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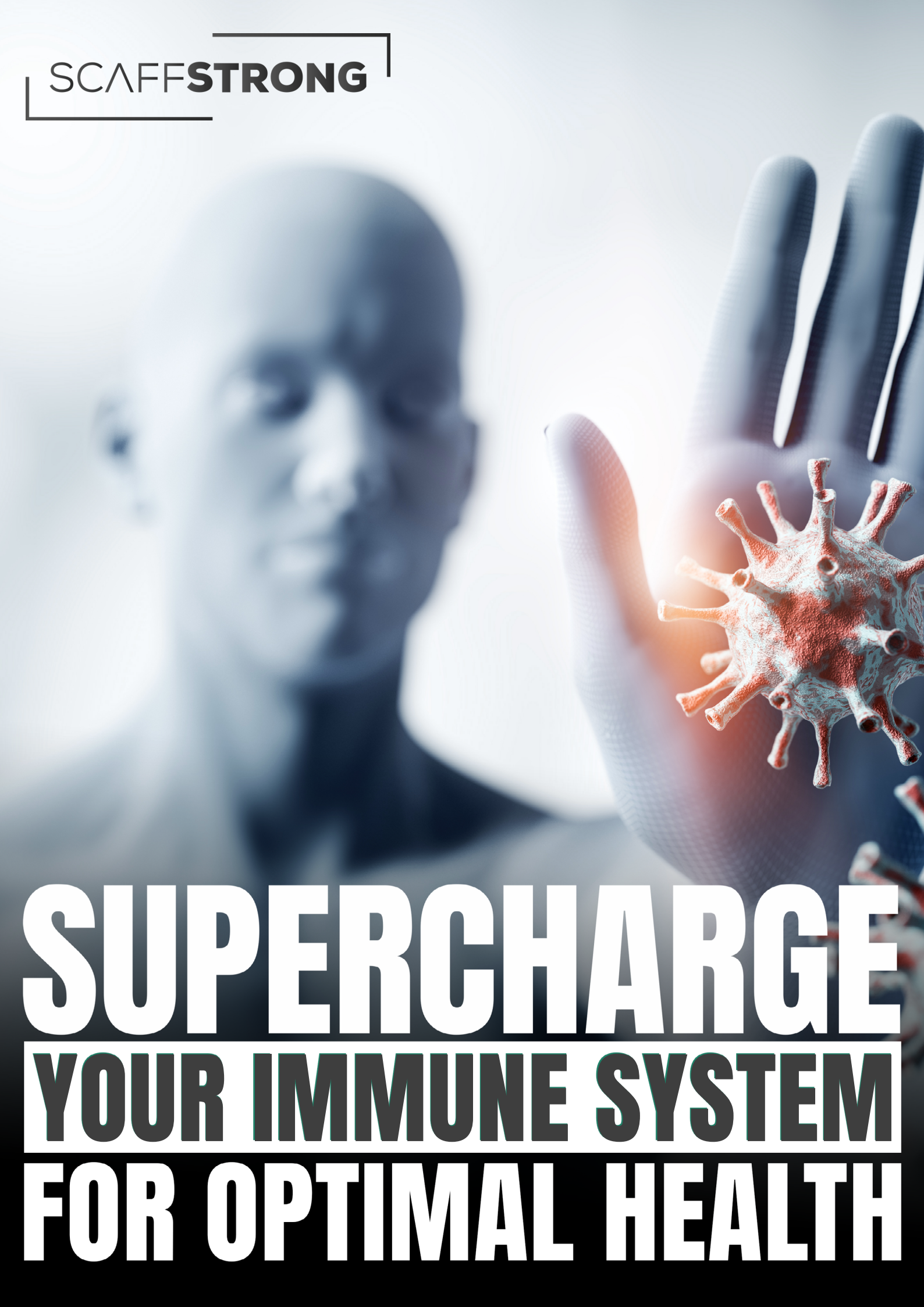


SUPERCHARGE YOUR IMMUNE SYSTEM FOR OPTIMAL HEALTH

Contents Page

The Immune System!

Our immune system is essential for our survival. Without an immune system, our bodies would be open to attack from bacteria, viruses, parasites, and more. It is our immune system that keeps us healthy as we drift through a sea of pathogens.

