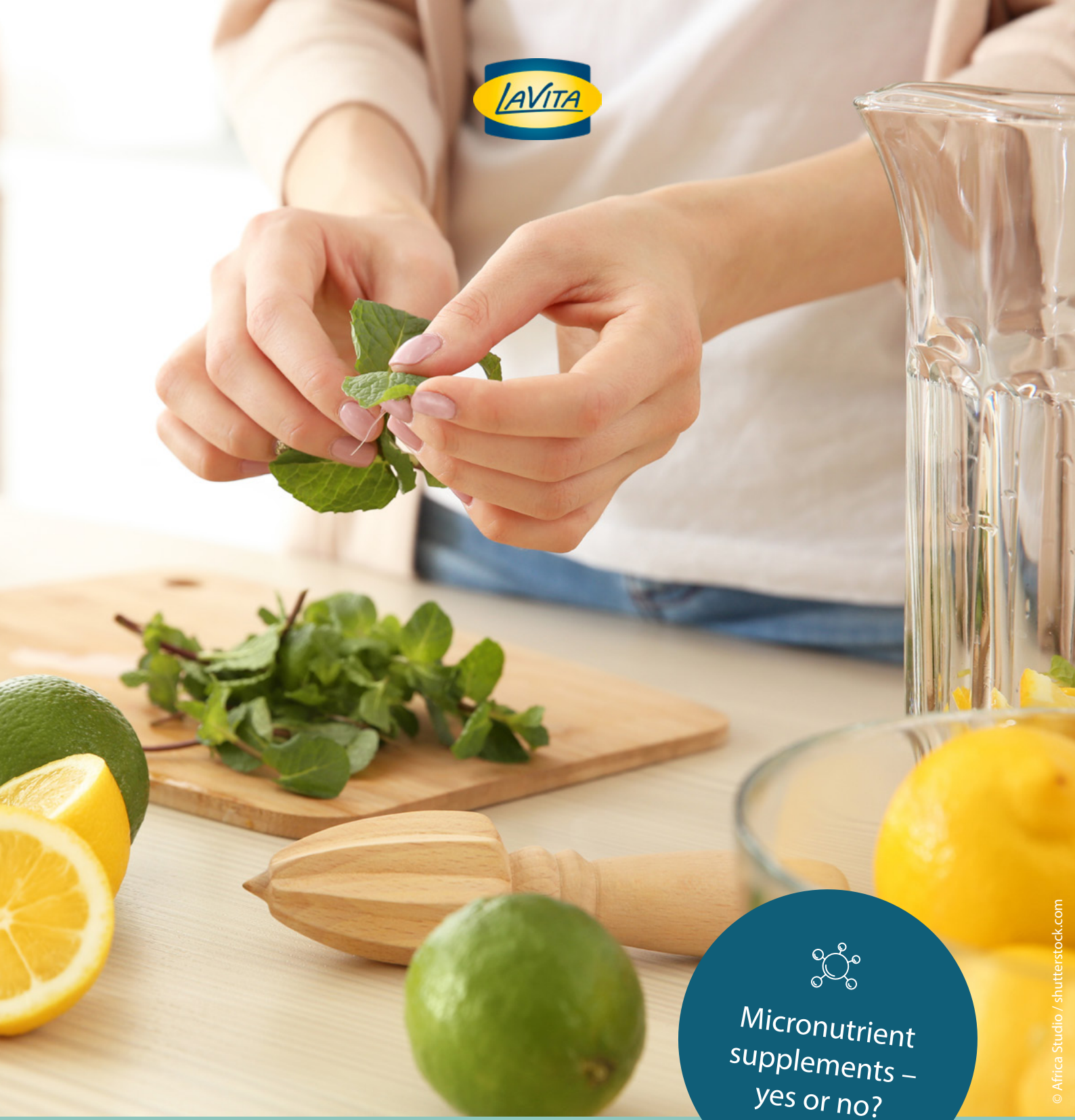


Micronutrient supplements – yes or no?

The Micronutrient Guide

Everything you need to know about micronutrients

Micronutrients are the driving force behind our cells and mediators of all metabolic processes. Even though our bodies only need small amounts of them compared to macronutrients, this does not diminish their importance for the organism. Read on to find out what functions they perform in the body, how much you need, and how you can get the right dosage.

