

VITAMINS & SUPPLEMENTS



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CHAPTER 1

WHAT YOU NEED TO KNOW ABOUT VITAMINS AND SUPPLEMENTS

If you're planning on taking vitamin and mineral supplements, it helps to do your homework. There are a lot of things to know about supplements before you add them to your daily diet.

Here, we'll take a look at answers to some of the most common questions about vitamin and mineral supplements.

Who Needs Vitamin and Mineral Supplements?

Vitamin and mineral supplements are often considered something everyone should take. However, if you eat a balanced healthy diet and you're generally healthy, you might not need them at all.

Supplements are made to provide additional nutrients to those who need them. Deficiencies can be caused by a range of factors including medical conditions. So, when the body isn't getting enough nutrients, supplements can help. Just remember that they are in no way a replacement for a poor diet.

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Are Supplements Regulated?

You'd think that anything you can take for your health would be well regulated. However, when it comes to supplements, that isn't always the case.

The supplement market isn't regulated like medications. They can be sold without any actual proof of purity, effectiveness or safety. A recent study has shown that over 500 supplements have been found to contain pharmaceuticals of some kind. These included antidepressants, steroids and weight loss medications.

So, if you do plan on buying supplements, make sure you purchase them from a well-known supplier. Check out reviews too as these will give you a good idea of how effective the supplements are.

Can You Take Too Many?

The answer to this is yes; you can actually take too many vitamin and mineral supplements. While most won't cause serious harm, some types can even prove fatal when taken in excess. This is something a lot of people are unaware of. There is a common belief that supplements are natural so it's impossible to overdose on them. However, you need to make sure you are sticking to the daily dietary requirements.

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Are They Safe?

Following on from the last point, supplements are largely safe to take. Provided you do buy them from a reliable supplier, you won't have to worry about any nasty added ingredients. Most people would also find it hard to overdose when following the instructions provided.

However, you still need to be aware of the potential safety risks if you do take them in excess. It is also important to check with your doctor before you take any form of supplements. This is because supplements have been shown to sometimes interact with medications. They can impact how effective the medications are. So, if you were to simply start taking them without consulting with a doctor, they could cause your medication to work incorrectly.

Overall, vitamin and mineral supplements can do wonders for the health. However, it's important not to become too reliant upon them. Instead, it is much better to get the nutrients you need naturally via your diet where possible. You should also do your homework to ensure you know the risks and benefits of each supplement.

CHAPTER 2

INTRODUCTION TO VITAMINS

Vitamins are essential nutrients that the body needs to stay healthy. While they are crucial to the health, the body doesn't actually produce them by itself. Instead, we get most of our vitamins from the foods we eat.

Here, we'll look at some of the different types of vitamins the body needs, where to find them and the benefits they provide.

What Are the Different Types of Vitamins?

Vitamins are split into two main groups – fat-soluble and water-soluble vitamins. They are absorbed slightly differently by the body and provide different benefits.

Fat-soluble vitamins include vitamin A, D, E and K. They dissolve in fat and then travel through the bloodstream. These vitamins are found in foods such as egg yolks, fatty fish, dairy products and liver.

Water-soluble vitamins include vitamins B1, B2, B3, B4, B5, B6, B7, B9 and B12. They also include vitamin C, making them the most common type of vitamins. They dissolve in water and are absorbed easily by the body's tissues.

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What Benefits Do They Provide?

Vitamins provide a huge range of benefits to the body. Each one offers slightly different benefits.

Vitamin D, otherwise known as the sunshine vitamin, has several different functions. Most importantly, it helps to regulate the absorption of phosphorus and calcium. It is also responsible for ensuring the immune system is working correctly. A good level of vitamin D is also required to help the bones and teeth grow strong and healthy.

Vitamin A is known to have a lot of benefits for the body. It can help you to see better at night, supports a healthy immune system, improves the skin and even helps fight off certain cancers.