This vast network of cells and tissues is constantly on the lookout for invaders, and once an enemy is spotted, a complex attack is mounted.

The immune system is spread throughout the body and involves many types of cells, organs, proteins, and tissues. Crucially, it can distinguish our tissue from foreign tissue — self from non-self. Dead and faulty cells are also recognized and cleared away by the immune system.

If the immune system encounters a pathogen, for instance, a bacterium, virus, or parasite, it mounts a so-called immune response.

Innate Immunity System

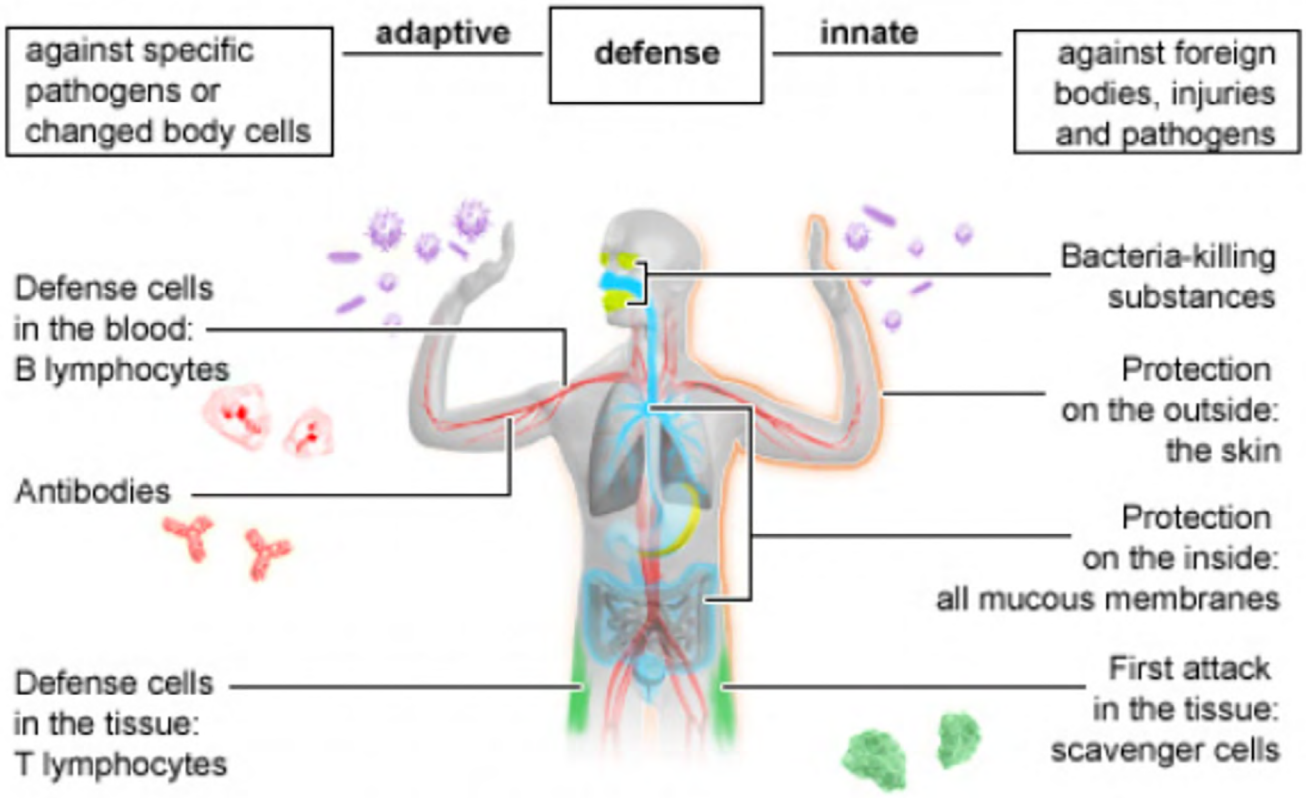
Innate immunity, also known as genetic or natural immunity, is immunity that one is born with. This type of immunity is written in one's genes, offering lifelong protection. The innate immune response is fast acting and non-specific, meaning it does not respond differently based on the specific virus or bacteria that it detects.

The innate immune system encompasses physical barriers and chemical and cellular defences.