Micronutrients – the little all-rounders
The nutrients we consume in our food can be divided into macronutrients and micronutrients. Unlike macronutrients (proteins, carbohydrates, fats), micronutrients do not provide energy.Nevertheless, they are no less important.

Micronutrients: What are they good for?
Every micronutrient, whether a vitamin or trace element, performs specific tasks in the body and is involved in regulating a wide variety of metabolic processes. The exciting thing is that although each micronutrient fulfills individual functions, all micronutrients work together in the body. This is because the individual metabolic processes overlap and thus determine the existence of all vitamins and minerals.

An overview of the most important functions of vitamins and minerals can be found at the end of the guide (pp. 6–8).

Vitamins

Fat-soluble vitamins:
- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K

Water-soluble vitamins:
- B Vitamins (B1, B2, B3, B5, B6, B7, B9, B12)
- Vitamin C

Minerals

Macrominerals:
- Sodium
- Potassium
- Calcium
- Magnesium
- Chlorine
- Phosphorus
- Sulfur

Trace elements:
- Iron
- Iodine
- Zinc
- Copper
- Manganese
- Selenium
- Fluoride
- Molybdenum
- Chromium
- Cobalt

Daily micronutrient requirements: How many micronutrients do I need?

Daily requirements can vary. The German Nutrition Society (DGE) provides age- and gender-specific recommendations on its website, but each person has individual micronutrient requirements. How many micronutrients you need depends primarily on your lifestyle: How much alcohol and nicotine do I consume? How active am I? Athletes, for example, have higher requirements than non-athletes due to their high muscle mass, increased physical activity, and increased sweat production—and not just for magnesium.

Long-term use of medication in particular can interfere with the absorption, utilization, and storage of vitamins in the body. This is because drugs and micronutrients compete for the same transporters and enzymes in the body, and as a side effect, diuretic drugs also flush out water-soluble vitamins.

The need for certain micronutrients can also increase during certain stages of life: during particularly stressful times, during growth, or during pregnancy and breastfeeding. While the calorie requirements of a pregnant woman increase by only about 10 to 15 percent, the need for many vitamins and trace elements increases by 150 to 200 percent.

Increased demand: When can additional micronutrient intake be beneficial?

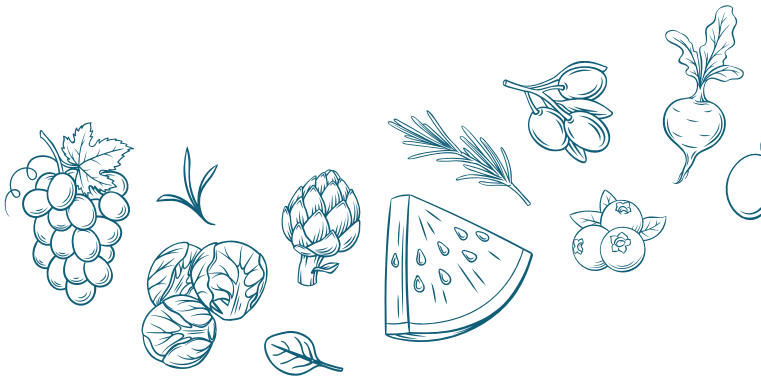
- During physical and mental strain
- During stress
- When taking medications such as painkillers, oral contraceptives ("the pill"), blood pressure tablets, …
- In case of stomach and intestinal disorders
- During pregnancy and breastfeeding
- When consuming alcohol and nicotine
- During intense exercise and muscle building
- In older age (age-related impairments in micronutrient utilization)

Meeting your needs – what can I do?

If you want to ensure you are well supplied, you should place great emphasis on a healthy lifestyle and a wide variety of fresh, plant-based foods. Our bodies can produce only a few micronutrients on their own (e.g., vitamin D during the summer months), so we must obtain them through our diet—and fresh, plant-based foods are far more nutrient-dense than heavily processed foods. Focus on broccoli, kale, blueberries, walnuts, and the like to nourish your body properly.

