

## 8 Symptoms That May Indicate Lack of Iodine

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### Can Iodine Boost Your IQ?

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#### STORY AT-A-GLANCE

- Most have likely heard of iodine, but may not realize how crucial it is to your health, particularly brain health, as it improves energy levels, cognition, memory and mood
- Because your body is not able to make iodine on its own, it must come either through your diet or taken as a dietary supplement
- Adequate iodine supplementation helps rid your body of toxins you may be exposed to, such as heavy metals and fluoride, optimizing your thyroid hormones, gene expression and metabolism



- Iodine, as an essential trace element, is a fast-acting nootropic, aka “smart drug” that can help repair damaged neurons, improve brain function and even help prevent brain degeneration later in life

Perhaps the best way to determine how important iodine is to your health is to explain that not having enough — i.e., a deficiency — has been identified as the most common cause of preventable brain damage on the planet. Even more startling is research asserting that iodine deficiency is completely preventable, at least in the Western world.

In fact, even a moderate decrease in your iodine levels can cause a 10- to 15-point loss in your intelligence quotient (IQ), according to one study.<sup>1</sup> Whether or not it's intentional, pregnant mothers nourish their babies' future health with their own food and lifestyle choices. Doing everything possible to ensure a child's overall health once they're born is important, but the brain health of developing babies before they're born is absolutely critical.

It's imperative for pregnant moms to get proper amounts of iodine for their unborn child's brain development, as even small amounts through breast milk helps babies in their first critical months after they're born, even to the point of helping to improve their IQ.<sup>2</sup> In everyone else, upping your iodine intake may boost cognition.

Alarming low levels of iodine are a common problem in developing areas of the world, but it's becoming more prevalent in Western countries as well. In fact, one study revealing this is more than 20 years old,<sup>3</sup> and one-fifth of Europe's population, where iodized salt is rare, is iodine deficient, according to the World Health Organization (WHO).<sup>4</sup>

Spirituality and Health notes that among the health benefits of balanced iodine levels, one of the most important is that it helps protect against toxins, and that goes for adults as well as infants. However, people in the U.S. aren't getting enough. In addition:

*“Prenatal vitamins, for example, don’t necessarily have iodine in them, and while processed foods are certainly high in sodium, they don’t usually contain iodized salt. Home-cooked food with table salt provides more iodine than a processed frozen meal. Sea salt, more popular than ever, isn’t always fortified with iodine, and another past source, bread, is no longer boosted with iodine.”<sup>5</sup>*

## Nootropics: Optimized Brain Health

A substance known as “nootropic,” aka, “smart drug,” means it can help repair damaged neurons and improve brain function. Nootropic can refer to compounds in foods or supplements with the ability to improve your mental abilities, such as your memory, ability to focus, motivation or even mood. Medical Daily further explains:

*“Neuroscientists are acquiring a more nuanced understanding of the brain, the result being many new pharmaceutical drugs which target exact regions of the brain are in the works. The very same knowledge, though, might reveal how particular supplements might do an equally good job of improving brain function over the long haul.”<sup>6</sup>*

Iodine, as an essential trace element, is a fast-acting nootropic that can help prevent brain degeneration later in life. One important aspect is that it combines with the amino acid tyrosine to form thyroid hormones T4 (thyroxine), which has four iodine atoms, and T3 (triiodothyronine), which has three. According to Nootropics Expert:

*“Within your brain, T4 is converted to T3 by selenium which then affects gene expression controlling metabolism within cells, and activates the catecholamines dopamine, norepinephrine and epinephrine. Malfunctioning thyroid function which is often caused by insufficient iodine results in poor cognition, difficulty learning, problems with recall, depression and anxiety.”<sup>7</sup>*

One of the most important aspects of iodine is how critical it is for your brain receptors, called neurotransmitters, in regard to regulation, production and use. As just mentioned, iodine is

required for the production of T4 and T3, and thyroid hormone receptors in your brain help regulate the production and use of all important neurotransmitters. When you don't have enough iodine, symptoms of [hypothyroidism](#) may set in. These include:

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## Iodized Salt: How It's Helped Boost IQ

Consumers in the U.S. have been getting the benefits of iodized table salt in the form of potassium iodide since 1924 to reduce

an uptick in goiters, evidenced by an enlargement of the thyroid gland. The benefits have been substantial in terms of cognitive health, which three economists found when they looked at the IQs of children born just before 1924 and those born just after.