Vitamin E is a powerful antioxidant. It protects the cells of the body, while enhancing the immune system. Studies have shown that it can help to protect the elderly against illnesses, as well as ease menstrual discomfort. There is also some evidence to suggest that it can improve the skin and encourage new hair growth.

The B-vitamins boast a wide range of benefits including good digestion, increased red blood cells, healthy brain function and improved cardiovascular health.

What Are Vitamin Supplements?

Vitamin supplements are designed to top up your vitamin levels. They are recommended for those who don't get enough vitamins in their daily diet. However, it is important to note here that vitamins should never be used as a replacement for a healthy diet.

There are literally hundreds of different brands of vitamins supplements available. No two supplements are the same and they aren't as well regulated as you might think. Therefore, always make sure you buy your supplements from a well-known, reliable supplier.

As you can see, vitamins are an important part of a healthy diet. While it is always better to get your vitamin content from the foods you eat, sometimes supplements can come in useful. Just make sure you take the time to find good quality supplements and never take more than you actually need.

CHAPTER 3

INTRODUCTION TO MINERALS

Like vitamins, minerals are nutrients which help to keep the body functioning correctly. They too are found in the foods we eat, or they can be taken in supplementary form.

Here, we'll look at the different types of minerals, what they do and why we need them to stay healthy.

Understanding the Different Types of Minerals

There are two main types of minerals; trace and macro minerals. Both are required by the body to maintain general good health.

Trace minerals are also referred to as micro minerals and they are essential for our health. However, we only need them in small quantities. They include iron, copper, chromium, manganese, fluoride, zinc, iodine and selenium. You typically need from 0.2 to 15mg of trace minerals daily.

Macro minerals are required in larger quantities and they include calcium, phosphorus, chlorine, potassium, magnesium, sulfur and sodium.

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Why Do We Need Them?

Our body needs healthy levels of both trace and macro minerals. They help with practically every function of the body. Some of the main benefits minerals provide include:

- They balance fluids in the body
- They aid in nerve transmission
- Healthy bone and teeth development
- They regulate blood pressure
- Assist in wound healing
- Help fight off disease

If you don't get enough minerals within the diet, it can lead to a variety of health issues. So, it is important to ensure you're eating a balanced diet to retain proper levels of nutrients throughout the body.

What Happens If You Are Mineral Deficient?

If the body doesn't get enough minerals each day, it can lead to a deficiency. Calcium deficiencies are particularly common, though you can also suffer with iron, magnesium, potassium and zinc deficiencies.

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A deficiency in any type of mineral can cause a number of health issues. These include:

- Fatigue
- Irregular heartbeat
- Weak bones
- Stomach upset
- Muscle contractions

The severity of the deficiency will determine the symptoms experienced. Some types of deficiencies are more common than others too. For example, calcium and iron deficiencies are much more common than magnesium and copper deficiencies.

To avoid a deficiency, it's important to ensure you're getting enough minerals into the diet.

CHAPTER 4

WHAT TO CONSIDER BEFORE TAKING VITAMINS AND SUPPLEMENTS

It is estimated that more than half of Americans take vitamin and mineral supplements. While vitamins and minerals are crucial for the body, supplements aren't always as healthy as you may think they are.

Like everything in life, there are pros and cons of taking vitamin and mineral supplements. Here, we'll look at some factors that you need to be aware of.

The Pros of Taking Supplements

Vitamin and mineral supplements can deliver a lot of benefits in the right circumstances. For those who are deficient in certain types of vitamins, alongside pregnant women, supplements can prove invaluable at boosting the health.

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There are some types of minerals and vitamins that are more difficult to consume in healthy amounts naturally. Vitamin D is a great example as we get most of it from the sun's rays. If you don't spend a lot of time in the sun (say if you work from home, for example), you might not be getting the proper level of vitamin D that you need. So, taking a supplement would help to top up your levels, preventing you from developing a vitamin deficiency.

Supplements can also potentially help kids get the nutrients they need. A lot of children can be very fussy eaters. This can mean they simply don't get the right level of nutrients they should. So, kids' supplements can help parents ensure their children are getting a healthy dose of vitamins to aid their development.