→ Physical barriers protect the body from invasion. These include things like the skin and eyelashes.
→ Chemical barriers are defence mechanisms that can destroy harmful agent. Examples include tears, mucous, and stomach acid.
→ Cellular defences of the innate immune response are non-specific. These cellular defences identify pathogens and substances that are potentially dangerous and takes steps to neutralize or destroy them.

Adaptive Immune System

Adaptive immunity is an organism's acquired immunity to a specific pathogen. As such, it's also referred to as acquired immunity. Adaptive immunity is not immediate, nor does it always last throughout an organism's entire lifespan, although it can. The adaptive immune response is marked by clonal expansion of T and B lymphocytes, releasing many antibody copies to neutralize or destroy their target antigen.



How To Support Your Own System!

The immune system is precisely that, a system, not a single entity.

For it to function well, it requires balance and harmony. Researchers are still exploring the effects of diet, exercise, age, psychological stress, and other factors on the immune response.

In general, a healthy lifestyle is the single best step you can take toward naturally keeping your immune system strong and healthy. Every system in your body, including the immune system, functions better when following balanced and healthy strategies such as these:

→ Eating a whole food diet with plenty of fruit and veg
→ Exercising regularly
→ Staying hydrated
→ Maintaining a healthy weight
→ Getting enough sleep
→ Reducing stress
→ Drinking alcohol in moderation
→ Not smoking

Diet & Your Immune System

Like any fighting force, the immune system army marches on its stomach. Healthy immune system warriors need good, regular nourishment. Scientists have long recognized that people who live in poverty and are malnourished are more vulnerable to infectious diseases. Whether the increased rate of disease is caused by malnutrition's effect on the immune system, however, is not certain. There are still relatively few studies of the effects of nutrition on the immune system of humans.

There is some evidence that various micro nutrient deficiencies — for example, deficiencies of zinc, selenium, iron, copper, folic acid, and vitamins A, B6, C, and E — alter immune responses in animals, as measured in the test tube. However, the impact of these immune system changes on the health of animals is less clear, and the effect of similar deficiencies on the human immune response has yet to be assessed.

So, what can you do? If you suspect your diet is not providing you with all your micro nutrient needs — maybe, for instance, you don't like vegetables, try taking a daily multivitamin and mineral supplement may bring other health benefits, beyond any possibly beneficial effects on the immune system.

Taking mega doses of a single vitamin does not. More is not necessarily better.

Stress & Immune Function

Stress is difficult to define. What may appear to be a stressful situation for one person is not for another. When people are exposed to situations they regard as stressful, it is difficult for them to measure how much stress they feel, and difficult for the scientist to know if a person's subjective impression of the amount of stress is accurate.

The scientist can only measure things that may reflect stress, such as the number of times the heart beats each minute, but such measures also may reflect other factors.

Most studies are between the relationship of stress and immune function, however, do not study a sudden, short-lived stress or; rather, they try to study more constant and frequent stressors known as chronic stress, such as that caused by relationships with family, friends, and co-workers, or sustained challenges to perform well at one's work. Some studies are investigating whether ongoing stress takes a toll on the immune system.

Exercise: Good or Bad For Immunity

Regular exercise is one of the pillars of healthy living.

It improves cardiovascular health, lowers blood pressure, helps control body weight, and protects against a variety of diseases. But does it help to boost your immune system naturally and keep it healthy? Just like a healthy diet, exercise can contribute to general good health and therefore to a healthy immune system. It may contribute even more directly by promoting good circulation, which allows the cells and substances of the immune system to move through the body freely and do their job efficiently.

Do You Know Your Vitamins?

Vitamin A

Vitamin A, also known as retinol, has several important functions.

These include:

→ Helping your body's natural defence against illness and infection (the immune system) work properly
→ Helping vision in dim light
→ Keeping skin and the lining of some parts of the body, such as the nose healthy.

Foods that are high in colourful compounds called carotenoids (carrots, sweet potatoes, pumpkin, cantaloupe and squash) are all great options. The body turns these carotenoids into vitamin A, and they have an antioxidant effect to help strengthen the immune system against infection.

