

Are You Eating Enough Iodine-Rich Foods?



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Iodine is considered one of the body's vital nutrients, responsible for regulating **thyroid** function, supporting a healthy **metabolism**, aiding in growth and development, and preventing certain chronic diseases like cancer. Unfortunately, many adults don't consume enough iodine-rich

foods and are deficient in **iodine**. Therefore, many suffer a range of negative health consequences as a result, known as iodine deficiency disorders (IDD).

Iodine is present throughout the body in just about every organ and tissue, needed by almost every bodily system to keep us alive and energized. For this reason, iodine deficiency poses many risks – an alarming thought considering that some sources suggest around 50 percent or more of the adult population in Western developed nations are iodine-deficient. (1)

One of the most widespread symptoms of iodine deficiency? Thyroid disorders. Thyroid function relies on proper levels of iodine, so too much (or too little) can cause many serious health problems. The thyroid is one of the body's master glands responsible for **balancing hormones**, and thyroid disruption caused partially by a diet low in iodine-rich foods can create such negative reactions as **fatigue**, weight gain or loss, hormone imbalances, mood changes, and much more.

A Lack of Iodine-Rich Foods Can Cause Iodine Deficiency

health concept hand on belly heart shaped fingers

** Note: Slight blurriness, best at smaller sizes Worldwide, around 2 billion people have insufficient iodine intake.

Populations in South Asia and sub-Saharan Africa are particularly affected and at risk for the symptoms related to iodine deficiency. (2) In the U.S. and Europe, iodine deficiency is believed to be on the rise, as are instances of iodine deficiency disorders.



Common signs of an iodine deficiency include:

- Trouble producing saliva and properly digesting food
- Swollen salivary glands and dry mouth
- Skin problems, including dry skin
- Poor concentration and difficulty retaining information
- **Muscle pains** and weakness
- Increased risk for thyroid disease
- Increased risk for fibrosis and **fibromyalgia**
- A higher risk for developmental problems in babies and children

Iodine deficiency and diets low in iodine-rich foods are associated with an increased risk for thyroid disease, but there are also potential thyroid and hormonal risks associated with taking *too much* iodine, especially from supplements that contain iodine in the form of iodide. Although it seems counterintuitive, research suggests that consuming more than the suggested amount per day is even associated with an increased risk for thyroid disorders as opposed to preventing them. (3)

Although too much iodine is a potential risk for thyroid disruptions, it's much less common and considered a relatively small risk compared to the substantial risks of iodine deficiency. Plus, consuming very high levels from iodine-rich foods alone is very unlikely. Due to the high prevalence of iodine deficiencies globally, plus the serious health concerns as a consequence, there is much more emphasis in the health community on adding more iodine into the average person's diet than worrying about removing it.

Why are more people experiencing iodine deficiency?

Several reasons might be to blame: a reduction in the amount of naturally iodine-rich foods in people's diets (wild-caught **fish**, green vegetables and **sea vegetables**, for example), a higher exposure rate to certain chemicals

found in processed foods that reduce iodine absorption (especially the compound called bromine, found in many plastic containers and baked goods, for example), and a depletion in the amount of iodine found in soils.

Bromine, found in lots of industrial-produced packaged food products, is of particular interest to researchers, since it's known to block iodine-rich foods from being useful and absorbable to some degree. Bromine is able to displace iodine and might lead to higher rates of iodine deficiency.

When it comes to soil depletion, research points to the fact that around the world, soils contain varying amounts of iodine, which in turn affects the quantity of iodine within crops. In some areas, iodine-deficient soils are more common, which makes it more likely that people will develop deficiencies.

Efforts to reduce deficiencies, known as "salt iodization programs," help reduce the rate of iodine deficiency in some parts of the impoverished world that experience high rates of ill health effects. But the surest way to prevent deficiencies (and the safest) is to increase your intake of iodine-rich foods.

What Happens When We Eat Plenty of Iodine-Rich Foods?



Iodine enters the body through iodine-rich foods, including certain salts ("iodized salt"), **eggs**, sea vegetables and fish. We rely on iodine to create thyroxine (T4 hormone) and triiodothyronine (T3), two of the main hormones produced by the thyroid that control numerous important functions.

An iodine deficiency can cause an abnormally enlarged **thyroid** gland (called a goiter), which happens in response to the body trying to “trap” as much iodine within the bloodstream as it can. Iodine is also absorbed and stored within tissue in many other organs, including the stomach, brain, spinal fluid, skin and certain glands. (4)

Iodine present in foods and iodized salt contains several chemical forms of iodine, including **sodium** and **potassium** salts, inorganic iodine (I₂), iodate, and iodide. Iodine usually occurs as a salt and is called iodide when it does (not iodine).