These are some of the benefits you can experience when taking the right supplements.

What Are the Cons?

It's logical to think that taking vitamin and mineral supplements can only be a good thing. After all, surely the more you have the healthier you will be. Unfortunately, this isn't the case.

If you take too many vitamins and minerals, it can have a negative impact on your health. For example, too much vitamin C can lead to diarrhea and an upset stomach. Too much vitamin B6 on the other hand, can lead to a loss of feeling in the legs and arms. So, you'll want to avoid taking too much of a particular vitamin or mineral.

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There is also some risk when it comes to mixing them. If you take multiple supplements, they can interact with one another, causing a range of problems. Zinc for example, is known to impact how iron and copper are absorbed by the body.

Things to Consider

When you're trying to decide if supplements are right for you, it's a good idea to talk to your doctor. The majority of people who take supplements don't actually need them. You also need to be careful of fake vitamin and mineral supplements, ensuring you only buy from a respected outlet.

Overall, vitamin and mineral supplements can be a great way to keep your levels topped up. However, you need to make sure you actually need the supplements and that you are taking them correctly.

CHAPTER 5

COMMON DEFICIENCIES IN VITAMINS AND MINERALS

With so many different vitamins and minerals required by the body, a balanced diet is key for ensuring you get a healthy supply. However, even with a strict diet, it's still possible to become deficient in certain types of nutrients.

Here, you'll discover some of the most common vitamin and mineral deficiencies you need to be aware of.

Iron

Iron is found in every cell within the body, making it crucial for our health. However, it's also one of the easiest minerals to be deficient in. It is particularly common in women who haven't yet experienced the menopause, alongside pregnant women and young children.

When you have an iron deficiency, it can lead to anemia. This is where there aren't enough healthy red blood cells in the body. As a result, you'll feel constantly tired, have brittle nails and pale skin.

Vitamin D

As we get most of our vitamin D levels from natural sunlight, it's easy to not get enough of a daily dose. Those who work indoors and spend very little time outdoors are most at risk of a deficiency.

It can be difficult to get a decent level of vitamin D from your diet alone, so supplements are often required for those who are deficient in the vitamin.

Iodine

The thyroid hormone is reliant upon iodine during its production. The hormone is crucial for regulating the heartbeat, calorie burn and skin turnover. Like vitamin D, the body isn't able to create its own Iodine supply. Instead, it can only be consumed via foods or supplements.

Those who live in an area where the soil is iodine deficient are most likely to not get enough in their diet. These include river valleys and mountainous areas.

Vitamin C

Despite it being one of the most important vitamins for our health, a vitamin C deficiency is common. Those who smoke, drink excessive levels of alcohol and who are on dialysis for kidney disease are most at risk.

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When you have a vitamin C deficiency, it can cause gum disease, a weak immune system and skin issues.

Calcium

Many of the body's functions are reliant upon calcium. The mineral is also important for the development of healthy, strong bones and teeth. Postmenopausal women are the ones most at risk of a calcium deficiency. This is because they tend to lose bone mass at a fast rate while their calcium absorption capabilities decrease.

If you have a deficiency in calcium, you may experience tingling or numbness, an abnormal heartbeat and convulsions. However, these symptoms usually only present in severe deficiency cases.

These are just some of the most common vitamin and mineral deficiencies you can suffer with. However, if you don't have a healthy balanced diet, you could end up deficient in any type of vitamin or mineral. If you do develop a deficiency, supplements can help. However, it is better to try to get more vitamins and minerals through diet and lifestyle choices alone.

CHAPTER 6

DANGERS OF EXCESS VITAMINS AND SUPPLEMENT INTAKE

Topping up your vitamin and mineral levels may seem like a great idea. However, did you know it's possible to consume too many of them? Like anything you have in excess, too many vitamins and minerals in the body can cause potentially serious complications.

Here, we'll look at some vitamins and minerals that are dangerous to consume in excess.