You can also get vitamin A by including good sources of beta-carotene in your diet, as the body can convert this into retinol. Yellow, red and green (leafy) vegetables, such as spinach, carrots, sweet potatoes and red peppers. Yellow fruit, such as mango, papaya and apricots

Liver Products such as liver pâté – this is a particularly rich source of vitamin A (if you're pregnant you should avoid eating liver or liver products)

The recommended amount of vitamin A per day you need is:
Adults aged 19 to 64 need is:

→ 700 µg a day for men
→ 600 µg a day for women

Vitamin B

This important vitamin (part of nearly 200 biochemical reactions in your body) is critical in how your immune system functions.

If you're vegan, it can be hard to get enough vitamin B12 in your diet, so it's worth considering a supplement.

The recommended amount of vitamin B per day you need is:
Adults aged 19 to 64 need is:
→ 1.5 micrograms of vitamin B12.

Vitamin C

Vitamins C is a antioxidants that help to destroy free radicals and support the body's natural immune response. It is often supplemented to reduce the symptoms of the common cold.

Supplementing vitamin C can reduce the duration of a cold by 8-14% in any population, when it is taken as a daily preventative measure, or at the beginning of a cold.

The recommended amount of vitamin C per day you need is:
Adults aged 19 to 64 need is:

→ 100-200mg, This is easily attained through the diet, so supplementation of such low doses is usually unnecessary.

→ Higher doses of vitamin C, up to 2,000mg, are used to support the immune system (for athletes) or reduce the duration of the common cold.

Vitamin D

Research shows that vitamin D supplementation may reduce the risk for viral infections, including respiratory tract infections, by reducing the production of pro-inflammatory compounds in the body.

Vitamin D plays an important role in protecting your bones, both by helping your body absorb calcium and by supporting muscles needed to avoid falls. Children need vitamin D to build strong bones, and adults need it to keep their bones strong and healthy. If you don't get enough vitamin D, and you're more likely to break bones as you age.

1 microgram of vitamin D is equal to 40 IU. So 10 micrograms of vitamin D is equal to 400 IU

The recommended amount of vitamin D per day you need is:
→ Adults need 10 micrograms of vitamin D a day

Vitamin D In Food

Vitamin D is found in very few foods. Sources include fatty fish like wild-caught mackerel, salmon, and tuna. Vitamin D is added to milk and other dairy products, orange juice, soy milk, and fortified cereals.

Check the food label to see if vitamin D has been added to a particular product. One eight-ounce serving of milk usually has 25% of the daily value (DV) of vitamin D. The DV is based on a total daily intake of 400 IU of vitamin D. So, a serving of milk with 25% of the DV of vitamin D contains 100 IU.

It is very difficult to get all the vitamin D you need from food alone. Most people must take vitamin D supplements to get enough to support bone health.

Sunlight

Your skin makes vitamin D in reaction to sunlight and stores it in fat for later use. How much vitamin D your skin can produce depends on time of day, season, latitude, skin pigmentation, age, and other factors.

There are many reasons people do not have enough vitamin D. As we age, our skin loses its ability to generate vitamin D. People who live in cities or in institutional settings like nursing homes spend too little time outdoors.

Even people who spend time outdoors often use sunscreen to prevent skin cancer. Sunscreen with an SPF as low as 8 reduces vitamin D production by 95 percent.

Vitamin E

Vitamin E can be a powerful antioxidant that helps your body fight off infection. Almonds, peanuts, hazelnuts and sunflower seeds are all high in vitamin E. So are spinach and broccoli if you prefer to increase your intake through meals rather than snacks.

Maintaining adequate levels of vitamin E in the body can be achieved through very low daily doses of 15mg (22.4 IU) or less.

This dose of vitamin E can be acquired through the diet, making supplementation unnecessary in many cases. An older person supplementing vitamin E to improve immunity should take a 50-200mg dose.

Do You Know Your Minerals

Folate/Folic Acid

Folate is one of the B-vitamins and is needed to make red and white blood cells in the bone marrow, convert carbohydrates into energy, and produce DNA and RNA. Adequate folate intake is extremely important during periods of rapid growth such as pregnancy, infancy, and adolescence. Folate is the natural form, and folic acid is the synthetic form, often added to foods because of its health benefits. To get more folate, add more beans and peas to your plate on a regular basis, as well as leafy green vegetables. You can also get folic acid in fortified foods (check the label) such as enriched breads, pastas, rice and other 100 percent whole-grain products.