It is especially important to eat as many different plant-based foods as possible, since each plant contains different nutrients, and only a varied intake of fruits and vegetables can cover all micronutrients. While diet plays a key role, other lifestyle factors also influence micronutrient status. Therefore, stress reduction, maintaining a healthy gut flora, and moderate consumption of indulgences should not be underestimated.

Our body is a marvel, capable of compensating for many challenges. However, every challenge requires a lot of energy, which is then often lacking elsewhere. A well-functioning metabolism is closely linked to adequate micronutrient supply.



Meeting your needs – when should I start taking micronutrient supplements?

But what should I do if I can't always eat healthily and am going through a stressful period? At times like these, it is particularly important to support your body and not put additional strain on it. Micronutrient supplements are a good way to support cognitive function, which is so important at times like these, as well as our energy metabolism, oxygen transport, nervous system, and more. Even if you are pregnant, breastfeeding, or belong to another group of people with increased needs (taking medication, being physically active, consuming alcohol and nicotine), it may be advisable to cover the increased demand with a nutritional supplement.

A dietary supplement is therefore not only useful for correcting an existing deficiency. Ideally, it supports the body on an ongoing basis.

Should I also take supplements in my "normal" everyday life?

Do you already have a relatively healthy lifestyle, don't take any medication, and rarely experience stressful periods? Then you're already doing a lot right! Whether a supplement makes sense depends on your individual nutritional status, your diet, and your well-being.

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Am I well supplied?

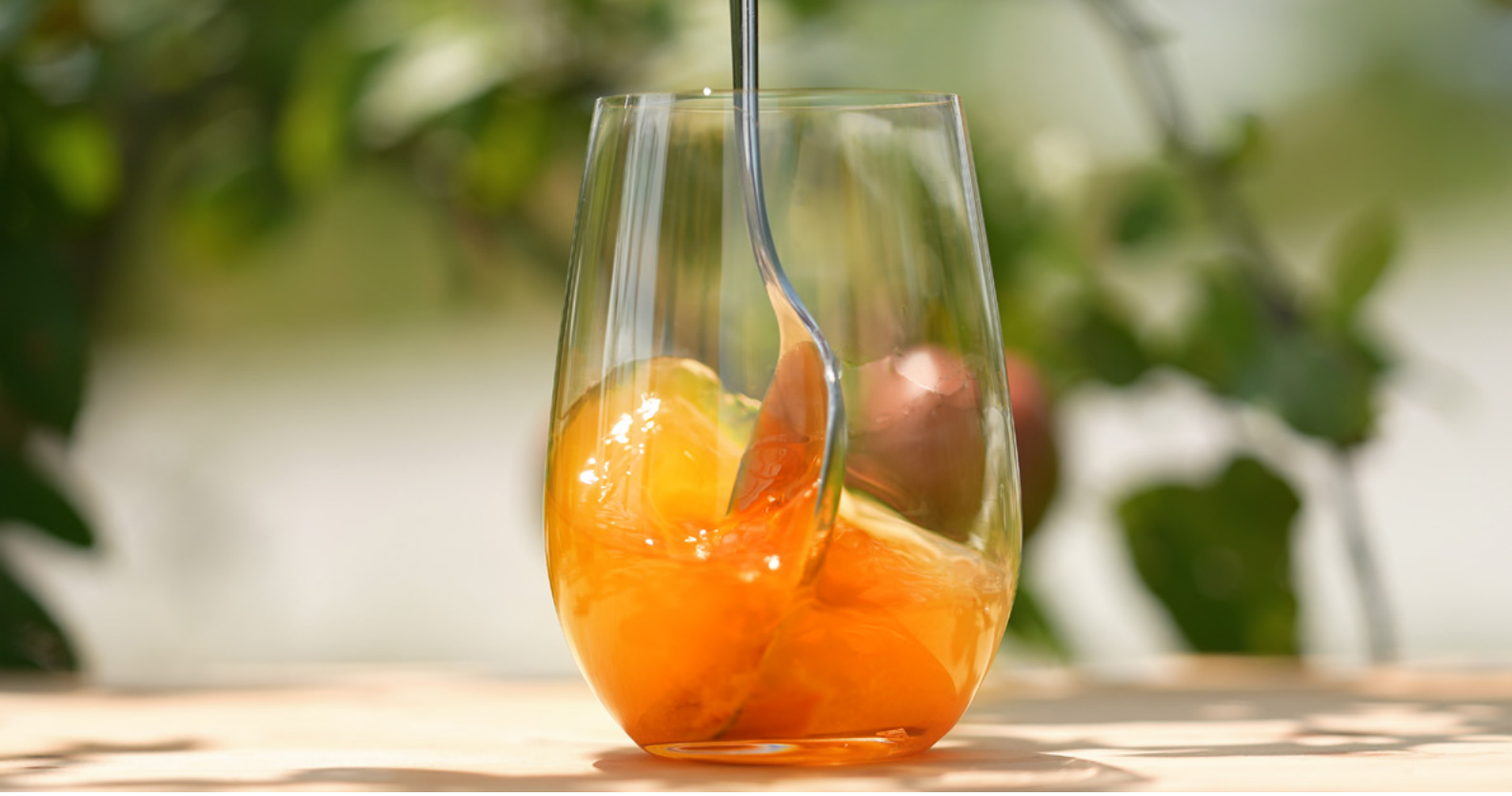
- Do I eat as varied a diet as possible? This means consuming at least 25 different plant-based foods per week (e.g., vegetables, fruits, oats, seeds, nuts) and the 400 g of vegetables per day recommended by the DGE.
- Do I frequently experience digestive issues such as constipation or stomach aches?
- And most importantly: How do you feel in everyday life? Full of energy, motivation, and focus? Or do you often feel tired, sluggish, and occasionally catch colds?