Iodide is absorbed in the stomach and enters the bloodstream, circulating to the thyroid gland, where it uses appropriate amounts for thyroid hormone synthesis. The unused iodine that we get from iodine-rich foods is then excreted in the urine. A healthy adult usually has about 15–20 milligrams of iodine present within her body at one time — 70 percent to 80 percent of which is stored in the thyroid.

Recommended Daily Amount of Iodine

Iodine recommendations are given in terms of “dietary reference intakes” (DRIs). DRIs were developed by the Food and Nutrition Board at the Institute of Medicine of the National Academies as a set of values used for planning and assessing nutrient intakes of healthy people. According to the USDA, the recommended amount of iodine depends on your age and gender, and are as follows: (5)

- Birth to 6 months: 110 micrograms
- 7–12 months: 130 micrograms
- 1–8 years: 90 micrograms
- 9–13 years: 120 micrograms
- 14 years and older: 150 micrograms

- Pregnant women: 220 micrograms
- Breastfeeding women: 290 micrograms

How can you best meet these recommended amounts?

Eat more iodine-rich foods, especially the kind that naturally contain this mineral and aren't fortified. Including **sea vegetables** in your diet is one of the best ways, considering their high iodine content along with other important minerals and antioxidants they contain. Various forms of seaweed (such as kelp, nori, kombu and wakame) are some of the best, natural sources of iodine. But like all crops, the exact content depends on the specific food and where it came from.

Other good iodine-rich foods include seafood, **raw/unpasteurized dairy products**, certain whole-grain products and cage-free eggs. It's believed that dairy products and grains are the major contributors of iodine in the average American's diet, although chances are people can afford to consume more raw, unpasteurized dairy and ancient, whole grains rather than conventional dairy and packaged foods.

To some extent, fruits and vegetables also contain iodine. The amount depends a lot on the soil, fertilizer and irrigation practices used to grow the crops. Because high-quality meat and dairy products come from animals raised on grass and given healthy diets, the amount of iodine in animal foods also varies depending on the quality of their diet and where they were free to graze.

Are Iodine Salts and Iodine Supplements Healthy?

According to the USDA, more than 70 countries, including the United States and Canada, have salt iodization programs, and 70 percent of households worldwide use **iodized salt**. The intentions of iodizing salt originally was to

prevent deficiencies, so in the U.S. manufacturers started adding iodine to table salt in the 1920s.

The U.S. Food and Drug Administration approves potassium iodide and cuprous iodide for salt iodization, and the World Health Organization recommends the use of potassium iodate due to its greater stability. On average, about 45 micrograms of iodine can be found in each eighth of a teaspoon of iodized salt in the U.S. By law, food manufacturers almost always use noniodized salt in processed foods and list salt as iodized in the ingredient list on foods that use iodized salt. The reason is to prevent very high intakes of iodine, considering the majority of salt intake in the United States comes from processed foods.

I always recommend consuming real salt, either Himalayan or Celtic **sea salt**, as opposed to iodized table salt. Sea salt contains more than 60 trace minerals and doesn't pose a risk for overconsuming iodine like table salt does. It's also much more natural, beneficial and tastes better.



Many supplements also contain iodine in the forms of potassium iodide or sodium iodide, including many multivitamins. Kelp capsules also contain iodine. These usually aren't necessary when someone consumes enough iodine-rich foods and may even be dangerous if taken in high doses. Taking supplements within the recommended daily amount can be helpful and is considered safe, but it's also best to follow dosages carefully and aim to get nutrients from food whenever possible.

6 Reasons to Eat More Iodine-Rich Foods

1. Supports Thyroid Health

The thyroid must have high enough levels of iodine present in order to make key **hormones**, including thyroxine. Thyroid hormones regulate many important biochemical reactions every day — some of the most significant include the synthesis of amino acids from proteins, digestive enzyme activity, and proper skeletal and central nervous system development.