The recommended amount of folate you need is:
→ Adults is 400 micrograms (mcg)

Adult women who are planning pregnancy or could become pregnant should be advised to get 400 to 800 mcg of folic acid a day

Zinc

Zinc is a mineral that can help boost white blood cells, which defend against invaders. Because of its role in immune function, zinc is likewise added to some nasal sprays, lozenges and other natural cold treatments.

Your body doesn't naturally produce zinc, you must obtain it through food or supplements.

The recommended amount of zinc per day you need is:

→ Boys And Men Age 14 And Older, 11 Mg
→ Women 19 And Older, 8 Mg
→ Pregnant women 14 to 18, 13 mg
→ Pregnant women 19 and older, 11 mg
→ Lactating women 14 to 18, 14 mg
→ Lactating women 19 and older, 12 mg

Iron

Iron is important in making red blood cells, which carry oxygen around the body. You should be able to get all the iron you need from your daily diet. Women who lose a lot of blood during their monthly period (heavy periods) are at higher risk of iron deficiency anaemia and may need to take iron supplements. Very high doses of iron can be fatal, particularly if taken by children.

The recommended amount of iron you need is:

→ 8.7mg A Day For Men Over 18
→ 14.8mg A Day For Women Aged 19 To 50
→ 8.7mg A Day For Women Over 50

Some common side effects of taking high doses (over 20mg) of iron include:

→ Constipation
→ Feeling Sick
→ Being Sick
→ Stomach Pain

Calcium

Calcium is a mineral that is necessary for life. In addition to building bones and keeping them healthy, calcium enables our blood to clot, our muscles to contract, and our heart to beat. About 99% of the calcium in our bodies is in our bones and teeth.

Every day, we lose calcium through our skin, nails, hair, sweat, urine and feces. Our bodies cannot produce its own calcium.

That's why it's important to get enough calcium from the food we eat. When we don't get the calcium our body needs, it is taken from our bones. This is fine once in a while, but if it happens too often, bones get weak and easier to break.

The recommended amount of Calcium you need is depends on your age and sex.

Women
Age 50 & Younger 1,000 Mg* Daily
Age 51 & Older 1,200 Mg* Daily

Men
Age 70 & Younger 1,000 Mg* Daily
Age 71 & Older 1,200 Mg* Daily

Calcium is important for the following functions:

→ Helping Build Strong Bones And Teeth
→ Regulating Muscle Contractions, Including Your Heartbeat
→ Making Sure Blood Clots Normally

Copper

Copper is an essential trace mineral necessary for survival. It is found in all body tissues and plays a role in making red blood cells and maintaining nerve cells and the immune system.

It also helps the body form collagen and absorb iron, and plays a role in energy production. Most copper in the body is found in the liver, brain, heart, kidneys, and skeletal muscle.

The recommended amount of copper you need is:
→ Adults 900 Micrograms (Mcg)

The upper limit for adults aged 19 years and above is 10,000 mcg, or 10 milligrams (mg) a day. An intake above this level could be toxic.

Phosphorus

Phosphorus is a mineral that helps build strong bones and teeth, and helps release energy from food.

The recommended amount of phosphorus you need is:

→ Adults Need 550mg Of Phosphorus A Day.

You should be able to get all the phosphorus you need from your daily diet.

What happens if I take too much phosphorus?
Taking high doses of phosphorus supplements for a short time can cause diarrhoea or stomach pain.

Taking high doses for a long time can reduce the amount of calcium in the body, which means bones are more likely to fracture.

Potassium

Potassium is a mineral that helps control the balance of fluids in the body, and also helps the heart muscle work properly. You should be able to get all the potassium you need from your daily diet.

The recommended amount of potassium you need is:

→ 3,500mg Adults (19 To 64 Years)

What happens if I take too much potassium?
Taking too much potassium can cause stomach pain, feeling sick and diarrhoea.

Magnesium

Magnesium is a mineral that helps:

→ Turn The Food We Eat Into Energy
→ Make Sure The Parathyroid Glands, Which Produce Hormones Important For Bone Health, Work Normally

The recommended amount of Magnesium you need is:
→ 300mg A Day For Men (19 To 64 Years)
→ 270mg A Day For Women (19 To 64 Years)

What happens if I take too much magnesium?
Taking high doses of magnesium (more than 400mg) for a short time can cause diarrhoea.