All of this provides information about whether you are getting enough nutrients or not. If one or more of these points apply to you, it certainly makes sense to supplement your diet and then see how your body and well-being change as a result.

After all, getting enough nutrients does not always mean getting the ideal amount! Even here, you can see big differences if you take vitamins and minerals in balanced amounts for a while and your body can access them enough.

Broad basic supply – what it means

Provide your body with all essential vitamins and minerals to create a broad foundation that your body can always rely on. Since most vitamins cannot be stored, it is important to consume them daily.



How should one supplement?
Caution is advised regarding the type of supplementation, as many products on the market are highly dosed and intended for people who want to correct a deficiency in a specific micronutrient. If a doctor has determined that you are lacking a particular micronutrient, you should supplement it according to medical advice. Otherwise, it is generally less advisable to supplement individual vitamins and minerals. After all, the body needs all micronutrients, which work together. Optimizing just one micronutrient often has little impact, since overall supply is what matters. It is therefore better to complement your diet with a natural base of all vitamins and minerals, allowing you to benefit from the synergistic effects of micronutrients.

The secret to effective supplementation? The right combination
In nature, our plants contain not just a single micronutrient, but a whole spectrum of vitamins, trace elements, and secondary plant compounds – and this offers a major advantage. When we consume certain micronutrients together in a meal, as is the case with a bell pepper, for example, the iron it contains becomes more bioavailable to the body thanks to the vitamin C also present. In other words, the body can absorb the iron more effectively. These and many other synergistic effects only occur when we consume different micronutrients together, just as we do with a varied diet.

Conclusion: It's all about the combination
Micronutrient supplementation benefits many of us – and, as so often in life, it is the healthy balance and variety that make the difference. A combination of different plant-based foods on your plate, a healthy, balanced lifestyle, and supplementation with a foundation of essential vitamins and minerals creates the best conditions for optimal nutrient supply – and with it, more energy, performance, and overall health.

A sensible dietary supplement…

…contains all essential vitamins and trace elements the body needs

…optimizes overall micronutrient supply, creating a solid foundation in the body

…is scientifically dosed

…is taken as a daily routine

How exactly do vitamins work?

Micronutrients work together in many ways in the body and complement each other.

