% DV



07

## Low Fat Dairy

- 1 cup of **Non-Fat Yogurt** provides 12% DV
- 1 cup (245g) of **Non-fat Skim Milk** provides 9% DV
- A 1 ounce (28g or 2 cubic inches) slice of **Swiss Cheese** provides 3% DV



08

## Bananas

- 1 **Medium Banana** (118g) provides 8% DV
- 1 cup of a **Banana Slices** (150g) provides 10% DV



09

## Dried Fruit

Magnesium per 1/2 cup (~75g):

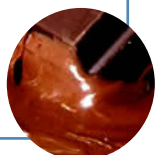
- **Figs** (13%) • **Prunes** (11%) • **Apricots** (10%)
- **Dates** (8%) • **Raisins** (7%)



10

## Dark Chocolate

- 1 **Square** (29g) provides 24% DV
- 1 **Cup Grated** (132g) provides 108% DV



# Manganese

## COOKING TIPS

Manganese is water soluble and not degraded by heat.

## HEALTH BENEFITS

Alleviates PMS, Alopecia (spot baldness), and helps prevent epileptic seizures.

## DEFICIENCY SYMPTOMS

Scaly dermatitis (skin problems), and unhealthy low cholesterol levels.





## TOXICITY SYMPTOMS

Damage to the central nervous system similar to Parkinson's

## ABSORPTION FACTORS

None known.

### Recommended Daily Allowances (RDAs)

					
0–6 months	0.003 mg (0.2% DV)	0.003 mg (0.2% DV)			
7–12 months	0.6 mg (30% DV)	0.6 mg (30% DV)			
1–3 years	1.2 mg (60% DV)	1.2 mg (60% DV)			
4–8 years	1.5 mg (75% DV)	1.5 mg (75% DV)			
9–13 years	1.9 mg (95% DV)	1.6 mg (80% DV)			
14–18 years	2.2 mg (110% DV)	1.6 mg (80% DV)	14–18 years	2.0mg (100% DV)	2.6mg (130% DV)
19–30 years	2.3mg (115% DV)	1.8 mg (90% DV)	19–30 years	2.0mg (100% DV)	2.6mg (130% DV)
31–50 years	2.3mg (115% DV)	1.8 mg (90% DV)	31–50 years	2.0mg (100% DV)	2.6mg (130% DV)
51+ years	2.3mg (115% DV)	1.8 mg (90% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Nuts and seeds are **high calorie foods** which should be eaten in moderate amounts by people looking to lose weight.

# The Top 10 Foods Highest in Manganese

2mg = 100% DV for Manganese

01

## Seafood

Manganese per 3oz serving (85g):

- **Mussels** (289% DV) • **Clams** (43%)
- **Crayfish** (22%)



02

## Nuts

Manganese per ounce (28g):

- **Hazelnuts** (78% DV) • **Pecans** (55%)
- **Walnuts** (48%) • **Macadamia** (43%)
- **Almonds** (32%) • **Cashews** (23%)
- **Pistachios** (17%)



03

## Seeds

Manganese per ounce (28g):

- **Pumpkin Seeds** (64% DV) • **Chia Seeds** (38%)
- **Sesame Seeds** (35%) • **Flax Seeds** (35%)
- **Sunflower Seeds** (30%)



04

## Bread

Manganese per slice/piece (30g~65g):

- **Whole Wheat Bread** (35% DV)
- **Whole Wheat English Muffin** (59%)
- **Whole Wheat Pita** (56%)
- **Whole Wheat Roll** (32%)



05

## Tofu and Tempeh

- 1 cup (252g) of **Firm Tofu** provides 148% DV
- 1 cup (166g) of **Tempeh** provides 108% DV



06

## Beans

Manganese per cup cooked (170g):

- **Lima Beans** (106% DV) • **Winged Beans** (103%)
- **Chickpeas** (84%) • **Adzuki Beans** (66%)
- **White Beans** (57%)
- **Black-eyed Peas** (47%)
- **Kidney Beans** (42%)



07

## Fish

Manganese per 3 ounce filet (85g):

- **Bass** (48% DV) • **Trout** (46%)
- **Pike** (44%) • **Perch** (38%)



08

## Dark Leafy Greens

Manganese per cup cooked (180g):

- **Spinach** (84% DV) • **Amaranth Leaves** (57%)
- **Beet Greens** (37%) • **Swiss Chard** (29%)
- **Kale** (27%) • **Napa Cabbage** (11%)



09

## Whole Grains

Manganese per cup cooked (195g):

- **Brown Rice** (107% DV) • **Teff** (360%)
- **Quinoa** (58%) • **Buckwheat** (34%)



10

## Tea

- 1 cup (237g) of **Brewed Black Tea** provides 26% DV
- A fluid ounce (30g) **Brewed Black Tea** has 3% DV





# Phosphorus

## COOKING TIPS

Phosphorus is water soluble and not degraded by heat.

## HEALTH BENEFITS

Strong bones and teeth. Production of ATP for energy production.

## DEFICIENCY SYMPTOMS

Lowered appetite, anemia, muscle pain, numbness, weakened immune system.

## TOXICITY SYMPTOMS

Reduced calcium absorption.





## ABSORPTION FACTORS

**Age** — 55–70% of dietary phosphorus is absorbed in adults and about 65–90% in infants and children.

**Aluminum Antacids** — Aluminum antacids can reduce phosphorus absorption.

**Calcium Carbonate** — Supplements of calcium carbonate, at high doses, can interfere with phosphorus absorption.

## Recommended Daily Allowances (RDAs)

					
0–6 months	0.003 mg (0.2% DV)	0.003 mg (0.2% DV)			
7–12 months	0.6 mg (30% DV)	0.6 mg (30% DV)			
1–3 years	1.2 mg (60% DV)	1.2 mg (60% DV)			
4–8 years	1.5 mg (75% DV)	1.5 mg (75% DV)			
9–13 years	1.9 mg (95% DV)	1.6 mg (80% DV)			
14–18 years	2.2 mg (110% DV)	1.6 mg (80% DV)	14–18 years	2.0mg (100% DV)	2.6mg (130% DV)
19–30 years	2.3mg (115% DV)	1.8 mg (90% DV)	19–30 years	2.0mg (100% DV)	2.6mg (130% DV)
31–50 years	2.3mg (115% DV)	1.8 mg (90% DV)	31–50 years	2.0mg (100% DV)	2.6mg (130% DV)
51+ years	2.3mg (115% DV)	1.8 mg (90% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Cheese and shellfish are **high cholesterol foods** which should be eaten in moderate amounts and avoided by people at risk of heart disease or stroke.

# The Top 10 Foods Highest in Phosphorus

1000mg = 100% DV for Phosphorus

01

## Seeds

Phosphorus per ounce (28g, About a handful):

- **Pumpkin and Squash Seeds** (35% DV)
- **Sunflower Seeds** (32%) • **Chia Seeds** (24%)
- **Sesame Seeds** (22%)
- **Watermelon Seeds** (21%)
- **Flax Seeds** (18%)



02

## Cheese

Phosphorus per ounce (28g, About a slice):

- **Parmesan** (23% DV) • **Romano** (21%)
- **Goat Cheese** (20%) • **Nonfat Mozzarella** (18%)
- **Gruyere and Swiss** (17%)
- **Gouda** (15%) • **Edam** (15%)
- **Nonfat Cream Cheese** (15%)



03

## Fish

Phosphorus per 3 ounce fillet (85g):

- **Carp** (45% DV) • **Salmon** (32%)
- **American Shad** (30%) • **Whitefish** (29%)
- **Cod** (29%) • **Tuna** (28%)
- **Mackerel** (27%)



04

## Shellfish

Phosphorus per 3 ounce serving (85g):

- **Scallops** (36% DV) • **Clams** (29%)
- **Shrimp** (26%) • **Mussels** (24%)
- **Crab** (24%)



05

## Nuts

Phosphorus per ounce (28g, About a handful):

- **Brazil Nuts** (10% DV) • **Pine Nuts** (16%)
- **Almonds** (14%) • **Cashews** (14%)
- **Pistachios** (13%)



06

## Pork

- **1 Lean Sirloin Roast** (638g) provides 198% DV
- A 3 ounce (85g) serving of **Lean Sirloin Roast** provides 26% DV
- **1 Lean Pork Chop** (180g) provides 55% DV



07

## Beef

- A 3 ounce (85g) serving of **Veal Leg** provides 25% DV
- A 3 ounce (85g) serving of **Lean Beef** has 25% DV



08

## Low Fat Dairy

- 1 cup (245g) of **Nonfat Yogurt** provides 38% DV
- 1 cup (245g) **Nonfat Milk** provides 25% DV
- Low and Full Fat Dairy would provide slightly less phosphorus per gram and calorie.



09

## Soya Foods

- A 3 ounce (85g) serving of **Tofu** provides 24% DV
- 1 ounce (28g) of **Soybeans (Edamame)** have 18% DV



10

## Beans and Lentils

Phosphorus per cup (150g~200g):

- **Adzuki Beans** (39% DV) • **Lentils** (36%)
- **Yellow Beans** (32%) • **White Beans** (30%)
- **Chickpeas** (28%) • **Black Turtle Beans** (28%)
- **Pinto Beans** (25%) • **Kidney Beans** (25%)



# Potassium

## COOKING TIPS

Potassium is water soluble and not degraded by heat.

