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The Top Zinc Benefits to Improve Health & How to Regulate Levels

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You may have heard that zinc benefits include helping people recovering from colds, but this mineral is also needed by those who aren't sick and who don't have compromised immune function. Ideally this essential mineral should be consumed in small amounts every day in order to maintain overall health and perform *hundreds* of important functions.

What are the benefits of taking zinc, as well as consuming foods high in zinc? Zinc benefits the body in many ways – it helps with hormone production, proper growth and repair, improved immunity and promoting normal digestion.

It also has the ability to act as an anti-inflammatory agent, which means that it may have significant therapeutic benefits for several common, chronic diseases like cancer or heart disease, among other zinc benefits. No wonder zinc deficiency can lead to a number of health issues, such as chronic fatigue, digestive issues and hormonal problems.

So ask yourself, are *you* getting enough in your diet to take advantage of zinc benefits for health?

What Is Zinc?

Zinc is a type of metal and an essential trace element. It's "essential" because you must obtain it from your diet, since your body can't make its own.

Behind only iron, it's the second-most-abundant trace mineral in the human body.

How does zinc help your body exactly? It's actually present within all bodily tissues and needed for healthy cell division.

It acts like an antioxidant within the body, fighting free-radical damage and helping slow the aging process.

This mineral also has a major impact on hormonal balance, so for this reason, even a small deficiency can result in an increased risk for infertility or diabetes.

According to researchers at the Department of Dermatology at the University of California:

Zinc plays an essential role in numerous biochemical pathways: organ systems, including the integumentary, gastrointestinal, central nervous system, immune, skeletal, and reproductive systems... Zinc deficiency results in dysfunction of both humoral and cell-mediated immunity and increases the susceptibility to infection.

If you have low intake of zinc, it's possible to experience negative reactions like frequently getting sick, feeling like you're always tired and run down, and dealing with poor concentration, stunted growth and the inability to heal wounds.

Top 12 Zinc Benefits

Below are some of the most important benefits of zinc and reasons to make sure you're getting enough of this mineral:

1. Supports Immune Function and May Help Fight Infections/Colds

As the National Institutes of Health [explains](#), "Severe zinc deficiency depresses immune function, and even mild to moderate degrees of zinc deficiency can impair macrophage and neutrophil functions, natural killer cell activity, and complement activity."

This mineral is an essential component of pathogen-eliminating signal transduction pathways. It helps control inflammation and prevent elevated inflammatory responses, including release of cytokines, as well as damage to tissues.

This mineral plays an intricate function during an immune response because it helps the body return to homeostasis.

It is often taken as a natural over-the-counter remedy for fighting commons colds and symptoms of illnesses. When taken for at least five months, it may reduce your risk of becoming sick with the common cold – plus supplementing once you already feel sick may speed up the healing process.

Research shows that this essential mineral can help with development of immune cells and interfere with the molecular process that causes mucus and bacteria to build within the nasal passages. Ionic zinc, based on its electrical charge, has the ability to exert an antiviral effect by attaching to receptors in nasal epithelial cells and blocking their effects.

One study found that when zinc supplements were administered within 24 hours of onset of cold symptoms, the duration of symptoms was significantly reduced compared to the control group that didn't supplement with it. Fewer patients in the zinc group had cold-related symptoms five and seven days after experiencing the first symptoms compared to those who did not take it.

2. Acts as a Powerful Antioxidant

Zinc has been shown to be an effective anti-inflammatory and antioxidant agent, helping fight oxidative stress and decrease the chance for disease development. Especially in elderly patients, zinc benefits include its ability to support healthy cell division, preventing cancerous cell mutation and stunting tumor growth.

When researchers from the School of Medicine at the University of Michigan studied potential benefits from zinc supplements among 50 adults, they uncovered that levels of oxidative stress markers were significantly lower in the supplemented group than in the placebo group.

Those with lower levels who didn't take zinc supplements had higher levels of inflammatory cytokines, higher plasma oxidative stress markers and endothelial cell adhesion molecules.

After zinc supplementation, the incidence of illness-related side effects and infections was also significantly lower in the supplemented group, another example of the immune-boosting abilities of zinc benefits.

3. Can Help Balance Hormones

Benefits of zinc for hormonal health and fertility are due to this mineral playing an important role in hormone production, including by increasing testosterone naturally, which has very widespread roles in both men and women.