Vitamin A (retinol)

- Contributes to the maintenance of normal **vision**
- Contributes to the maintenance of normal **skin** and **mucous membranes**
- Contributes to normal **iron metabolism**

Vitamin B1 (thiamine)

- Contributes to normal **energy metabolism**
- Contributes to normal functioning of the **nervous system**
- Contributes to normal **heart function**

Vitamin B2 (riboflavin)

- Contributes to normal **energy metabolism** and to the **reduction of tiredness and fatigue**
- Contributes to the normal functioning of the **nervous system**
- Contributes to the maintenance of normal **mucous membranes**, normal **skin**, and normal **vision**

Vitamin B3 (niacin)

- Contributes to normal **energy metabolism**
- Contributes to the **reduction of tiredness and fatigue**
- Contributes to normal functioning of the **nervous system**

Vitamin B5 (pantothenic acid)

- Contributes to normal **energy metabolism**
- Contributes to the **reduction of tiredness and exhaustion**
- Contributes to normal **mental performance**

Vitamin B6 (pyridoxine)

- Contributes to normal **energy, protein, and glycogen metabolism**
- Contributes to normal **immune and nervous system function**
- Contributes to the regulation of **hormonal activity**

Vitamin B7 (biotin)

- Contributes to normal **energy metabolism**
- Contributes to normal functioning of the **nervous system**
- Contributes to the maintenance of normal **mucous membranes, skin, and hair**

Vitamin B9 (folic acid)

- Contributes to the **reduction of tiredness and fatigue**
- Contributes to normal **blood formation**
- Folic acid contributes to the **growth of maternal tissue during pregnancy**

Vitamin B12

- Contributes to normal **energy metabolism**
- Contributes to normal functioning of the **nervous system and immune system**
- Contributes to normal **red blood cell formation**

Vitamin C

- Contributes to the **reduction of tiredness and fatigue**
- Contributes to the normal function of the **immune system**
- Contributes to normal **collagen formation** for the normal **function of blood vessels**

Vitamin D

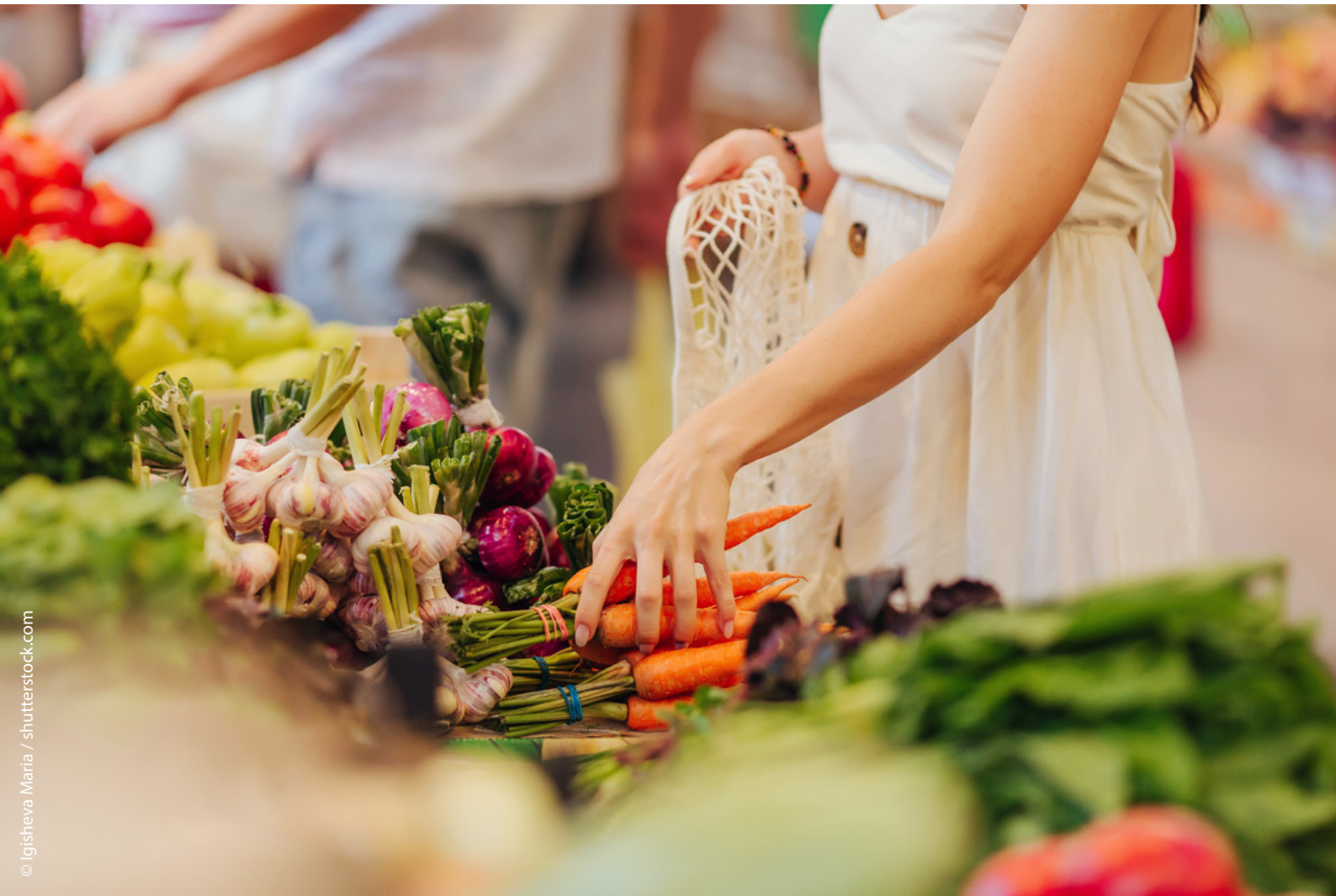
- Contributes to normal **immune system** function
- Contributes to the maintenance of normal **bones**
- Contributes to the maintenance of normal **muscle function**