## HEALTH BENEFITS

Reduced risk of high blood pressure. Osteoporosis protection.

## DEFICIENCY SYMPTOMS

Fatigue, irritability, and high blood pressure.

## TOXICITY SYMPTOMS

Nausea and vomiting.





## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholics** — Excessive consumption of alcohol can reduce potassium absorption.

**People taking Diuretics** — Especially thiazide or furosemide.

**Long distance athletes and dehydration** — Potassium is often lost via sweat, so athletes should replenish their levels.

### Recommended Daily Allowances (RDAs)

					
1–3 years	3g (86% DV)	3g (86% DV)			
4–8 years	3.8g (109% DV)	3.8g (109% DV)			
9–13 years	4.5g (129% DV)	4.5g (129% DV)			
14–18 years	4.7g (134% DV)	4.7g (134% DV)	14–18 years	4.7g (134% DV)	5.1g (146% DV)
18–50 years	4.7g (134% DV)	4.7g (134% DV)	19–50 years	4.7g (134% DV)	5.1g (146% DV)
50+ years	4.7g (134% DV)	4.7g (134% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

An overdose of potassium from supplements can cause cardiac arrest.

# The Top 10 Foods Highest in Potassium

3500mg = 100% of the Daily Value (%DV) for Potassium

01

## Beans

Potassium per cup cooked (~180g):

- **Adzuki** (35%) • **White Beans** (29%)
- **Soy** (28%) • **Lima** (28%) • **Kidney** (20%)
- Others at an average of 15% DV per cup cooked



02

## Dark Leafy Greens

Potassium per cup cooked (~180g):

- **Beet Greens** (37%) • **Spinach** (24%)
- **Swiss Chard** (27%) • **Pak Choi** (18%)
- **Kale** (8%) • **Collards** (6%)



03

## Potatoes

- An **average potato** (173g) provides 26% DV
- Half a cup of **baked potato** (61g) provides 9% DV



04

## Dried Fruit

Potassium per 1/2 cup (~65g):

- **Figs** (29% DV) • **Apricots** (22%) • **Peaches** (22%)
- **Dates** (20%) • **Prunes** (20%)
- **Raisins** (18%) • **Apples** (11%)



05

## Squash

Potassium per cup baked (~200g):

- **Acorn** (26%) • **Hubbard** (21%)
- **Butternut** (17%) • **Zucchini** (14%)
- **Average Winter Squash** (10%)



06

## Yogurt

Potassium per cup (~245g):

- **Non Fat Yogurt** (18%)
- **Whole Fat Yogurt** (11%)
- **Chocolate Non Fat Yogurt** (24%)



07

## Fish

Potassium per 3oz (85g) fillet:

- **Salmon** (15%) • **Pompano** (15%)
- **Lingcod** (14%) • **Halibut** (13%)
- **Yellowfin Tuna** (13%) • **Anchovies** (12%)
- **Mackerel** (10%) • **Average Fish** (10%)



08

## Avocados

- An **average avocado** (201g) provides 28% DV
- Half a cup (115g) of **puréed avocado** provides 16%



09

## Mushrooms

Potassium per cup sliced and cooked (~145g):

- **White Button** (12%) • **Portabella** (9%)
- **Brown or Crimini** (9%) • **Enoki** (7%)
- **Shiitake** (5%) • **Maitake** (4%)



10

## Bananas


























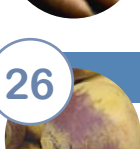



- An **average banana** (118g) provides 12% DV
- 1 cup **mashed** (225g) provides 23% DV





# Vegetables High in Potassium

3500mg = 100% DV for Potassium

<b>01</b>  <b>Beet Greens (Cooked)</b> Potassium in 100g - <b>26% DV</b> Per cup, pieces (144g) - <b>37% DV</b> Per ½ cup, pieces (72g) - <b>19% DV</b>	<b>02</b>  <b>Yam</b> Potassium in 100g - <b>23% DV</b> Per cup, cubes (150g) - <b>35% DV</b> Per cup, cooked (136g) - <b>26% DV</b>	<b>03</b>  <b>Garden Cress</b> Potassium in 100g - <b>17% DV</b> Per cup (50g) - <b>9% DV</b> Per sprig (1g) - <b>0% DV</b>
<b>04</b>  <b>Lima Beans (Cooked)</b> Potassium in 100g - <b>16% DV</b> Per cup (170g) - <b>28% DV</b> Per ½ cup (85g) - <b>14% DV</b>	<b>05</b>  <b>Spinach</b> Potassium in 100g - <b>16% DV</b> Per cup (30g) - <b>5% DV</b> Per cup, cooked (180g) - <b>24% DV</b>	<b>06</b>  <b>Swiss Chard (Cooked)</b> Potassium in 100g - <b>16% DV</b> Per cup, chopped (175g) - <b>27% DV</b> Per cup, raw (36g) - <b>4% DV</b>
<b>07</b>  <b>Potatoes (Baked)</b> Potassium in 100g - <b>15% DV</b> Per large potato (299g) - <b>46% DV</b> Per small potato (138g) - <b>21% DV</b>	<b>08</b>  <b>Bamboo Shoots</b> Potassium in 100g - <b>15% DV</b> Per cup (151g) - <b>23% DV</b> Per 1/2 cup (76g) - <b>12% DV</b>	<b>09</b>  <b>Kale</b> Potassium in 100g - <b>14% DV</b> Per cup, pieces (16g) - <b>2% DV</b> Per cup, cooked (130g) - <b>8% DV</b>
<b>10</b>  <b>Sweet Potato (Cooked)</b> Potassium in 100g - <b>14% DV</b> Per large potato (180g) - <b>24% DV</b> Per small potato (60g) - <b>8% DV</b>	<b>11</b>  <b>Mushrooms (Brown)</b> Potassium in 100g - <b>13% DV</b> Per cup, sliced (72g) - <b>9% DV</b> Per mushroom (20g) - <b>3% DV</b>	<b>12</b>  <b>Jerusalem Artichokes</b> Potassium in 100g - <b>12% DV</b> Per cup, slices (150g) - <b>18% DV</b> Per ½ cup, slices (75g) - <b>9% DV</b>
<b>13</b>  <b>Fennel</b> Potassium in 100g - <b>12% DV</b> Per cup, sliced (87g) - <b>10% DV</b> Per bulb (234g) - <b>28% DV</b>	<b>14</b>  <b>Brussels Sprouts</b> Potassium in 100g - <b>11% DV</b> Per cup (88g) - <b>10% DV</b> Per bulb (234g) - <b>28% DV</b>	<b>15</b>  <b>Parsnips</b> Potassium in 100g - <b>11% DV</b> Per cup, slices (133g) - <b>14% DV</b> Per parsnip, cooked (160g) - <b>17% DV</b>
<b>16</b>  <b>Pak Choi (Cooked)</b> Potassium in 100g - <b>11% DV</b> Per cup, shredded (170g) - <b>18% DV</b> Per ½ cup, shredded (85g) - <b>9% DV</b>	<b>17</b>  <b>Globe Artichokes</b> Potassium in 100g - <b>11% DV</b> Per large artichoke (162g) - <b>17% DV</b> Per artichoke (128g) - <b>14% DV</b>	<b>18</b>  <b>Arugula (Rocket)</b> Potassium in 100g - <b>11% DV</b> Per ½ cup (10g) - <b>1% DV</b> Per leaf (2g) - <b>0% DV</b>
<b>19</b>  <b>Squash (Winter)</b> Potassium in 100g - <b>10% DV</b> Per cup, cubes (116g) - <b>12% DV</b> Per cup, cooked (205g) - <b>14% DV</b>	<b>20</b>  <b>Broccoli Raab (Cooked)</b> Potassium in 100g - <b>10% DV</b> Per serving (85g) - <b>8% DV</b> Per bunch (437g) - <b>43% DV</b>	<b>21</b>  <b>Pumpkin</b> Potassium in 100g - <b>10% DV</b> Per cup, cubes (116g) - <b>11% DV</b> Per cup, cooked (254g) - <b>16% DV</b>
<b>22</b>  <b>Beets (Beetroot)</b> Potassium in 100g - <b>9% DV</b> Per cup (136g) - <b>13% DV</b> Per beet (82g) - <b>8% DV</b>	<b>23</b>  <b>Carrots</b> Potassium in 100g - <b>9% DV</b> Per cup, chopped (128g) - <b>12% DV</b> Per carrot (61g) - <b>6% DV</b>	<b>24</b>  <b>Broccoli</b> Potassium in 100g - <b>9% DV</b> Per cup, chopped (91g) - <b>8% DV</b> Per spear (31g) - <b>3% DV</b>
<b>25</b>  <b>Endive</b> Potassium in 100g - <b>9% DV</b> Per ½ cup, chopped (25g) - <b>2% DV</b> Per head (513g) - <b>46% DV</b>	<b>26</b>  <b>Rutabagas (Swede)</b> Potassium in 100g - <b>9% DV</b> Per cup, cubes (140g) - <b>12% DV</b> Per Swede (386g) - <b>34% DV</b>	<b>27</b>  <b>Cauliflower</b> Potassium in 100g - <b>9% DV</b> Per cup, chopped (107g) - <b>9% DV</b> Per floret (13g) - <b>1% DV</b>
<b>28</b>  <b>Okra</b> Potassium in 100g - <b>9% DV</b> Per cup (100g) - <b>9% DV</b> Per 8 pods (95g) - <b>8% DV</b>	<b>29</b>  <b>Sweet Corn (Frozen)</b> Potassium in 100g - <b>8% DV</b> Per cup, kernels (165g) - <b>14% DV</b> Per ear (125g) - <b>11% DV</b>	<b>30</b>  <b>Celery (Cooked)</b> Potassium in 100g - <b>8% DV</b> Per cup, diced (150g) - <b>12% DV</b> Per 2 stalks (75g) - <b>6% DV</b>