This mineral also impacts female sex hormones and is even involved in the creation and release of eggs within and from the ovaries.

It is needed for the production of estrogen and progesterone in women, which both support reproductive health. You can reduce your risk for experiencing problems with menstruation, mood swings, early menopause, infertility and possibly even certain cancers by avoiding having either too high or too low levels.

4. Helps Fight Diabetes

This essential mineral is needed to balance most hormones, including insulin, the main hormone involved in the regulation of blood sugar, and as a diabetes natural treatment. Zinc benefits blood sugar levels because it binds to insulin, so insulin is adequately stored in the pancreas and released when glucose enters the bloodstream.

It also allows for proper utilization of digestive enzymes that are necessary for insulin to bind to cells so glucose is used as fuel for the body, instead of stored as fat.

5. Helps Maintain Heart Health by Supporting Blood Vessels

Zinc is needed to maintain the health of cells within the cardiovascular system, while also lowering inflammation and oxidative stress. The endothelium, the thin layer of cells that lines the blood vessels, partially

relies on adequate levels of the mineral.

Zinc benefits heart health by supporting healthy circulation, since it helps as a natural remedy for high blood pressure and cholesterol levels from clogged or damaged arteries.

6. Can Help Prevent Diarrhea

Zinc deficiency is related to chronic digestive problems and diarrheal diseases, which has been shown in several studies. Researchers have found that supplementation can be effective in both prophylaxis and as an acute diarrhea remedy.

7. Supports Fertility

Studies show that zinc plays an important role in fertility, especially modulating serum testosterone levels in men. Dietary zinc restriction and deficiency in normal young men are associated with a significant decrease in serum testosterone concentrations, which can negatively impact fertility and lower libido.

What does zinc do for you sexually? It can potentially improve low sex drive by increasing testosterone levels.

In one study by the Department of Internal Medicine at Wayne University, after 20 weeks of zinc restriction, giving patients zinc supplements effectively increased serum testosterone in the majority of men.

This mineral also impacts women's fertility since adequate levels are needed during the growth process of the female's eggs, otherwise eggs cannot properly mature and ovulation suffer.

8. Aids in Nutrient Absorption and Digestion

This essential mineral affects protein synthesis and is required by the body to use amino acids from foods. It's also involved in the breakdown of carbohydrates from foods, which are one of the main sources of energy for

the body.

For this reason, you can reduce your risk of experiencing low energy levels and adrenal or chronic fatigue by avoiding deficiency.

9. Supports Liver Health

Supplementing with this mineral is shown to reduce the incidence of infection and correlated with lower levels of liver damage. Zinc benefits can help support liver health by reducing inflammation in the liver, decreasing free radical damage, helping with nutrient absorption and allowing for proper waste elimination.

10. Helps with Muscle Growth and Repair

This particular mineral plays a crucial role in cell division and cell growth, so zinc benefits muscle repair and growth by making it possible for the body to heal itself and maintain strength in the muscular and skeletal systems.

It also helps with the release of testosterone, growth hormone and insulin-like growth factor-1 (IGF-1), all of which build muscle mass and a healthy metabolism.

Zinc benefits muscle mass because it helps increase the amount of testosterone the body is able to produce following exercise — especially weight training and high intensity interval training — because it enhances the conversion rate of androstenedione to testosterone.

11. Supports Vision and Eye Health

A high intake of zinc may help reduce the risk for advanced stage age-related macular degeneration and vision loss. A systematic review found that supplementation alone may not be sufficient to produce clinically meaningful changes in visual acuity, however it seems to help slow down the rate that macular degeneration progresses.

12. Can Help Decrease Acne and Promote Wound Healing

Some of the zinc stored in your body is actually held within your skin, and it plays a key role in the development, differentiation and growth of various human tissues. According to a 2019 report, “Disturbances in zinc metabolism may give rise to disorders that typically manifest themselves on the skin.”

Because it supports production of collagen, the most abundant protein in the human body that forms connective tissue, this mineral is sometimes used to help people recovering from burns, ulcers, slow healing wounds, and other types of skin damage or injuries. Zinc benefits can also help support the immune system in a way that may limit skin’s susceptibility to infections while healing.