Iron

People with excessive levels of iron can develop a range of unpleasant symptoms. It can cause blood in your stools, nausea, dizziness and diarrhea. In severe cases it can even lead to fluid build-up in the lungs, which can prove deadly if not treated quickly enough.

The amount of iron you need will depend upon your sex and age. Men over the age of 18 need 8.7mg iron each day. Women aged 19-50 need 14.8mg per day, while women over 50 need 8.7mg, the same as men.

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Vitamin A

Vitamin A delivers a lot of benefits to the body. It can boost the immune system, improve the skin and lower the risk of cancers. However, when taken in excess it can cause a range of problems.

Just some of the effects of overdosing on vitamin A include liver damage, hair loss, bone pain, extreme headaches, dry skin and blurred vision. Men need approximately 900mcg each day, while women need 700mcg daily.

Vitamins B3 and B6

The B-vitamins are crucial for your health, but in excess they can cause serious complications. An overdose of vitamin B3 for example, can lead to nausea, increased liver enzymes and jaundice. An excess of vitamin B6 can lead to nerve damage.

So, you're going to want to focus on ensuring you stay within the limits with B-vitamins. Again, the amount you need will depend upon your sex. There are a lot of different B-vitamins so it's important to familiarize yourself with the daily recommendations of each.

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Vitamin D

While vitamin D can be one of the most useful supplements given you can't get it from diet alone, it is possible to take too much. Most people need just 10 micrograms a day. Experts warn not to take more than 100 micrograms a day, which is equivalent to 4,000 IU.

An overdose of vitamin D can lead to constipation, muscle weakness, confusion and an abnormal heart rhythm.

Vitamin E

Largely used to keep the skin and eyes healthy, vitamin E is a crucial nutrient for the body. It also helps to strengthen the immune system. In abnormal levels, however, it can impact the body's ability to clot the blood. This makes it especially dangerous for those taking blood-thinning medications.

The amount of vitamin E you need will depend upon your age and sex. Ask your doctor if you aren't sure how much you should be getting.

These are just some of the vitamins and minerals that are most dangerous when taken in excess. While it is rare to overdose on these nutrients, it is still worth being aware of what can happen if you do.

CHAPTER 7

DEBUNKING THE MYTHS ABOUT SUPPLEMENTS

When you're researching into the different vitamin and mineral supplements, it won't take long to come across a few common myths. Finding reliable information can be tricky, which can make it dangerous if you follow the wrong advice.

To ensure you don't fall victim to incorrect advice, here we'll look at some of the most common myths about vitamin and mineral supplements.

Everyone Needs to Take a Daily Multivitamin

There is a myth circulating that everyone needs to take a multivitamin to stay healthy. This isn't true at all. In fact, some experts suggest taking multivitamins when you are fit and healthy can be more harmful.

The truth is, if you take too many vitamins and minerals, it can have a negative impact on your health. So, you should only take one if you aren't getting enough nutrients from a balanced diet.

Supplements Are Safe because They Are Natural

Perhaps the most dangerous myth surrounding supplements is that they are fully safe because they are natural. While it's true that when taken correctly, vitamin and mineral supplements can enhance your health, if you take them incorrectly, they can cause a range of health issues.

There is also the fact that not all supplements are made equal. As the industry isn't well regulated, you could be buying something where you have no idea what ingredients are in it. This can obviously be dangerous to your health as you don't know what you are taking. So, you need to be very careful about where you buy the supplements.

They Can Make Up for a Poor Diet

A lot of people use vitamin and mineral supplements to account for a poor diet. However, what you might not realize is that supplements aren't as good as the real thing.

You'll experience many more benefits from consuming vitamins and minerals in their natural form. Supplements are merely designed to help those who aren't getting enough nutrients through their diet alone for a number of reasons. It could be down to medical issues, or they may not be able to eat certain food groups.

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You should never use supplements in place of a balanced healthy diet.

They Will Give You More Energy

Constant fatigue can be difficult to live with. It can also point to a condition known as anemia, often caused by a deficiency in iron. So, for those who struggle with tiredness, it's common to assume iron supplements will help.