Healthy, normal thyroid function is primarily regulated by thyroid-stimulating hormones (TSH), also known as thyrotropin. This hormone is secreted by the pituitary gland and works to control thyroid hormone production and secretion throughout the body — it's what allows our bodies to protect us from **hypothyroidism** and **hyperthyroidism** (too much or too little thyroid hormones production). TSH secretion increases uptake of iodine in the thyroid and stimulates the synthesis and release of hormones T3 and T4, so in the absence of iodine, TSH levels remains dangerously elevated. (6)

When thyroid disorders occur because of a diet low in iodine-rich foods, symptoms can range from a sluggish **metabolism**, heart complications, changes in appetite and body temperature, changes in thirst and perspiration, weight fluctuations, and mood changes.

2. Helps Prevent Cancer

Iodine improves immunity and helps induce apoptosis — the self-destruction of dangerous, cancerous cells. While iodine can help destroy mutated **cancer** cells, it doesn't destroy healthy cells in the process. For example, evidence shows the ability of iodine-rich seaweed to inhibit breast tumor development. This is supported by the relatively low rate of breast cancer in parts of the world like Japan, where women consume a diet high in iodine-rich seaweed. (7)

3. Prevents Impaired Growth and Development in Children

Research shows that an iodine deficiency during pregnancy and infancy can disturb healthy growth and brain development. Infants with iodine deficiency are more susceptible to mortality and at a higher risk for neurodegenerative problems like a form of mental disability known as cretinism, low growth rate, motor-function problems and learning disabilities. (8)

Although doctors commonly test women during **pregnancy** for iodine deficiency, it's difficult to get an accurate reading of iodine levels. Thus, many health experts now encourage women to increase their intake of iodine-rich foods and supplement with iodine considering how common deficiencies are.

4. Maintains Healthy Brain Function

Iodine plays a big role in healthy brain development and ongoing cognitive abilities, therefore iodine deficiency is believed to be one of the most common preventable causes of mental disorders in the world. (9)

How to Get Enough **IODINE**

Common signs of an iodine deficiency

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Why more people are becoming iodine-deficient

- A reduction in the amount of naturally iodine-rich foods in people's diets (wild-caught fish, green vegetables and sea vegetables for example)
- A higher exposure rate to certain chemicals found in processed foods that can reduce iodine absorption (especially the compound called bromine, which is found in many plastic containers and baked goods, for example)
- A depletion in the amount of iodine found in soils

Recommended Daily Amount of Iodine

Birth to 6 months	100 mcg
7-12 months	130 mcg
1-8 years	90 mcg
9-13 years	120 mcg
14 years and older	150 mcg
Pregnant women	220 mcg
Breastfeeding women	290 mcg

What iodine-rich foods should I eat to meet these recommended amounts?

1



SEAWEED/ DRIED KELP

19 to 2,984 mcg
1 whole sheet dried

11%-
1,989%
DV

2



COD (WILD- CAUGHT)

99 mcg
3 oz

66%
DV

3



YOGURT

(ORGANIC, GRASS-
FED AND IDEALLY RAW)
75 mcg
1 cup

50%
DV

4



RAW MILK

56 mcg
1 cup

37%
DV

5



EGGS

24 mcg
1 large

16%
DV

6



TUNA

17 mcg
1 can in oil/3 oz

11%
DV

7



LIMA BEANS

16 mcg
1 cup cooked

10%
DV

8



CORN (ORGANIC)

14 mcg
1/2 cup

9%
DV

9



PRUNES

13 mcg
5 prunes

9%
DV

10



CHEESE (RAW)

12 mcg

8%
DV

11



GREEN PEAS

6 mcg

4%
DV

12



BANANAS

3 mcg

2%
DV

 1 ounce 1 cup cooked 1 medium

Dr. Axe
FOOD IS MEDICINE

5. Preserves Skin Health

A common sign of iodine deficiency is dry, rough and irritated skin that becomes flaky and inflamed. Iodine also helps regulate perspiration, so people might experience changes in how much they sweat if their iodine levels become imbalanced.

6. Helps Control Sweating and Body Temperature

Sweating is an important **detoxification** method that the body uses to discard toxins and even excess calories. Iodine deficiency can disturb the natural way we flush waste from the body through our pores and control our body temperature. Similar to an ability to produce enough sweat, a lack of iodine also can cause dry mouth due to an abnormally low production of saliva. This makes it difficult to enjoy eating and can impair digestion to some degree.

The Best Iodine-Rich Foods

Keep in mind that iodine levels vary greatly within a type of food depending on the conditions in which it was grown or produced. For example, because soil depletion is a concern for lowering iodine counts in foods, crops grown in depleted soils have lower levels of iodine than organically grown crops. Similarly, wild-caught seafood and cage-free, organic eggs are more likely to contain a higher level of nutrients than **farm-raised fish** or conventionally produced versions.