Selenium

Selenium helps the immune system work properly, as well as in reproduction. It also helps prevent damage to cells and tissues. Selenium seems to have a powerful effect on the immune system, including the potential to slow the body's over-active responses to certain aggressive forms of cancer. You can find it in garlic, broccoli, sardines, tuna, Brazil nuts and barley, among other foods.

The recommended amount of Selenium you need is:

→ 75µg A Day For Men (19 To 64 Years)
→ 60µg A Day For Women (19 To 64 Years)

You should be able to get all the selenium you need by eating a varied and balanced diet that includes meat, fish or nuts.

What happens if I take too much selenium?
Too much selenium causes selenosis, a condition that, in its mildest form, can lead to loss of hair and nails.

If you take selenium supplements, it's important not to take too much as this could be harmful.

Taking 350µg or less a day of selenium supplements is unlikely to cause any harm.

Sodium Chloride (Salt)

Sodium and chloride are minerals needed by the body in small amounts to help keep the level of fluids in the body balanced. Chloride also helps the body digest food.

You should have no more than 6g of salt (2.4g of sodium) a day.
Salt is found naturally at low levels in all foods, but some salt is added to many processed foods.

Good Sources Of.....

Good Sources Of vitamin A

→ Cheese
→ Eggs
→ Oily Fish
→ Fortified Low-Fat Spreads
→ Milk And Yoghurt
→ Liver And Liver Products

Good Sources Of vitamin B

→ Beef, Liver & Chicken
→ Fish And Shellfish (Trout, Salmon, Tuna Fish & Clams)
→ Fortified Breakfast Cereal
→ Low-Fat Milk, Yogurt & Cheese
→ Eggs

Vitamin B6

→ Pork
→ Poultry
→ Fish
→ Bread
→ Whole Grains
→ Eggs
→ Vegetables
→ Soy Beans
→ Peanuts

Folate (Vitamin B9)

→ Broccoli
→ Brussels Sprouts
→ Green Leafy Vegetables (Such As Cabbage, Spinach, Kale)
→ Peas
→ Chickpeas

Vitamin B12

→ Beef
→ Salmon
→ Sardines
→ Cod
→ Milk
→ Cheese
→ Eggs

Vitamin C

→ Red Bell Peppers
→ Oranges
→ Strawberries
→ Banana
→ Broccoli
→ Lemons

Vitamin D

→ Oily Fish(Salmon, Sardines, Herring & Mackerel)
→ Red Meat
→ Liver
→ Egg Yolks
→ Fortified Foods (Fat Spreads & Breakfast Cereals)

Vitamin E

→ Almonds
→ Spinach
→ Avocado
→ Olives

Zinc

→ Pumpkin Seeds
→ Sesame Seeds
→ Beans
→ Lentils

Iron

→ Liver (But Avoid This During Pregnancy)
→ Red Meat
→ Beans- Red Kidney Beans, Edamame Beans & Chickpeas
→ Nuts
→ Dried Fruit
→ Fortified Breakfast Cereals
→ Soy Bean Flour

Salt

→ Sea Salt
→ Himalayan Pink Salt
→ Meat Products (Bacon, Gammon)
→ Breakfast Cereals
→ Cheese

Calcium

→ Milk, Cheese & Other Dairy Foods
→ Green Leafy Vegetables (Curly Kale, Okra & Spinach)
→ Soya Drinks (Added Calcium)
→ Bread (Made With Fortified Flour)
→ Fish (Where You Eat The Bones I.e. Sardines And Pilchards)

Magnesium

→ Wholemeal Bread
→ Spinach
→ Nuts
→ Banana
→ Beans
→ Dark Chocolate

Phosphorus

→ Red Meat
→ Dairy Foods
→ Fish
→ Poultry
→ Bread
→ Brown Rice
→ Oats

Potassium

→ Bananas
→ Some Vegetables – Broccoli, Parsnips & Brussels Sprouts
→ Beans And Pulses
→ Nuts And Seeds
→ Fish
→ Beef
→ Chicken
→ Turkey

Selenium

→ Brazil Nuts
→ Fish
→ Meat
→ Eggs

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CONTACT

Kieran Doyle

@scaff_strong