# Fruits High in Potassium

3500mg = 100% DV for Potassium

<b>01</b> 	<b>Avocados</b> Potassium in 100g - <b>14% DV</b> Per cup, cubes (150g) - <b>21% DV</b> Per avocado (201g) - <b>28% DV</b>	<b>02</b> 	<b>Guavas</b> Potassium in 100g - <b>2% DV</b> Per cup (165g) - <b>20% DV</b> Per fruit (55g) - <b>7% DV</b>	<b>03</b> 	<b>Bananas</b> Potassium in 100g - <b>10% DV</b> Per cup, sliced (150g) - <b>15% DV</b> Per banana (118g) - <b>12% DV</b>
<b>04</b> 	<b>Passion Fruit</b> Potassium in 100g - <b>10% DV</b> Per cup (236g) - <b>23% DV</b> Per fruit (18g) - <b>2% DV</b>	<b>05</b> 	<b>Kiwi Fruit</b> Potassium in 100g - <b>9% DV</b> Per cup, sliced (186g) - <b>17% DV</b> Per fruit (86g) - <b>8% DV</b>	<b>06</b> 	<b>Persimmons</b> Potassium in 100g - <b>9% DV</b> Per 2 fruit (50g) - <b>4% DV</b> Per fruit (25g) - <b>2% DV</b>
<b>07</b> 	<b>Cantaloupe Melon</b> Potassium in 100g - <b>8% DV</b> Per cup, balls (177g) - <b>14% DV</b> Per wedge (69g) - <b>5% DV</b>	<b>08</b> 	<b>Apricots</b> Potassium in 100g - <b>7% DV</b> Per cup, sliced (165g) - <b>12% DV</b> Per fruit (35g) - <b>3% DV</b>	<b>09</b> 	<b>Pomegranate</b> Potassium in 100g - <b>7% DV</b> Per ½ cup, seeds (87g) - <b>6% DV</b> Per fruit (282g) - <b>19% DV</b>
<b>10</b> 	<b>Figs</b> Potassium in 100g - <b>7% DV</b> Per large fig (64g) - <b>4% DV</b> Per small fig (40g) - <b>3% DV</b>	<b>11</b> 	<b>Honeydew Melon</b> Potassium in 100g - <b>7% DV</b> Per cup, balls (177g) - <b>12% DV</b> Per wedge (125g) - <b>8% DV</b>	<b>12</b> 	<b>Cherries</b> Potassium in 100g - <b>6% DV</b> Per cup (138g) - <b>9% DV</b> Per cherry (8g) - <b>1% DV</b>
<b>13</b> 	<b>Pummelos</b> Potassium in 100g - <b>6% DV</b> Per cup (190g) - <b>12% DV</b> Per fruit (609g) - <b>38% DV</b>	<b>14</b> 	<b>Nectarines</b> Potassium in 100g - <b>6% DV</b> Per cup, slices (143g) - <b>8% DV</b> Per fruit (142g) - <b>8% DV</b>	<b>15</b> 	<b>Grapes</b> Potassium in 100g - <b>5% DV</b> Per cup (92g) - <b>5% DV</b> Per grape (2g) - <b>0% DV</b>
<b>16</b> 	<b>Peaches</b> Potassium in 100g - <b>5% DV</b> Per cup, slices (154g) - <b>8% DV</b> Per peach (150g) - <b>8% DV</b>	<b>17</b> 	<b>Papaya</b> Potassium in 100g - <b>5% DV</b> Per cup, pieces (145g) - <b>8% DV</b> Per small papaya (157g) - <b>8% DV</b>	<b>18</b> 	<b>Oranges</b> Potassium in 100g - <b>5% DV</b> Per cup, sections (180g) - <b>9% DV</b> Per orange (131g) - <b>7% DV</b>
<b>19</b> 	<b>Clementines (or Tangerines)</b> Potassium in 100g - <b>5% DV</b> Per 2 fruit (148g) - <b>8% DV</b> Per fruit (74g) - <b>4% DV</b>	<b>20</b> 	<b>Litchis</b> Potassium in 100g - <b>5% DV</b> Per cup (190g) - <b>9% DV</b> Per fruit (10g) - <b>0% DV</b>	<b>21</b> 	<b>Mangos</b> Potassium in 100g - <b>5% DV</b> Per cup, pieces (165g) - <b>8% DV</b> Per fruit (336g) - <b>16% DV</b>
<b>22</b> 	<b>Blackberries</b> Potassium in 100g - <b>5% DV</b> Per cup (144g) - <b>7% DV</b> Per ½ cup (72g) - <b>4% DV</b>	<b>23</b> 	<b>Plums</b> Potassium in 100g - <b>4% DV</b> Per cup, sliced (165g) - <b>7% DV</b> Per plum (66g) - <b>3% DV</b>	<b>24</b> 	<b>Strawberries</b> Potassium in 100g - <b>4% DV</b> Per cup, sliced (166g) - <b>7% DV</b> Per large strawberry (18g) - <b>1% DV</b>
<b>25</b> 	<b>Raspberries</b> Potassium in 100g - <b>4% DV</b> Per cup (123g) - <b>5% DV</b> Per 10 fruit (19g) - <b>1% DV</b>	<b>26</b> 	<b>Grapefruit</b> Potassium in 100g - <b>4% DV</b> Per cup, sections (230g) - <b>9% DV</b> Per ½ grapefruit (128g) - <b>5% DV</b>	<b>27</b> 	<b>Lemons</b> Potassium in 100g - <b>4% DV</b> Per cup, sections (212g) - <b>8% DV</b> Per fruit (84g) - <b>3% DV</b>
<b>28</b> 	<b>Apples (Granny Smith)</b> Potassium in 100g - <b>3% DV</b> Per cup, sliced (109g) - <b>4% DV</b> Per apple (167g) - <b>6% DV</b>	<b>29</b> 	<b>Pears</b> Potassium in 100g - <b>3% DV</b> Per cup, sliced (140g) - <b>5% DV</b> Per pear (178g) - <b>6% DV</b>	<b>30</b> 	<b>Watermelon</b> Potassium in 100g - <b>3% DV</b> Per cup, balls (154g) - <b>5% DV</b> Per wedge (286g) - <b>9% DV</b>

# Sodium

## COOKING TIPS

Reduce sodium intake by using dry herbs instead of salt.

## HEALTH BENEFITS

Blood pressure regulation and nerve signaling.

## DEFICIENCY SYMPTOMS

Low blood pressure.

## TOXICITY SYMPTOMS





High blood pressure, and increased risk of cardiovascular disease.

## ABSORPTION FACTORS AND HIGH RISK GROUPS

**Long distance athletes and dehydration** — Sodium is often lost via sweat, so athletes should replenish their levels.

**Efficient absorption** — About 90% of sodium is absorbed from foods.

### Recommended Daily Allowances (RDAs)

					
0–6 months	12mg (0.5%DV)	12mg (0.5% DV)			
7–12 months	37mg (1.5% DV)	37 mg (1.5% DV)			
1–3 years	1000mg (42% DV)	1000mg (42% DV)			
4 –8 years	1200mg (50% DV)	1200mg (50% DV)			
9–13 years	1500mg (63% DV)	1500mg (63% DV)			
14–18 years	1500mg (63% DV)	1500mg (63% DV)	14–18 years	1500mg (63% DV)	1500mg (63% DV)
19–30 years	1500mg (35% DV)	1500mg (63% DV)	19–30 years	1500mg(63% DV)	1500mg (63% DV)
31–50 years	1300mg (54% DV)	1300mg (54%DV)	31–50 years	1500mg(63% DV)	1500mg (63% DV)
51+ years	1200mg (50% DV)	1200mg (50% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

All foods are a source of sodium, and limiting sodium intake and use of table salt is recommended to prevent cardiovascular disease.