However, supplements will only help if the cause of your fatigue is deficiency related. Taking supplements won't automatically give you more energy. So, it's a good idea to get a diagnosis from your doctor before attempting to treat your fatigue with supplements.

These are some of the most common myths associated with vitamin and mineral supplements. They can offer a lot of great benefits, but they do need to be taken correctly. Always seek medical advice before adding any supplement to your diet. You should also make sure you are buying them from a reliable seller.

CHAPTER 8

WHEN MEDICAL CONDITIONS IMPOSE SUPPLEMENTS INTAKE

While vitamin and mineral supplements are often taken to generally improve the health, there are times when they are medically needed. Certain medical conditions can affect the way that vitamins and minerals are absorbed in the body. This can lead to a deficiency without adequate supplementation.

Here, we'll look at some of the medical conditions that may require supplements. Just remember that before trying any supplement to aid a medical condition, it is important to seek advice from your doctor.

Iron Deficiency Anemia

One of the most common vitamin and mineral deficiencies is iron. This condition leads to anemia, causing you to feel constantly fatigued. Those who are suffering from iron deficiency anemia are often prescribed with iron supplements.

Supplements help to replenish the red blood cells in the body. However, you'll typically need prescribed iron tablets which are stronger than the supplements sold in stores.

Skin Conditions

If you suffer with various skin conditions, supplements can also prove useful. Dry skin for example, could be down to a lack of omega 3s in the diet. Omega 3 supplements are great for the skin, helping to keep it looking healthy and youthful.

Vitamin B5 can also work wonders for skin complaints. Your doctor will be able to assess your condition to see whether supplements would prove effective, or whether medication is the best course of treatment.

Neurological Problems

While traditional medication is mostly used to treat those with neurological conditions, supplements can also be prescribed. For example, there is some evidence to support that those living with MS could benefit from vitamin D supplements.

For those living with Parkinson's disease, vitamins B6 and B12 have shown to help with symptoms, while vitamin B2 and magnesium can help those who suffer with migraines.

Blood Clotting Issues

Blood clots can prove fatal if they aren't treated. For patients who experience blood clotting issues, vitamin E has been shown to help. Studies have revealed that the vitamin can lower the risk of blood clot development. While it isn't largely prescribed to help with these conditions, you can still take after upon seeking advice from your doctor.

Vitamin D Deficiency

One of the most common vitamin deficiencies people suffer with is that of vitamin D. When left untreated, this can lead to serious health issues such as rickets and osteoporosis. When the bones are starting to be affected by a deficiency, your doctor may prescribe vitamin D supplements.

If you are worried about your health, taking supplements can help to reduce symptoms. If taken early enough, they can also help to potentially prevent health problems from occurring.

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As you can see, supplements aren't just an additional boost for the health. Sometimes they can be used to treat a variety of illnesses and diseases. The above are just some of the medical conditions that may require supplements.

Just remember that it is important to seek advice from your doctor before taking any form of supplements. While they can help, they can also impact certain medications you are taking.

CHAPTER 9

SUPPLEMENTS FOR VEGANS

Going vegan can be a great health choice. However, it can also make it difficult to get the right level of nutrients. Our bodies are designed to take in vitamins and minerals from a wide variety of food sources. So, when you cut any of these food sources out, it's going to leave a nutritional gap.

Here, you'll discover some of the main supplements you may need if you are following a vegan diet.

Vitamin B12

Arguably the most important vitamin supplement vegans should take is vitamin B12. Studies have shown that vegans and vegetarians have the biggest risk of a vitamin B12 deficiency. This can lead to anemia, infertility and nervous system damage.

In order to top up their levels, vegans are advised to consume foods with added B12. Supplements can also work well; just be sure to pay attention to the strength before trying them.

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Omega 3s

Another thing that vegans are often lacking in is omega 3s. These essential fatty acids are required by the body to keep the brain and eyes healthy. They are largely found in foods such as oily fish, which is why vegans often don't get enough.