Discover Magazine called it “a natural experiment,” as military records on about 2 million male recruits born between 1921 and 1927 supplied what they needed:

*“Recruits all took a standardized intelligence test as part of their enlistment. Researchers didn’t have access to the test scores themselves, but they had a clever substitute: smarter recruits were assigned to the Air Forces while the less bright ones went to the Ground Forces. This allowed the researchers to infer test scores depending on which branch a recruit was selected for.*

*Intelligence data were paired with birthdate and hometown, since iodine levels in the soil and water vary significantly from place to place. To estimate which regions were naturally high-iodine and which were low, the researchers referred to nationwide statistics collected after World War I on the prevalence of goiter.”<sup>8</sup>*

Interestingly, when the researchers reported their findings in the National Bureau of Economic Research, one rather disturbing statistic was the 10,000 deaths in the decades after 1924 attributed to abrupt iodine supplementation among deficient people, which, they found, can cause thyroid-related deaths.

But the trend turned, and both iodine deficiencies and related symptoms were “vanquished almost overnight.”<sup>9</sup> In addition, the “Flynn Effect,” demonstrated by a 3-point rise in the collective IQ levels of whole populations of developed countries in the 20th century, showed that iodization of salt had been a remarkably healthy idea.

## **What Iodine Supplementation — or Lack Thereof — Could Do**

Where foods aren’t fortified with iodine and supplements aren’t recommended by the National Health Service (NHS), even for pregnant mothers, the effects of iodine deficiency are quite

evident. In fact, one symptom is [cretinism](#), causing severely stunted physical and mental growth and deafness.

The case for supplementing with iodine is strengthened with this bit of information from a “cost effectiveness” study published in the journal *Lancet Diabetes and Endocrinology*,<sup>10</sup> which found that augmenting the levels of iodine for pregnant women would save the NHS around £200 (\$267) per woman in health costs and boost the child’s IQ by 1.22 points.

In fact, the U.K.-based study cites an overall “benefit to society” potential of approximately £4,500 (\$6,008) per child over their lifetime, and also addressed the fact that during pregnancy and lactation, iodine levels need to be increased.

*“Results from previous studies show that the cognitive ability of offspring might be irreversibly damaged as a result of their mother’s mild iodine deficiency during pregnancy. A reduced intelligence quotient (IQ) score has broad economic and societal cost implications because intelligence affects well-being, income and education outcomes.”<sup>11</sup>*

Needless to say, it’s not how the state would benefit but the implications for each individual child, and here’s why: Fifty million people throughout the world have suffered brain damage due to an [iodine deficiency](#), the WHO<sup>12</sup> notes. Science Daily quotes the study authors’ sobering observation: “Iodine deficiency in pregnancy remains the leading cause of preventable retardation worldwide.

Even mild iodine deficiency during pregnancy is associated with children with lower IQs.”<sup>13</sup> Adequate iodine supplementation also helps rid your body of toxins you may be exposed to, such as heavy metals and [fluoride](#).

## How Does Your Body Assimilate Iodine?

Iodine, not to be confused with iodide, is the molecule cells absorb in your body, but it’s not readily available in food and supplements. Iodide, which is more stable, is the form usually found in supplements. In your body, the iodide molecule is converted into iodine, the active form needed by your thyroid gland.



It doesn't take much iodine to keep your body in healthy levels, but a little bit daily is critical for keeping your organs at optimal function. As mentioned, iodine helps synthesize your thyroid hormones, which regulate nearly all your systems. Several thyroid hormones secreted by your thyroid gland even maintain energy production and metabolism.