# The Top 10 Foods Highest in Sodium

2400mg = 100% DV for Sodium

01

## Table Salt

Sodium per teaspoon (~6g):

- **Table Salt** (97% DV) • **Baking Soda** (57%)
- **Baking Powder** (22%)



02

## Sauces and Salad Dressings

Sodium per tablespoon (~18g):

- **Fish Sauce** (59% DV) • **Soy Sauce** (51%)
- **Teriyaki** (29%) • **Oyster Sauce** (21%)
- **Hot Pepper Sauce** (18%)
- **Steak Sauce** (12%) • **BBQ Sauce** (7%)
- **Most Salad Dressings Average** (11%)



03

## Cured Meat and Fish

Sodium per ounce (28g):

- **Salt Cod** (82% DV) • **Canned Anchovies** (43%)
- **Turkey Bacon and Salami** (27%) • **Bacon** (25%)
- **Beef Jerky** (24%) • **Smoked Salmon** (23%)
- **Italian Salami** (22%)
- **Smoked Herring** (11%)



04

## Cheese

Sodium per ounce (28g):

- **Roquefort** (21% DV) • **Queso Seco** (21%)
- **Romano** (17%) • **Parmesan** (16%)
- **Blue Cheese** (13%) • **Feta** (11%)
- **Camembert** (10%)
- **Gouda** (10%)



05

## Pickles

Sodium per cup (~155g):

- **Olives** (117% DV) • **Pickled Eggplant** (95%)
- **Pickled Cucumber** (78%)
- **Pickled Jalapenos** (72%)
- **Sauerkraut** (39%)



06

## Instant Soups

Sodium per packet (9g):

- **Onion Soup** (131% DV) • **Chicken Noodle** (112%)
- **Tomato and Vegetable** (109%)
- **Bouillon Stock Cube** (50%)
- **Cream of Vegetable** (37%)
- **Beef Noodle** (32%)



07

## Salted Nuts and Seeds

Sodium per ounce (28g):

- **Pumpkin Seeds** (30% DV) • **Almonds** (8%)
- **Cashews** (7%) • **Sunflower Seeds** (7%)
- **Pistachios** (5%)

Unsalted nuts and seeds are low in sodium



08

## Snacks

Sodium per ounce (28g):

- **Pretzles** (20% DV) • **Sesame Sticks** (17%)
- **Low Fat Tortillas** (12%) • **Salted Popcorn** (10%)
- **Soy Chips** (10%) • **Pita Chips** (10%)
- **Salted Peanuts** (9%)



09

## Fast Foods

Sodium per piece or slice (~185g):

- **Egg and Ham Biscuit** (83%) • **French Fries** (42%)
- **Beef, Chili, and Cheese Burrito** (44%)
- **Hamburger with Cheese** (35%)
- **Pepperoni Pizza** (29%)
- **Hush Puppies** (10%)



10

## Canned Vegetables

Sodium per cup (~140g):

- **Sweet Peppers** (80%) • **Tomato Sauce** (54%)
- **Snap Beans** (36%) • **Zucchini** (35%)
- **Spinach** (29%) • **Asparagus** (28%)
- **Mushrooms** (28%) • **Peas** (22%)
- **Sweet Corn** (22%) • **SunDried Tomato** (12%)





# Selenium

## COOKING TIPS

Selenium is water soluble and not degraded by heat.

## HEALTH BENEFITS

Proper thyroid function and reduced cancer risk.

## DEFICIENCY SYMPTOMS

Muscle and joint pain, unhealthy hair, and white spots on nails.





## TOXICITY SYMPTOMS

Jaundice, Nausea, Loss of Appetite, Irritability, Vomiting

## ABSORPTION FACTORS AND AT RISK GROUPS

**People Living in Selenium Deficient Areas** — People who eat primarily vegetables grown in selenium deficient soil can suffer selenium deficiency.

### Recommended Daily Allowances (RDAs)

					
0–6 months	15 mcg* (21% DV)	15 mcg* (21% DV)			
7–12 months	20 mcg* (29% DV)	20 mcg* (29% DV)			
1–3 years	20 mcg (29% DV)	20 mcg (29% DV)			
4–8 years	30 mcg (43% DV)	30 mcg (43% DV)			
9–13 years	40 mcg (57% DV)	40 mcg (57% DV)			
14–18 years	55 mcg (79% DV)	55 mcg (79% DV)	14–18 years	60 mcg (86% DV)	70 mcg (100% DV)
19–50 years	55 mcg (79% DV)	55 mcg (79% DV)	19–50 years	60 mcg (86% DV)	70 mcg (100% DV)
51+ years	55 mcg (79% DV)	55 mcg (79% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Selenium

70mcg (micrograms, µg) = 100% DV for Selenium

01

## Nuts

Selenium per ounce (28g):

- **Brazil Nuts** (767% DV) • **Mixed Nuts** (14%)
- **Cashews** (8%) • **Black Walnuts** (7%)
- **Macadamia Nuts** (5%)



02

## Seafood

Selenium per 3oz serving (85g, ~3 medium oysters):

- **Oysters** (187% DV) • **Mussels** (109%)
- **Octopus** (109%) • **Lobster** (89%)
- **Clams** (78%) • **Squid** (63%) • **Shrimp** (60%)

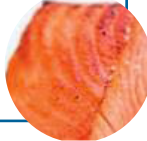


03

## Fish

Selenium per 3oz fillet (85g):

- **Tuna** (131% DV) • **Rockfish** (93%)
- **Swordfish** (83%) • **Halibut** (67%)
- **Tilapia** (66%) • **Mackerel** (63%)
- **Snapper** (60%)

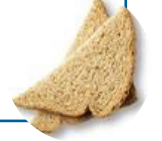


04

## Whole Wheat Bread

Selenium per slice/piece (30g~65g):

- **Whole Wheat Bread** (16% DV)
- **Oat Bran Bagel** (51%)
- **Large Pita Bread** (40%)
- **English Muffin** (63%)
- **Medium Dinner Roll** (25%)



05

## Seeds

Selenium per ounce (28g, About a handful):

- **Sunflower Seeds** (32% DV) • **Chia Seeds** (22%)
- **Sesame Seeds** (14%) • **Flaxseeds** (10%)
- **Pumpkin and Squash Seeds** (4%)



06

## Pork

Selenium per 3oz serving (85g):

- **Lean Tenderloin** (63% DV) • **Roast Ham** (61%)
- **Lean Pork Mince** (60%)
- **Lean Pork Loin** (59%)
- **A Boneless Pork Chop** (73g) provides 54%



07

## Beef and Lamb

Selenium per 3oz serving (85g):

- **Lean Beef Steak** (54% DV) • **Sirloin** (47%)
- **Lean Lamb Stewing Meat** (46%)
- **Lean Lamb Shoulder** (46%)
- **Lean Lamb Foreshank** (43%)



08

## Chicken and Turkey

Selenium per 3oz serving (85g):

- **Turkey Leg** (46% DV) • **Chicken Breast** (39%)
- **Chicken Thigh** (36%)
- **Stewing Chicken** (35%)



09

## Mushrooms

Selenium per cup sliced (~75g):

- **Raw Criminis** (27% DV) • **Cooked Shiitake** (51%)
- **Cooked Portabellas** (38%)
- **Raw Portabellas** (23%)
- **Cooked White Button Mushrooms** (21%)



10

## Whole Grains

Selenium per cup cooked (~170g):

- **Rye** (34% DV) • **Brown Rice** (27%)
- **Pearl Barley** (19%)
- **Oatmeal** (18%)
- **Quinoa** (7%)



# Zinc

## COOKING TIPS

Zinc is water soluble and not degraded by heat.

## HEALTH BENEFITS

Reduced duration of the common cold. Accelerated wound healing.

## DEFICIENCY SYMPTOMS

Impotence, hair loss, and decreased immunity.

## TOXICITY SYMPTOMS

Nausea, Loss of Appetite, Vomiting.

## ABSORPTION FACTORS AND AT RISK GROUPS





**Alcoholics** — 30-50% of alcoholics have low levels because alcohol decreases absorption and increases urinary secretion.

**Iron Supplements** — Iron supplements, or high iron intake, can interfere with zinc absorption.

**Vegetarians and Vegans** — The bio-availability of zinc is higher in meats and thus more easily absorbed. Further legumes and whole grains contain phytates which bind zinc and inhibit absorption. Vegetarians should aim to eat 50% DV more zinc each day to ensure proper levels.

**People with Sickle Cell Disease** — For unknown reasons 44% of children, and 60-70% of adults with sickle cell disease have low levels of zinc.

## Recommended Daily Allowances (RDAs)

					
0-6 months	2 mg* (13% DV)	2 mg* (13% DV)			
7-12 months	3 mg (20% DV)	3 mg (20% DV)			
1-3 years	3 mg (20% DV)	3 mg (20% DV)			
4-8 years	5 mg (30% DV)	5 mg (30% DV)			
9-13 years	8 mg (53% DV)	8 mg (53% DV)			
14-18 years	11 mg (73% DV)	9 mg (60% DV)	14-18 years	12 mg (80% DV)	13 mg (87% DV)
19+ years	11 mg (73% DV)	8 mg (53% DV)	19-50 years	11 mg (73% DV)	12 mg (80% DV)

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

Shellfish and roast beef are **high cholesterol foods** which should be eaten in moderate amounts and avoided by people at risk of heart disease or stroke.