You can try to boost your intake naturally by consuming flax seeds, soybeans and walnuts. However, supplements are usually required to keep levels adequate.

Vitamin D

While vitamin D deficiencies are largely caused by a lack of natural sunlight exposure, it can be related to diet too. Some foods do provide vitamin D in small quantities. However, as vegans generally have a relatively restricted diet, getting any form of vitamin D from food is a lot harder than it is for those who eat animal products.

Taking a vitamin D supplement can therefore ensure you don't develop a deficiency.

Iron

Iron deficiency is quite common, and it occurs more frequently in vegans due to the restricted diet. This is because there are two types of iron that the body needs: heme iron and non-heme iron.

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Heme iron is only found in animal products, whereas non-heme is found in plants. So, vegans will only get one source of iron, leaving them deficient in heme iron. The type of iron they do get from plants is also harder for the body to absorb. So, as a vegan you do need to consume more non-heme iron foods to make up for the deficiency. Supplements can prove invaluable at keeping iron levels topped up.

Calcium

Finally, many vegans would benefit from taking calcium supplements. As most sources of calcium come from animal products, it's easy to not get enough in a vegan diet. If you aren't getting enough, a calcium supplement is important. It helps to protect the teeth and bones, making it crucial for our overall health.

Although vegans aren't guaranteed to suffer with vitamin and mineral deficiencies, they are at a greater risk. The above are some of the main vitamin and mineral supplements vegans may need to take to keep their levels topped up.

CHAPTER 10

6 SUPER FOODS CONTAINING NATURAL SUPPLEMENTS

Supplements are a great way to boost the health when you are deficient in vitamins and minerals. However, they should never be used as a replacement for a healthy diet.

The vitamins and minerals found in food are in their natural form. Supplements on the other hand don't tend to contain the same level of nutritious benefits as the real thing. So, it's much better to get your daily dose through your diet where possible.

Here, you'll discover the best foods to eat to avoid needing supplements.

Sweet Potatoes

Sweet potatoes are an excellent source of vitamin A. They contain a lot of beta-carotene which converts to vitamin A once it is in the body. They are considered one of the healthiest types of vegetables you can eat, with even the skin being packed full of nutrients.

Adding sweet potatoes to your diet will help to boost your immune system, promote good gut health and enhance brain function.

Dairy

If you want to avoid calcium deficiencies, it's important to eat a lot of dairy. Think milk, cheese and yoghurt. These days, a lot of adults are calcium deficient because they avoid consuming higher-fat dairy products.

Provided you consume dairy products daily, you should get the right amount of calcium that the body needs.

Bananas

Bananas are a healthy snack choice and they come packed full of vitamin B6. Just a couple of medium bananas contain 44% of the daily recommended dose of this vitamin. They are also an excellent source of fiber and potassium.

Other foods that are great for vitamin B6 include turkey and pistachio nuts.

Oranges

When it comes to getting enough vitamin C, oranges are the go-to fruit. Did you know just one large orange contains all of your daily vitamin C? Not only that, but they also contain good levels of vitamin B1, potassium and folate.

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You'll find oranges can be a great weight-loss tool too. In a medium orange, there are around 62 calories. They also contain a lot of water and fiber, helping to keep you feeling fuller for longer.

Portobello Mushrooms

It can be really hard to get enough vitamin D into the body if you don't spend a lot of time outdoors. As you know, most of our vitamin D levels come from the sun's rays. However, there are a few foods that contain a good amount of vitamin D.

Portobello mushrooms are grown using additional lighting. According to some sources, this can boost their vitamin D content by as much as 3000%. So, if you want to keep those levels topped up, add portobello mushrooms to your diet.

Sunflower Seeds

Finally, sunflower seeds are an excellent source of vitamin E. Just a small handful contains half of your daily recommended requirements. They also contain selenium and magnesium, known to help reduce inflammation within the body.

So, there you have it – some of the best foods you can eat to avoid needing supplements. The key is to make sure you're following a balanced diet, packed full of fruits and vegetables.