Another way of saying it is that your whole body counts on your thyroid hormones continuing to produce and optimize the function of your thyroid gland, which is controlled by your pituitary gland. Your pituitary gland, in turn, is controlled by your hypothalamus.

As Healthline explains, your hypothalamus "governs physiologic functions such as temperature regulation, thirst, hunger, sleep, mood, sex drive and the release of other hormones within the body."<sup>14</sup> In essence, this "order of command," so to speak, is necessary for low thyroid hormone levels to be identified so more will be secreted.

That's why iodine for a healthy thyroid is so important for children even before they're born, and continues throughout life. It makes the difference between normal, healthy growth and neurological development.

## **Perchlorate: New Concerns Over An Old Tradition**

A 2014 study suggests fireworks may not be the harmless display we believe they are when we celebrate holidays. In fact, the fallout causes not just air pollution and residues from barium, cobalt, lead and strontium, but a little-known chemical called perchlorate, The Conversation<sup>15</sup> reports.

Perchlorate is a concern because it may have detrimental effects on brain development, according to a study<sup>16</sup> published in the Journal of Clinical Endocrinology & Metabolism, involving 21,000 pregnant women in the U.K and Italy. Not only did all of them test for high levels of perchlorate, but also for low iodine levels. Their babies were subsequently found to have a significantly higher risk of IQ loss.

Then there's [flame retardants](#), which have been linked to

papillary thyroid cancer, the most common type of thyroid cancer, especially among postmenopausal women. The worst flame retardants in terms of being cancer-causing are polybrominated diphenyl ether (PBDE) and organophosphate, which may lead to decreases in TSH (thyroid-stimulating hormone).<sup>17</sup>

## Iodine-Rich Foods and Iodine Supplementation

Many countries, including the U.S., routinely fortify table salt with iodine. If you want to [increase your iodine](#) with food, a few of the most iodine-rich options include raw, organic, pastured cow's milk, sea vegetables such as kelp and [dulce seaweed](#), organic, grass fed yogurt, [pastured, organic eggs](#) and Celtic sea salt. Organic cranberries, strawberries and raw, unpasteurized, [organic cheese](#) also have higher amounts of iodine.<sup>18</sup>

Keep in mind that many doctors tell their patients to lower their salt intake, or even eliminate salt from their diet altogether, as a misguided strategy to lower their risk of high blood pressure and heart disease. In reality, a balanced potassium-to-sodium ratio exerts far more influence, so [don't cut salt](#) until you know the real implications.

WHO now advises adults worldwide to take 150 micrograms (mcg) of iodine per day, with 250 mcg recommended for both pregnant and breastfeeding women.<sup>19</sup> In this fast-moving world with concerns about everything from our nutrient-depleted soil to the chemical additives in our air and water, the quest for health may seem like a challenge sometimes.

However, when research emerges to help you make informed choices about how to proceed in order to optimize your health, as well as that of your children and grandchildren, it's an opportunity to improve on what you already know.



Let's face it: We're surrounded by threats, some of them unseen, that are putting us at risk of ill health. GMOs. Processed foods. EMFs. And that's just the tip of the iceberg. It's at this time that most people seek guidance to help

the tip of the iceberg. It's at this time that most people seek guidance to help guard against these perils and secure their well-being. Oftentimes, it seems like an impossible feat.

But here's a secret: The most complex of tasks can become easier and simpler if you take them one step at a time. If you're truly committed to take control of your health, then my **30-Day Resolution Guide** is exactly what you need. This step-by-step plan outlines the most important strategies for achieving optimal wellness, which include:

- The healthiest foods to eat (and when to eat them)
- The importance of high-quality sleep (and how to get enough)
- An innovative HIIT exercise that boosts your mitochondrial health (it only takes 4 minutes!)

And so much more!



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