# The Top 10 Foods Highest in Zinc

15mg = 100% DV for Zinc

01

## Seafood

Zinc per 3 ounce serving (85g):

- **Oysters** (445%) • **Crab** (43%)
- **Lobster** (41%)
- **6 Oysters** (42g) provides 220% DV



02

## Beef and Lamb

Zinc per 3 ounce serving (85g):

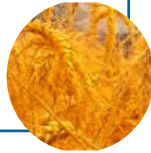
- **Lean Beef Short Ribs** (70% DV)
- **Lean Lamb Fore Shank** (49%)
- **Lean Lamb Shoulder** (46%)
- **Lean Lamb Stew Meat** (37%)



03

## Wheat Germ

- 1 cup (113g) of **Toasted Wheat Germ** has 126% DV
- 1 oz (28g) of **Toasted Wheat Germ** has 31% DV



04

## Green Leafy Vegetables

Zinc per cup cooked (~180g):

- **Spinach** (9% DV)
- **Amaranth Leaves** (8%)
- **Raw Endive** (2%)
- **Raw Radicchio** (2%)



05

## Seeds

Zinc per ounce (28g):

- **Pumpkin and Squash Seeds** (19%)
- **Sesame Seeds** (19%) • **Sunflower Seeds** (10%)
- **Chia Seeds** (9%)
- **Flaxseeds** (8%)



06

## Nuts

Zinc per ounce (28g):

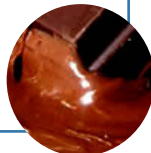
- **Pine Nuts** (12%) • **Cashews** (10%)
- **Pecans** (9%) • **Almonds** (6%)
- **Walnuts** (6%) • **Peanuts** (6%)
- **Hazelnuts** (5%)



07

## Cocoa and Chocolate

- A cup (86g) of **Cocoa Powder** provides 39% DV
- A tablespoon (5g) of **Cocoa Powder** provides 2% DV
- A cup (132g) of **Grated Baking Chocolate** provides 85% DV



08

## Pork and Chicken

- 3 ounces (85g) of **Lean Pork Shoulder** has 28% DV
- 3 ounces (85g) of **Chicken Drumstick** has 18% DV
- 1 **Chicken Drumstick** (42g) provides 9% DV



09

## Beans

Zinc per cup cooked (~160g):

- **Baked Beans** (39% DV) • **Adzuki** (27%)
- **Chickpeas** (17%) • **Kidney Beans** (12%)



10

## Mushrooms

Zinc per cup (60~160g):

- **Cooked White Mushrooms** (9% DV)
- **Raw Morels** (9%) • **Raw Portabellas** (5%)
- **Raw Oysters** (4%) • **Raw White** (5%)
- 4 (76g) **Shiitake Mushrooms Raw** (4%)





# Protein

## COOKING TIPS

Cooking has little effect on protein quality.

## HEALTH BENEFITS

Normal health and function of the human body.

## DEFICIENCY SYMPTOMS

Edema, muscle loss, dull skin, fragile hair.

## TOXICITY SYMPTOMS

Possible liver damage, kidney stones.





## ABSORPTION FACTORS AND AT RISK GROUPS

**Vegans and Vegetarians** — There is some concern of vegans and vegetarians obtaining all the essential amino acids, or “complete proteins” in foods. However, vegans and vegetarians that eat a wide variety of foods such as beans, rice, green vegetables, nuts, and seeds, should be fine.

**Phenylketonuria** — Individuals with phenylketonuria lack an enzyme to process the amino acid phenylalanine. They should avoid phenylalanine as too much can lead to skin disorders and hampered brain development.

**Maple Syrup Urine Disease (MSUD):** — People with MSUD should avoid branched-chain amino acids (BCAAs), such as leucine, isoleucine, and valine. Not avoiding them can lead to hampered brain development and even death.

## Recommended Daily Allowances (RDAs)

					
0–6 months	9.1g	9.1g			
7–12 months	11g	11g			
1–3 years	13g	13g			
4–8 years	19g	19g			
9–13 years	34g	34g			
14–18 years	52g	46g	14–18 years	71g	71g
19+ years	56g	46g	19–50 years	71g	71g

## WARNINGS

None.

# The Top 10 Foods Highest in Protein

01

## Fish

1g protein per 4.5 calories

Protein per fillet (3oz or 85g):

- **Tuna** (22g) • **Salmon** (22g) • **Halibut** (22g)
- **Snapper** (22g) • **Perch** (21g)
- **Flounder and Sole** (21g) • **Cod** (20g)
- **Talapia** (17g)



02

## Lean Chicken and Turkey

1g protein per 4.6 calories

- 1/2 **chicken breast** (86g) provides 27 grams protein
- 1 **chicken leg – drumstick** (60g) provides 16g protein
- 1 **chicken thigh** (37g) provides 9g protein
- A 3oz serving of **turkey breast** (85g) provides 26g protein



03

## Cheese

1g protein per 4.7 calories

Protein per ounce (28g):

- Non-fat **Mozzarella** (9g)
- Low-fat **Swiss Cheese** (8g)
- Low-fat **Cheddar** (6g)
- Non-fat **Cottage Cheese** (5g)
- **Parmesan** (10g) • **Romano** (9g)



04

## Lean Beef and Veal

1g protein per 5.3 calories

- A 3oz (85g) slice of **roast beef** provides 31g of protein
- **T-Bone Steak** 3oz (85g) provides 19g of protein
- 1 piece of **beef jerky** (20g) provides 7g of protein



05

## Pork Loin (Chops)

1g protein per 5.2 calories

- 1 **chop** (137g) provides 41g protein
- **Sirloin roast** 3oz (85g) provides 23g of protein
- 3 ounces (85g) of **Ham** provides 18g of protein



06

## Tofu

1g protein per 7.4 calories

- 1 3oz (85g) slice of **firm tofu** provides 6g of protein
- 1 cup (252g) of **firm tofu** provides 20g protein
- 1 cup of **soft tofu** (248g) provides 16g protein
- 1 cup of **tempeh** (166g) provides 31g protein



07

## Yogurt, Milk, and Soymilk

1g protein per 9.8 calories

- 1 cup **yogurt** (245g) provides 14g protein
- 1 cup **skim milk** (245g) provides 8g protein
- 1 cup **soymilk** (243g) provides 8g protein



08

## Beans

1g protein per 10.4 calories

Protein per cup cooked (~180g):

- **Mature Soy Beans** (29g) • **Kidney Beans** (17g)
- **White Beans** (17g) • **Lima Beans** (15g)
- **Black Beans** (15g) • **Fava Beans** (14g)
- **Mung Beans** (14g)

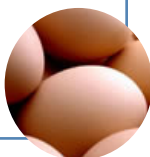


09

## Eggs

1g protein per 12 calories

- 1 **large egg** (50g) provides 6 grams protein
- 1 **egg white** (33g) provides 4 grams protein
- 1 cup of **scrambled eggs** (220g) provides 22g protein



10

## Nuts and Seeds

1g protein per 15.8 calories

Protein per ounce (28g):

- **Pumpkin Seeds** (9g) • **Squash Seeds** (9g)
- **Watermelon Seeds** (9g) • **Peanuts** (7g)
- **Almonds** (6g) • **Pistachios** (6g)
- **Sunflower Seeds** (6g) • **Flax Seeds** (5g)
- **Mixed Nuts** (4g)



# Carbohydrates

## COOKING TIPS

Choose whole grains over refined.

## HEALTH BENEFITS

Proper immune function, reproduction, blood clotting, and human development.

## DEFICIENCY SYMPTOMS

Headaches, lack of energy, ketosis.





## TOXICITY SYMPTOMS

Increased body fat, type II diabetes, high cholesterol, increased cancer risk.

## ABSORPTION FACTORS

**The Glycemic Index** — Studies suggest that whole unrefined carbohydrates like brown rice and oranges, are absorbed slower than their refined counterparts of white rice and orange juice. There may be significant health benefits in choosing whole carbohydrates which are absorbed at a slower rate. When reducing carbohydrates we are talking about simple carbohydrates such as sugars and refined carbohydrates such as white bread and white rice. These foods contain mostly energy and few nutrients, so are sometimes referred to as 'empty calories'. Healthy whole grain carbohydrates on the other hand form an essential part of a balanced diet.

### Recommended Daily Allowances (RDAs)

					
0-6 months	60g	60g			
7-12 months	95g	95g			
1-3 years	130g	130g			
4-8 years	130g	130g			
9-13 years	130g	130g			
14-18 years	130g	130g	14-18 years	175g	210g
19+ years	130g	130g	19-50 years	175g	210g

## WARNINGS

Other than dried fruit, almost all the foods on the right should be avoided.

# The Top 10 Foods Highest in Carbohydrates To Avoid

## 01 Sugars, Syrups, Sweeteners

68%-100% Carbs

Carbs per Teaspoon (4g):

- **Granulated Sugar** (4g) • **Fructose** (4g)
- **Aspartame** (3.6g) • **Honey** (3.3g)
- **Powdered Sugar** (3g) • **Brown Sugar** (2.9g)
- **Maple Syrup** (2.7g)



## 02

### Candies

Up to 99% Carbs

Carbs per 10 candies (~10g-130g):

- **Almond Nougat** (129g) • **Chocolate Tootsie Rolls** (61g)
- **Hard Candies** (59g) • **Butterscotch** (43.5g)
- **Jelly Gum Drops** (36g) • **Chewing Gum** (29g)
- **Jellybeans** (26.2g)
- **Sugarless Gum** (19g) • **Skittles** (10g)



## 03

### Dried Fruit

62%-94% Carbs

Carbs per Cup (~60g-130g):

- **Dried Cherries** (129g)
- **Sweetened Dried Blueberries** (128g)
- **Prunes** (117g) • **Raisins** (115g)
- **Dates** (110g) • **Dried Apricots** (99g)
- **Dried Figs** (95g) • **Dried Apples** (56g)



## 04

### Cereals

Up to 91% Carbs

Grams per 3/4 cup (NLEA Serving, ~30g):

- **Rice Crispies** (29g) • **Corn Pops** (27g)
- **Frosted Flakes** (27g)
- **Reduced Sugar Frosted Flakes** (26g)
- **Golden Puffs** (24g) • **Bran Flakes** (24g)
- **Fruit and Nut Muesli** (23g)