Here are 12 of the best iodine foods, with percentages below based on the recommended dietary allowance for the average adult: (10)

- **Seaweed/Dried Kelp** — 1 whole sheet dried: 19 to 2,984 micrograms (amounts vary widely — anywhere from 11 percent to 1,989 percent)
- **Cod (wild-caught)** — 3 ounces: 99 micrograms (66 percent DV)
- **Yogurt** (organic, grass-fed and ideally raw) — 1 cup: 75 micrograms (50 percent DV)
- **Raw Milk** — 1 cup: 56 micrograms (37 percent DV)
- **Eggs** — 1 large: 24 micrograms (16 percent DV)
- **Tuna** — 1 can in oil/3 ounces: 17 micrograms (11 percent DV)
- **Lima beans** — 1 cup cooked: 16 micrograms (10 percent DV)
- **Corn (organic)** — 1/2 cup: 14 micrograms (9 percent DV)
- **Prunes** — 5 prunes: 13 micrograms (9 percent DV)
- **Cheese** (look for **raw, unpasteurized**) — 1 ounce: 12 micrograms (8 percent DV)
- **Green peas** — 1 cup cooked: 6 micrograms (4 percent DV)
- **Bananas** — 1 medium: 3 micrograms (2 percent DV)

Recipes Using Iodine-Rich Foods

Egg Salad Recipe

Eggs are one of the most versatile iodine-rich foods there is. This recipe is good in many ways, on its own or thrown on a sandwich. Try this high-protein and iodine-rich recipe today.

Total Time: 10 minutes

Serves: 2-4

INGREDIENTS:

-
- 5 hard boiled eggs
 - 1/2 cup vegenaïse
 - 1/4 cup celery
 - 1/4 cup sprouted pecans
 - 1/4 cup raisins
 - sea salt and black pepper

DIRECTIONS:

1. Chop eggs, celery and pecans.
2. Combine all ingredients together.
3. Serve chilled.

Savory Baked Fish Recipe

This recipe is delicious, easy to make and healthy. Try it with tuna fish, one of the most loved and popular iodine-rich foods available.

Total Time: 40 minutes

Serves: 6

INGREDIENTS:

- 6 white fish fillets, such as mahi mahi, grouper or snapper
- Sea salt and pepper to taste
- 3 cloves **garlic**, finely minced
- 1/2 cup finely minced onion
- 3 tablespoons **coconut oil**
- 1 teaspoon onion powder
- 1 teaspoon lemon pepper seasoning
- 1/2 teaspoon salt
- 1/2 teaspoon paprika
- 1 (8-ounce) can fire-roasted diced tomatoes
- 4 tablespoons parsley

- 1 tablespoon **apple cider vinegar**
- 3 tablespoons grated raw cheese
- 3 tablespoons almond flour

DIRECTIONS:

1. Preheat oven to 350 degrees F.
2. Sauté the onions and garlic in coconut oil in small skillet over medium low heat until onion is transparent and soft.
3. Purée fire-roasted tomatoes in blender. Add garlic/onion mix to blender with tomatoes and other herbs.
4. Place fish in baking pan that has been coated with coconut oil. Generously brush fish with tomato sauce mixture.
5. In a small bowl, mix flour and cheese together. Sprinkle cheese mixture over fish and bake for approximately 30 minutes.

Yogurt Berry Smoothie Recipe

This recipe is what I recommend you start the day with. In addition to iodine, it's loaded with healthy fats to support hormones and also antioxidants. Kids love this recipe as well.

Total Time: 2 minutes

Serves: 1

INGREDIENTS:

- 6 ounces kefir or goat's milk yogurt
- 1 cup raspberries
- 1/4 teaspoon vanilla extract
- Stevia to taste

DIRECTIONS:

1. Blend all ingredients until smooth.

Potential Interactions and Concerns with Iodine

As mentioned earlier, too much iodine can lead to thyroid disorders because it has the potential for causing goiters on the thyroid just like an iron deficiency does. People who have Hashimotos, thyroiditis or certain cases of **hypothyroidism** should speak with their doctor to discuss how much, if any, iodine should be taken through supplements carefully.

Read Next: 15 Omega-3 Foods Your Body Needs Now

From the sound of it, you might think leaky gut only affects the digestive system, but in reality it can affect more. Because Leaky Gut is so common, and such an enigma, I'm offering a free webinar on all things leaky gut.

[Click here to learn more about the webinar.](#)

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