Additionally, this mineral is used to help naturally decrease acne breakouts due to its anti-inflammatory properties. It’s considered by some experts to be “a promising alternative to other acne treatments owing to its low cost, efficacy, and lack of systemic side effects.”

Signs of Deficiency

Zinc deficiency is somewhat common around the world, including in the U.S. A 2019 report estimates that up to 17 percent of the global population is at risk for inadequate zinc intake.

It typically occurs when someone doesn’t eat enough foods that contain the mineral or has trouble absorbing and using it from foods due to digestive disorders or very poor gut health.

Who is most at risk for low intake? Anyone following a plant-based diet that doesn’t include meat or dairy products (like vegans or vegetarians) are usually at the greatest risk since their diets eliminate the top zinc food sources.

People who suffer from sickle cell disease, severe stomach-acid issues, chronic digestive problems like leaky gut syndrome or alcoholism are also more likely to have a zinc deficiency.

Finally, it's believed that women taking birth control pills or who are on hormone replacement therapy drugs may also be at a higher risk, since this can interfere with zinc's hormone-related roles in the body. Pregnant women, lactating women and breastfed infants should also be careful to consume enough of this essential mineral to support normal development.

The most common signs and symptoms associated with zinc deficiency include:

- Changes in appetite, including food cravings for salty or sweet foods
- Changes in ability to taste and smell
- Weight gain or loss
- Hair loss
- Digestive problems, including diarrhea
- Chronic fatigue syndrome
- Infertility
- Hormonal problems, including worsened PMS or menopause symptoms
- Low immunity
- Poor concentration and memory
- Slowed ability to heal wounds, skin infections or irritation
- Nerve dysfunction

Top 12 Foods

The best way to avoid zinc deficiency is by increasing your dietary intake. High-protein foods, such as red meat, poultry, other meats, nuts and beans contain the highest amounts of naturally occurring zinc.

Oysters actually contain the most of any food, however we generally recommend avoiding shellfish for a number of reasons.

Here are the top 12 food sources of zinc (percentages below are based on the average adult women's recommended daily intake of 8 milligrams/day):

1. Lamb – 3 ounces: 2.9 milligrams (35 percent DV)
2. Grass-fed beef – 3 ounces: 2.6 milligrams (32 percent DV)
3. Chickpeas – 1 cup cooked: 2.5 milligrams (31 percent DV)
4. Cashews – $\frac{1}{4}$ cup: 1.9 milligrams (23 percent DV)
5. Pumpkin seeds – $\frac{1}{4}$ cup: 1.6 milligrams (20 percent DV)
6. Yogurt (or Kefir) – 1 container of plain yogurt/6 ounces: 1 milligrams (12.5 percent DV)
7. Chicken – 3 ounces: 1 milligrams (12.5 percent DV)
8. Turkey – 3 ounces: 1 milligrams (12.5 percent DV)
9. Eggs – 1 large: 0.6 milligrams (7 percent DV)
10. Mushrooms – 1 cup: 0.6 milligrams (7 percent DV)
11. Salmon – 3 ounces: 0.5 milligrams (6 percent DV)
12. Cocoa powder – 1 tablespoon: 0.3 milligrams (3 percent DV)

Top 12 Food SOURCES OF ZINC

High-protein foods contain the highest amounts of naturally occurring zinc. Percentages below are based on the average adult women's RDI of 8 mg/day



1 Lamb
2.9 mg | 3 oz.

Grass-fed
Beef **2**



2.6 mg | 3 oz.



3 Chickpeas
2.51 mg | 1 cup cooked



Cashews 4

1.9 mg | 1/4 cup



5 Pumpkin seeds

1.6 mg | 1/4 cup

Yogurt (or Kefir) 6

1 mg | 6 oz.



12.5% DV

12.5% DV



7 Chicken

1 mg | 3 oz.



12.5% DV

Turkey 8

1 mg | 3 oz.



Eggs 9

0.6 mg | 1 large

7%
DV

Mushrooms 10

0.6 mg | 1 cup

7%
DV



Salmon 11

0.5 mg | 3 oz.