## 05

### Snacks

Up to 84% Carbs

Grams per 2 cakes/crackers (~20g):

- **Rye Wafers** (18g) • **Rye Crispbread** (16g)
- **Corn Cakes** (15g) • **Saltines** (8g)

Grams per ounce (~28g):

- **Fat-Free Potato Chips** (24g)
- **Pretzles** (23g) • **Popcorn** (21g)



## 06

### Cookies and Cakes

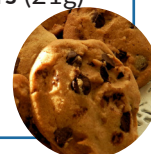
Up to 84% Carbs

Grams per ounce (28g):

- **Fortune Cookies** (24g) • **Gingersnaps** (22g)
- **Sugar Free Choc. Cookies & Animal Crackers** (21g)

Grams per piece or slice (~60g):

- **Coffee Cake** (30g)
- **Fruit Cake** (27g) • **Sponge Cake** (23g)



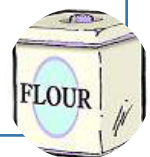
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### Flour

Up to 80% Carbs

Carbs per cup (160g):

- **Potato Flour** (133g) • **Rice Flour** (127g)
- **Wheat Flour** (95g) • **Yellow Corn Flour** (90g)
- **Dark Rye** (88g) • **Whole Wheat** (86g)
- **Buckwheat Flour** (85g) • **Light Rye** (78g)
- **Oat Flour** (68g) • **Chickpea Flour** (53g)



## 08

### Jams and Preserves

Up to 69% Carbs

Grams per tablespoon (20g):

- **Marmalade** (13.3g)
- **Apricot Jam** (12.9g)
- **Dietetic Jam** (7.5g)



## 09

### Bread, Toast, Bagels, Pizza

Up to 59% Carbs

Grams per slice/piece (~30-100g):

- **1 Cinnamon Raisin Bagel** (59g)
- **Deep-Dish Pizza** (40g) • **Thin Crust Pizza** (27g)
- **Whole-Wheat Pita** (35g) • **Refined Pita** (33g)
- **English Muffin** (26g) • **Raisin Bread** (17g)
- **Flour Tortilla** (15g) • **Wheat Bread** (14g)



## 10

### Potatoes

Up to 35% Carbs

• 1 cup of **Hash Browns** (55g)

- **Whole Baked Potato** (37g)
- 3.5oz (100g) of **Candied Sweet Potato** (33.7g)
- 10 **French Fries** (21g)
- 1 **Medium Potato Pancake** (10g)



# Sugar

## COOKING TIPS

Check nutrient labels and avoid refined sugar.

## HEALTH BENEFITS

None known.

## DEFICIENCY SYMPTOMS

Low energy.

## TOXICITY SYMPTOMS

Tooth decay, obesity, type II diabetes.

## ABSORPTION FACTORS

None

## Recommended Daily Allowances (RDAs)

There is no recommended daily intake for sugar. **It is best to limit or avoid all refined sugars.**

## WARNINGS

*Dried fruit and some commercial cereals can be consumed in limited quantities. All other high sugar foods should be avoided.*



# The Top 10 Foods Highest in Sugar to Avoid

## 01 Sugars, Syrups, Sweeteners

60%-100% Sugar

Percent Sugar:

- Granulated Sugar (100%) • Brown Sugar (97%)
- Fructose (93%) • Honey (82%) • Molasses (75%)
- High Fructose Corn Syrup (76%)
- Agave and Maple Syrup (68%)
- Canadian Maple Syrup (60%)



## 02 Drink Powders and Soft Drinks

10%-95% Sugar

Percent Sugar:

- Lemonade Powder (95%) • Gatorade Mix (81%)
- Cocoa Mix (66%) • Instant Mocha Coffee (59%)
- Cream Soda and Energy Drinks (13%)
- Cola, Root Beer, and Orange Drink (11%)
- Lemon Ice Tea (10%)



## 03 Candies and Nougat

66%-93% Sugar

Percent Sugar:

- Hard Candies (93%) • Nougat (83%)
- Butterscotch (81%) • Fudge (76%) • Skittles (76%)
- Jelly Beans and Gum Drops (70%)
- Taffy (69%) • After Eight Mints (67%)
- Chewing Gum and Caramels (66%)



## 04 Dried Fruit

38%-81% Sugar

Percent Sugar:

- Apples (81%) • Sweetened Blueberries (68%)
- Currants, Dates & Sweetened Cherries (67%)
- Sweetened Cranberries (65%)
- Pears (62%) • Raisins (59%) • Apricots (53%)
- Figs (48%) • Peaches (42%) • Prunes (38%)



## 05 Cookies, Cakes, and Pies

36%-71% Sugar

Percent Sugar:

- Macaroon (71%) • Chocolate Sandwich (Oreo) (61%)
- White Cake with Coconut Frosting (57%)
- Oatmeal Cookies (42%) • Brownies (39%)
- Chocolate Cake (40%) • Doughnuts (35%)
- Coconut Cream Pie (36%)



## 06 Jams, Preserves, and Spreads

11%-60% Sugar

Percent Sugar:

- Marmalade (60%) • Chocolate Hazelnut Spread (54%)
- Most Jams (49%) • Apricot Jam (43%)
- Diet Jam (38%)
- Peanut Butter (11%)
- Coconut Cream Pie (36%)



## 07 Cereals

27%-56% Sugar

Percent Sugar:

- Honey Smacks (56%) • Froot Loops (50%)
- Frosted Flakes (38%) • Cocoa Puffs (37%)
- Raisin Bran (34%) • Granola (33%)
- Cherios (33%) • Fruit Muesli (31%)
- Low Sugar Frosted Flakes & All-Bran (27%)



## 08 Fruit Canned in Syrup

16%-52% Sugar

Percent Sugar:

- Canned Papaya (52%) • Maraschino Cherries (39%)
- Plums, Sour Red Cherries, Strawberries (22%)
- Figs (21%) • Blueberries, Raspberries (20%)
- Apricots (20%) • Fruit Salad (18%)
- Pears, Sweet Cherries (16%) • Coconut Cream Pie (36%)



## 09 Sauces and Instant Gravies

10%-38% Sugar

Percent Sugar:

- Cranberry Sauce (38%) • Barbeque Sauce (33%)
- Pickle Relish (29%) • Hoisin Sauce (27%)
- Peanut Sauce (19%) • Teriyaki Sauce (14%)
- Sweet and Sour Sauce (19%)
- Steak Sauce, Worcestershire Sauce (10%)



## 10 Ice Cream and Frozen Yogurt

6%-25% Sugar

Percent Sugar:

- Most Ice Creams (25%) • Soft Serve Yogurt (24%)
- Thick Chocolate Milkshake (21%)
- Chocolate Covered Ice Cream Bar (18%)
- Non-fat No-sugar Frozen Yogurt (13%)
- Low Carb Vanilla Ice Cream (6%)



# Calories

## COOKING TIPS

Calories are not effected by heat and typically concentrated with cooking.

## HEALTH BENEFITS

Maintains body function and basal metabolism.

## DEFICIENCY SYMPTOMS

Weight loss, muscle atrophy, weakened immunity.

## TOXICITY SYMPTOMS

Weight gain, obesity, type II diabetes, heart disease, and cancer.

## ABSORPTION FACTORS

**None** — Calories are so essential that very little inhibits their absorption.

## Recommended Daily Allowances (RDAs)

Depending on activity levels and metabolism, adults should consume between 1800 - 2500 calories per day.

## WARNINGS

*Dried fruits and fruit juices are high in sugar.*

# The Top 10 Foods Highest in Calories

2000 Calories = 100% DV for Calories

01

## Fats and Oils

Calories per Tablespoon (~13g):

- **Most Vegetable Oils** (124 calories)
- **Coconut Oil** (121) • **Mutton Tallow** (117)
- **Most Animal Fats** (117)
- **Butter** (100) • **Pak Choi** (144%)



02

## Nuts and Seeds

Calories per Ounce (28g):

- **Macadamias** (201 Calories) • **Pecans** (199%)
- **Pine Nuts** (188) • **Brazil Nuts** (184)
- **Walnuts** (183) • **Hazelnuts** (181)
- **Almonds** (162) • **Squash Seeds** (161)
- **Flaxseeds** (150) • **Chia Seeds** (136)



03

## Nut and Seed Butters

Calories per Tablespoon (~16g):

- **Sunflower Seed Butter** (99 calories)
- **Almond Butter** (98) • **Peanut Butter** (94)
- **Cashew Butter** (94) • **Tahini** (89)

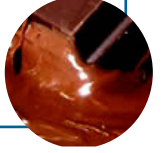


04

## Chocolate

Calories per Ounce (28g):

- **Dark Chocolate (70-85% Cacao)** - 167 Calories
- **Dark Chocolate (60-69% Cacao)** - 162 Calories
- **Chocolate (45-59% Cacao)** - 153 Calories



05

## Dried Fruit and Fruit Juice

Calories per 1/2 cup (~65g):

- **Dried Cherries** (266 Calories) • **Blueberries** (254)
- **Prunes** (224) • **Raisins** (217) • **Dates** (208)
- **Apricots** (191) • **Figs** (186) • **Apples** (104)
- **Prune Juice** (91) • **Grape Juice** (76)
- **Pineapple Juice** (67) • **Apple Juice** (57)



06

## Avocados

- A cup (150g) of **Avocado** has 240 calories
- An **Average Avocado** (201g) has 332 calories