Vitamin E

- Helps **protect cells from oxidative stress**

Vitamin K

- Contributes to normal **blood clotting**
- Contributes to the maintenance of normal **bones**



How do minerals actually work?

Magnesium

- Contributes to normal **energy metabolism** and to the **reduction of tiredness and fatigue**
- Contributes to the normal functioning of the **nervous system**
- Contributes to the maintenance of normal **bones** and normal **muscle function**

Copper

- Helps protect cells from **oxidative stress**
- Contributes to normal **energy metabolism**
- Contributes to normal functioning of the **nervous system** and **immune system**

Iodine

- Contributes to normal **nervous system** function
- Contributes to normal **cognitive function**
- Contributes to normal **thyroid hormone production** and normal **thyroid function**

Zinc

- Contributes to normal **protein synthesis** and normal **carbohydrate and fatty acid metabolism**
- Contributes to the normal functioning of the **immune system**
- Contributes to the maintenance of normal **bones, skin, hair, nails,** and normal **vision**

Manganese

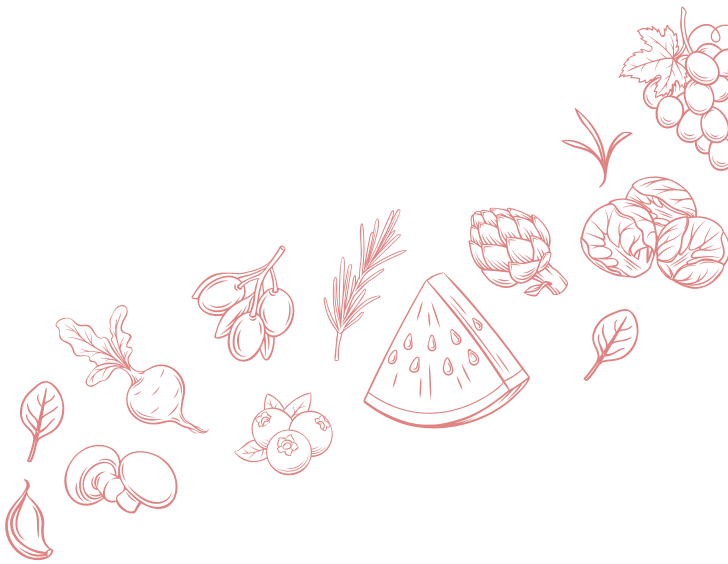
- Helps **protect cells from oxidative stress**
- Contributes to normal **energy metabolism**
- Contributes to the maintenance of normal **bones**

Selenium

- Helps **protect cells from oxidative stress**
- Contributes to normal **immune system** function and **normal thyroid function**
- Contributes to the maintenance of normal **hair and nails**

Iron

- Contributes to the **reduction of tiredness and fatigue**
- Contributes to normal **oxygen transport in the body**
- Contributes to the normal **formation of red blood cells and hemoglobin**



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