6%
DV

Cocoa powder 12

3%
DV



0.3 mg | 1 tablespoon



Dr. Axe

Recipes

You can add more zinc to your diet naturally by including plenty of zinc-rich foods in your meals. Here are three ideas to get you started:

- [Garlic Lamb Roast Recipe](#)
- [Crockpot Beef Stew Recipe](#)
- [Herbed Turkey Breast Recipe](#)

Supplement and Dosage

Sometimes, zinc supplements are used to prevent or treat a deficiency. People who are unable to get enough through their diet, or who can't properly absorb it, may benefit from supplements.

This mineral is usually available in various forms, including oral zinc lozenges, syrups, gels and capsules. It's also found in most [multivitamin](#) and mineral supplements.

These supplements can contain zinc in the form of zinc oxide, gluconate, sulfate or acetate. As of now, all are believed to work in very similar ways so one type is not thought to be superior over the others. Ideally look for "enzyme activated" zinc to support absorption.

Typically, prescribed zinc supplements (like zinc sulfate) are taken by mouth, but sometimes patients receive zinc injections under the care of a health care professional..

Eating foods high in zinc is still the best way to maintain proper levels, so consider supplements a good “insurance plan” or boost if you are unable to consume enough regularly.

When should you take zinc? In order to maximize absorption, it's best to take this supplement at least one or two hours before or after meals. If you find that this contributes to stomach pains, try taking it with meals instead.

Dosage Recommendations:

How much zinc should you take in a day? According to the USDA, the dietary reference intakes for zinc below are based on age and gender:

Infants:

- 0–6 months: 2 milligrams/day
- 7–12 months: 3 milligrams/day

Children:

- 1–3 years: 3 milligrams/day
- 4–8 years: 5 milligrams/day
- 9 –13 years: 8 milligrams/day

Adolescents and adults:

- Males age 14 and over: 11 milligrams/day
- Females age 14 to 18 years: 9 milligrams/day
- Females age 19 and over: 8 milligrams/day
- Pregnant and breastfeeding women: 11 to 12 milligrams/day

Risks and Side Effects

Taking high doses of supplemental zinc for a prolonged period can interfere with the body's absorption of other important minerals, including copper. For this reason, zinc acetate capsules are sometimes used to treat a liver disease that causes the liver to hold on to too much copper, causing damage.

For people without this condition, taking too much zinc has the potential to do the opposite of what's zinc supposed to do — it can depress the immune system and impair blood cell formation.

More commonly, only short-term and minor symptoms occur when taking moderately high doses of zinc. Some people who use zinc nasal sprays and gels also experience changes in the ability to smell or taste foods, which can impact appetite.

Some signs of a zinc overdose include:

- nausea
- indigestion
- diarrhea
- abdominal cramps
- vomiting

Side effects usually occur within three to 10 hours of swallowing the supplements but go away within a short period of time after stopping the supplements.

Another thing to keep in mind is that zinc supplements may interact with several types of medications, including antibiotics, penicillamine (a drug used to treat rheumatoid arthritis) and diuretics. If you use these medications on a regular basis, speak to your healthcare professional before using zinc supplements.

How much zinc is too much?

Is 50 milligrams of zinc too much for the average adult? Most experts consider the tolerable upper limit to be around 40 milligrams per day.

A “high dose” is considered to be between 25 and 45 mg/day, so ~~uust~~ under 50 mg. This means that before taking any more than 40 mg/day you should discuss this with your doctor, especially if you take daily medications.

That said, some studies have found that taking high doses around 80 to 90 mg/day can help safely fight off cold symptoms. Still, consuming over 40 to 60 mg/day may lead to certain zinc overdose side effects, so speak to your health care professional before increasing your dosage.

Final Thoughts on Zinc Benefits

- Zinc is an essential trace element that’s needed in small amounts every day in order to maintain health and perform important body functions.
- Zinc benefits include supporting immune function, regulating hormone production, promoting growth and repair, reducing inflammation, and fighting free-radical damage.
- What are the signs of a zinc deficiency? People with low zinc intake may experience changes in appetite, chronic fatigue, weight gain or loss, hair loss, poor concentration, more frequent colds symptoms, slowed wound healing, and hormonal problems – just to name a few.
- The best way to avoid deficiency is by increasing your dietary intake, such as by eating red meat and other animal meats, fish, cashews, pumpkin seeds and yogurt.
- Zinc supplements are also available for people who aren’t getting enough in their diets or have issues absorbing the essential mineral.