07

## Whole Grains

Calories per cup (140g):

- **Teff** (255 Calories) • **Amaranth** (251)
- **Spelt** (246) • **Kamut** (227) • **Quinoa** (222)
- **Brown Rice** (218) • **Millet** (207)
- **Barley** (193) • **Wholewheat Pasta** (174)
- **Buckwheat** (155) • **Soba Noodles** (113)



08

## Milk, Dairy, and Eggs

- **Goat's Cheese** (75 per oz) • **Feta Cheese** (74 per oz)
- **Whole Milk** (149 per cup)
- **Ricotta Cheese** (108 per 1/4 cup)
- **Protein Powder** (45 per tablespoon)
- **1 Boiled Egg** (78)



09

## Oily Fish

Calories per 3oz fillet (85g):

- **Mackerel** (223 Calories) • **Shad** (214)
- **Herring** (213) • **Halibut** (203) • **Salmon** (175)
- **Trout** (162) • **Butterfish** (159)
- **Tuna** (156) • **Tuna canned in oil** (168)
- **3.75oz Can of Sardines** (191)



10

## Meat

Calories per 3oz fillet (85g):

- **Ground Pork** (334 Calories) • **Turkey Bacon** (321)
- **Beef Brisket** (304) • **Lamb Shoulder** (303)
- **Duck Meat and Skin** (286) • **Veal** (241)
- **Chicken Dark Meat** (219)
- **Chicken Drumstick** (173)



# Fiber

## COOKING TIPS

Fiber is not effected by heat and typically concentrated when cooked.

## HEALTH BENEFITS

Ensures digestive track health. Reduces risk of heart disease and cancer.

## DEFICIENCY SYMPTOMS

Constipation, hemorrhoids, high cholesterol, high blood sugar.





## TOXICITY SYMPTOMS

Bowel obstruction, diarrhea, dehydration.

## ABSORPTION FACTORS

**Consume with liquids** — Fiber both absorbs and is absorbed by liquids. Consuming liquids with fiber is recommended.

### Recommended Daily Allowances (RDAs)

					
0–6 months	None	None			
7–12 months	None	None			
1–3 years	19g (76% DV)	19g (76% DV)			
4–8 years	25g (100% DV)	25g (100% DV)			
9–13 years	31g (124% DV)	26g (104% DV)			
14–18 years	38g (152% DV)	26g (104% DV)	14–18 years	28g (112% DV)	29g (116% DV)
19–50 years	38g (152% DV)	25g (100% DV)	19–50 years	28g (112% DV)	29g (116% DV)
51–70 years	30g (120% DV)	21g (84% DV)			
70+ years	30g (120% DV)	21g (84% DV)			

The Percent Daily Value (%DV) differs from the RDA, since it accounts for absorption factors in foods. The RDAs refer to the amount your body needs each day.

## WARNINGS

None.

# The Top 10 Foods Highest in Fiber

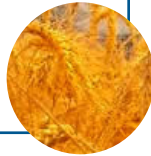
25mg = 100% DV for Fiber

01

## Bran

Fiber per cup crude (~75g):

- **Corn Bran** (240% DV) • **Wheat Bran** (99%)
- **Rice Bran** (99%) • **Oat Bran** (58%)



02

## Cauliflower and Broccoli

- 1 cup (156g) of **Cooked Broccoli** has 20% DV
- 1 cup (124g) of **Cooked Cauliflower** has 12% DV



03

## Cabbage

Fiber per cup shredded and cooked (~150g):

- **Savoy Cabbage** (16% DV) • **Red Cabbage** (16%)
- **Common Cabbage** (12%)
- **Chinese Cabbage** (8%)



04

## Berries

Fiber per Cup (~123g):

- **Elderberries** (41% DV) • **Raspberries** (32%)
- **Blackberries** (30%) • **Gooseberries** (26%)
- **Cranberries** (18%) • **Strawberries** (12%)



05

## Leafy Greens

Fiber per cup shredded (~50g):

- **Turnip Greens** (7% DV) • **Beet Greens** (6%)
- **Cos or Romaine Lettuce** (4%)
- **Spinach** (3%)



06

## Celery

- 1 cup (101g) of **Chopped Celery** has 6% DV
- 1 medium stalk (40g) of **Celery** has 2% DV



07

## Squash

Fiber per cup cooked (~205g):

- **Hubbard** (40% DV) • **Acorn Squash** (36%)
- **Butternut** (26%) • **Pumpkin** (11%)
- **Average Winter Squash** (23%)
- **Average Summer Squash** (10%)



08

## Beans

Fiber per cup cooked (~180g):

- **Navy Beans** (76% DV) • **French Beans** (66%)
- **Pinto Beans** (62%) • **Black Beans** (60%)
- **Chickpeas** (50%) • **Kidney Beans** (45%)



09

## Mushrooms

Fiber per cup cooked (~155g):

- **White Mushrooms** (14% DV)
- **Shiitake** (12%)
- **Portabello** (11%)



10

## Oranges

- 1 cup (180g) of **Orange Segments** provides 17% DV
- A medium **Orange** (131g) provides 12% DV





# Fat

## COOKING TIPS

Heating a fat or oil past its smoke point can make it harmful to your health.

## HEALTH BENEFITS

Nutrient absorption, hormone regulation, and proper neurological function.

## DEFICIENCY SYMPTOMS

Impaired growth, increased risk of chronic disease, usually in low fat-high carb diets

## TOXICITY SYMPTOMS





Weight gain and obesity, cancer, insulin resistance, increased risk of heart disease.

## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholics** — High alcohol intake can hinder the metabolism of fat, resulting in more fat stored in the body.

**People with Long Term Problems Absorbing Fat** — This includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

### Recommended Daily Allowances (RDAs)

					
0-6 months	31g (48% DV)	31g (48% DV)			
7-12 months	30g (46% DV)	30g (46% DV)			
1-3 years	None Set	-			
4-8 years	None Set	-			
9-13 years	None Set	-			
14-18 years	None Set	-	14-18 years	None Set	-
19-50 years	None Set	-	19-50 years	None Set	-

## WARNINGS

Animal sources of fat are **high cholesterol foods** which should be eaten in moderate amounts and avoided by people at risk of heart disease or stroke.

# The Top 10 Foods Highest in Fat

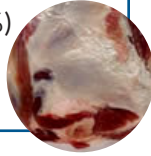
65g = 100% DV for Fat

01

## Animal Fats (Lard)

Fat per tablespoon (~13g):

- **Lard** (20% DV) • **Beef Tallow** (20%)
- **Goose Fat, Duck Fat, Meat Drippings** (20%)
- **Beef Suet** (20%)

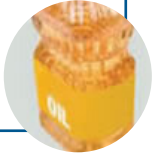


02

## Vegetable Oils

Fat per tablespoon (~14g):

- **Soybean Oil** (22% DV) • **Coconut Oil** (22%)
- **Olive Oil, Palm Oil, Sesame Oil** (22%)
- **Corn Oil, Canola Oil** (22%)
- **Most Vegetable Oils** (22%)



03

## Butter and Margarine

Fat per tablespoon (~14g):

- **Butter** (17% DV) • **Margarine** (17%)
- **Light Butter** (12%)
- **Whipped Butter** (11%)



04

## Nuts

Fat per ounce (28g):

- **Macadamia** (33% DV) • **Pecans** (32%)
- **Pine Nuts** (29%) • **Brazil Nuts** (29%)
- **Walnuts** (28%) • **Hazelnuts** (27%)
- **Almonds** (22%) • **Peanuts** (21%)
- **Cashew Nuts** (20%) • **Pistachios** (19%)



05

## Coconut

Fat per ounce (28g):

- **Dried Coconut** (28% DV)
- **Creamed Dried Coconut** (30%)
- **Toasted Dried Coconut** (20%)
- **Coconut Meat** (15%) • **Coconut Milk** (10%)
- **Coconut Water** (0%)



06

## Seeds

Fat per ounce (28g):

- **Sunflower Seeds** (21% DV) • **Sesame** (21%)
- **Pumpkin Seeds** (21%)
- **Watermelon Seeds** (20%)
- **Flaxseeds** (18%) • **Chia Seeds** (13%)

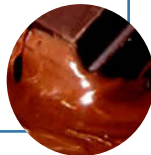


07

## Chocolate

Fat per ounce (28g):

- **Dark Chocolate (70-85% Cocoa)** (18% DV)
- **Baking Chocolate** (23%)
- **Dark Chocolate (60-69% Cocoa)** (17% DV)
- **White Chocolate** (14%)
- **Milk Chocolate** (13%)



08

## Cheese

Fat per ounce (28g):

- **Hard Goat's Cheese** (15% DV) • **Cheddar** (15%)
- **Cream Cheese** (15%) • **Gruyere** (14%)
- **Colby** (14%) • **Cheshire, Roquefort** (13%)
- **Monterey** (13%) • **Edam** (12%)



09

## Oily Fish

Fat per 3oz filet (~85g):

- **Mackerel** (23%) • **Herrings** (23%) • **Salmon** (16%)
- **Sardines Canned in Oil** (15%) • **Trout** (11%)
- **Tuna Canned in Oil** (11%) • **Tuna** (8%)
- **Wild Salmon** (11%) • **Swordfish** (10%)



10

## Avocados

- A cup (150g) of **Avocado** provides 34% DV
- An **Average Avocado** (201g) provides 45% DV
- **Olives** are also high in fat, 10 **Olives** (30g) contain 10% DV of fat.



# Saturated Fat

## COOKING TIPS

Heating a fat or oil past its smoke point can make it harmful to your health.

## HEALTH BENEFITS

Nutrient absorption, hormone regulation, and proper neurological function.

## DEFICIENCY SYMPTOMS

Impaired growth, increased risk of chronic disease, usually in low fat-high carb diets

## TOXICITY SYMPTOMS

While it is controversial, excess saturated fat may increase risk of heart disease.

## ABSORPTION FACTORS AND AT RISK GROUPS

**Alcoholics** — High alcohol intake can hinder the metabolism of fat, resulting in more fat stored in the body.

**People with Long Term Problems Absorbing Fat** — This includes people with: **Celiac Disease** — Gluten Intolerance; **Crohn's Disease** — Inflammatory Bowel Disease; **Pancreatic Disorders** — The pancreas releases enzymes for proper digestion of fats; **Cystic Fibrosis** — Leads to a pancreatic disorder and improper absorption of fats

## Recommended Daily Allowances (RDAs)

There is no recommended daily intake for saturated fat. The American Heart Association recommends you don't eat more than 13g (65% DV) per day. In the UK, upper limits are set at 30g (150% DV) for men, and 20g (100% DV) for women.

## WARNINGS

*Do not substitute saturated fats with trans-fats, or margarine, which can be worse for your heart health.*

# The Top 10 Foods Highest in Saturated Fat

20g = 100% DV for Saturated Fat

01

## Hydrogenated Oils

Saturated Fat per Tablespoon (~14g):

- **Palm Oil** (66% DV)
- **Hydrogenated Soy Oil** (66%)
- **Hydrogenated Coconut Oil** (65%)



02

## Coconut

Saturated Fat per Ounce (28g):

- **Coconut Oil** (121% DV) • **Dried Coconut** (80%)
- **Creamed Coconut** (86%)
- **Toasted Dried Coconut** (58%)
- **Raw Coconut Meat** (41%)
- **Coconut Milk** (30%)



03

## Butter

Saturated Fat per Tablespoon (~14g):

- **Butter** (36%) • **Light Butter** (24%)
- **Whipped Butter** (23%)
- **Cocoa Butter** (42%)



04

## Animal Fats

Saturated Fat per Tablespoon (~13g):

- **Suet** (34% DV) • **Tallow** (32%)
- **Meat Drippings** (29%) • **Shortening** (26%)
- **Lard** (25%) • **Duck Fat** (22%)
- **Goose Fat** (18%)

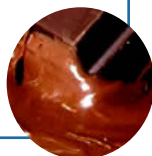


05

## Chocolate

Saturated Fat per ounce (28g):

- **Baking Chocolate** (47% DV)
- **Dark Chocolate (70-85% Cocoa)** (34%)
- **Dark Chocolate (60-69% Cocoa)** (31%)
- **White Chocolate** (28%)
- **Milk Chocolate** (26%)



06

## Fish Oils

Saturated Fat per Tablespoon (~14g):

- **Sardine Oil** (21% DV) • **Menhaden** (21%)
- **Cod Liver Oil** (16%) • **Herring Oil** (15%)
- **Salmon Oil** (14%)



07

## Cheese

Saturated Fat per Ounce (28g):

- **Hard Goat's Cheese** (34% DV) • **Cheddar** (30%)
- **Colby** (28%) • **Cheshire, Roquefort** (27%)
- **Cream Cheese** (27%) • **Blue&Gruyere** (26%)
- **Parmesan** (23%) • **Feta** (21%)



08

## Cream

Saturated Fat per Cup (120g):

- **Heavy Whipping Cream** (153% DV)
- **Light Cream** (144%)
- **Light Whipping Cream** (116%)
- **Aerosol Whipped Cream** (41%)



09

## Nuts and Seeds

Saturated Fat per Ounce (28g):

- **Brazil Nuts** (21% DV) • **Pilanuts** (44%)
- **Macadamia** (17%) • **Cashews** (13%)
- **Mixed Nuts** (13%) • **Pumpkin Seeds** (12%)
- **Sunflower Seeds** (12%) • **Walnuts** (9%)
- **Pecans** (9%) • **Almonds, Flax, Chia** (5%)



10

## Processed Meat

Saturated Fat per Ounce (28g):

- **Pepperoni** (21% DV) • **Bacon** (20%)
- **Pork Sausage** (19%) • **Blood Sausage** (19%)
- **Salami** (17%) • **Frankfurter** (17%)
- **Luncheon Meat** (15%)
- **Bratwurst** (14%) • **Chorizo** (145%)



# Cholesterol

## COOKING TIPS

Rendering fat from meat can reduce cholesterol intake.

## HEALTH BENEFITS

Proper functioning of cell membranes, hormone and bile production.

## DEFICIENCY SYMPTOMS

Deficiency is rare, but may result in inadequate hormone production.

## TOXICITY SYMPTOMS

Increased risk of heart disease.

## ABSORPTION FACTORS AND AT RISK GROUPS

**Absorption** — Despite all necessary cholesterol being manufactured by our own bodies, people typically absorb 40%-60% of all dietary cholesterol.

**Vegans and Vegetarians** — Cholesterol is found exclusively in foods from animals. Vegans and vegetarians are likely to have lower cholesterol levels than others.

## Recommended Daily Allowances (RDAs)

There is no recommended daily intake for Cholesterol.

## WARNINGS

*Genetic factors, exercise, smoking and other lifestyle factors also contribute to blood cholesterol levels, regardless of diet.*



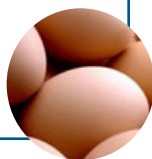
# The Top 10 Foods Highest in Cholesterol

300mg = 100% DV for Cholesterol

01

## Egg Yolks

- 1 large **Egg Yolk** (17g) has 61% DV
- 1 large **Egg** (50g) has 62% DV
- 1 Tablespoon (16g) of **Caviar** has 31% DV

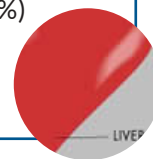


02

## Liver

Cholesterol per ounce (28g):

- **Chicken Liver** (53% DV) • **Lamb Liver** (47%)
- **Beef Liver** (37%) • **Chicken Liver Pâté** (36%)
- **Pork Liver** (34%)
- **Liver Pâté** (24%)



03

## Fish and Fish Oil

Per 3 ounce (85g) for fish, per ounce (28g) for Oil:

- **Salted Cod** (43% DV) • **Oil Canned Sardines** (39%)
- **Perch Oil** (33%) • **Sardine Oil** (33%)
- **Herring** (28%) • **Salmon** (27%)
- **Cod Liver Oil** (27%) • **Salmon Oil** (23%)
- \*Fish Oils are Heart Healthy



04

## Fast Foods

Cholesterol per piece/serving (~60g~150g)

- **Egg and Bacon Biscuit** (118% DV)
- **Fried Chicken** (55%) • **Hamburger** (47%)
- **Milkshake** (13%) • **Fried Fish** (10%)



05

## Animal Fats and Oils

Cholesterol per Tablespoon (14g):

- **Butter** (10% DV) • **Whipped Butter** (7%)
- **Light Butter** (5%) • **Beef Tallow** (5%)
- **Shortening** (4%) • **Goose Fat** (4%)
- **Duck Fat** (4%) • **Lard** (4%)



06

## Shellfish and Shrimp

Cholesterol per 3 ounces (85g):

- **Calamari** (74% DV) • **Shrimp** (60%)
- **Lobster** (41%) • **Crayfish** (39%)
- **Whelks** (37%) • **Oysters** (28%)
- **Octopus** (27%) • **Crab** (27%)
- **Clams** (19%) • **Mussels** (16%)



07

## Processed Meats

Cholesterol per ounce (28g):

- **Beef Sticks** (12% DV) • **Blood Sausage** (11%)
- **Bacon** (10%) • **Salami** (10%) • **Pepperoni** (10%)
- **Pork Sausage** (9%) • **Ham** (9%)
- **Turkey Bacon** (8%) • **Corned Beef** (8%)
- **Frankfurter & Bratwurst** (7%)



08

## Red Meat

Cholesterol per ounce (28g):

- **Lean Veal** (45% DV) • **Lamb** (36%)
- **Rabbit** (35%) • **Beef Pot Roast** (34%)
- **Venison** (32%) • **Pork Loin** (30%)
- **Beef Sirloin Steak** (28%) • **Duck** (26%)



09

## Cheese

Cholesterol per ounce (28g):

- **Port De Salut** (11% DV) • **Fontina** (11%)
- **Gouda** (11%) • **Cream Cheese, Cheddar** (10%)
- **Colby, Brie, Gjetost & Swiss** (9%)
- **Edam, Roquefort, Feta & Monterey** (8%)
- **Mozarella** (7%) • **Parmesan** (6%)



10

## Cakes, Pies, and Cookies

Cholesterol per piece (~60g~120g):

- **Danish Pastries** (54% DV) • **Cream Puffs** (43%)
- **Sponge Cake** (36%) • **Pecan Pie** (35%)
- **Éclairs** (31%) • **Ladyfingers** (8%)
- **Brownies** (6%) • **Butter Cookies** (2%)





*There is no diet  
that will do  
what healthy eating does*

*Thanks for reading*