



Vital Vitamins Challenge

CHALLENGE DESCRIPTION:

In a world full of multivitamins, it can be easy to forget that the best fuel you can give your body doesn't always come in pill-form. For most people, the best (and most delicious) way to get the vitamins our bodies need, is through food. For this challenge, you will focus on a different vitamin every day, learning more about what it does and which foods to eat to ensure your body is getting the right amount. You will also learn about what happens when you don't get enough of a certain vitamin and the impact it can have on your health. Time to fuel up and take your vitamins!

WHAT IS A VITAMIN?

So, what is a vitamin anyway? Vitamins are tiny substances needed for our body to function properly and protect us from a variety of diseases. There are 13 different types of vitamins, each with a unique job to do when it comes to keeping our bodies healthy.

Some people will have difficulty getting the vitamins they need due to diet or specific medical conditions. This is why multivitamins and supplements are a great option to compliment a balanced diet, in case food alone isn't cutting it. At first glance, you may feel that monitoring your daily vitamin intake is no simple task – just looking at the nutritional label on the side of a cereal box can send you running for a calculator! Each vitamin laid out with the percentage of your daily requirements contained in one bowl of cornflakes – it's no wonder people don't know where to start.

If you are managing a vitamin deficiency or health condition, ask your doctor or pharmacist for advice on how to navigate your dosage. Otherwise, forget the numbers! Research has shown that a balanced diet will fuel your body with all the vitamins it needs to maintain healthy functioning.

THE CHALLENGE

For the next 12 days, you will spend each day learning about one type of vitamin and its impact on your health. This is a good opportunity to evaluate whether or not you're eating a well-rounded diet that incorporates food that contain all of these necessary vitamins. If there is anything you feel you are missing from your diet or if you are known to be vitamin deficient in a certain area, then use this opportunity to find out what types of food or supplements you should be looking to include in your daily routine.

VITAL VITAMINS

Day 1: Vitamin A

Vitamin A supports your overall health by:

- Helping your immune system function effectively
- Keeping your skin healthy
- Supporting cell reproduction and growth
- Helping with vision

What foods contain Vitamin A?

Vitamin A can be found in both animal and plant foods. Plant-based Vitamin A tends to have orange/yellow pigment known as beta-carotene. Try something from the list below to get your daily dose of Vitamin A!

Plant sources include:

- Carrots
- Red pepper
- Mangoes
- Sweet Potato
- Apricots
- Pumpkin
- Cantaloupe
- Spinach
- Peas
- Broccoli

Animal Sources include:

- Liver
- Eggs
- Some fortified milk and milk products (with added Vitamin A)

How are you going to incorporate Vitamin A into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin A?

Vitamin A, plays a crucial role in maintaining healthy bodily functioning. When you don't get enough Vitamin A, there can be several serious health effects, such as:

- Increased risk of infections
- Night blindness or irreversible blindness
- Excessive keratin build-up of skin

It's also important to note that Vitamin A is a 'fat-soluble' vitamin, meaning it is stored in the body and not as easily excreted when you go to the bathroom. It is nearly impossible to get too much Vitamin A through food, but, if you are considering Vitamin A supplements, it's important to speak with your doctor to get the right dose for your body. Too much Vitamin A can lead to blurry vision, bone pain and liver damage.

The power of Vitamin A

Vitamin A derivatives, called retinoids, are a powerful ingredients used in skincare products to increase skin cell turnover and boost collagen production to support healthy skin and treat acne. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 2: Vitamin B1 (Thiamin)

Vitamin B1 supports your overall health by:

- Supporting your metabolism by converting carbohydrates found in food into fuel your body needs to function
- Supporting healthy nervous system and brain function
- Supporting healthy liver function
- Keeping your skin and hair healthy

What foods contain Vitamin B1?

Vitamin B1 can be found in both animal and plant foods. Try something from the list below to get your daily dose of Vitamin B1!

Plant sources include:

- Whole-grain or enriched cereals and rice
- Legumes
- Wheat germ
- Bran
- Nuts
- Blackstrap molasses

Animal Sources include:

- Pork
- Beef
- Poultry
- Organ meats

How are you going to incorporate Vitamin B1 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B1?

It is rare to be deficient in thiamine, although alcoholics, people with Crohn's disease, anorexia, and those undergoing kidney dialysis may not be getting enough B1 to support their body's needs. Vitamin B1 deficiency can lead to:

- Headache
- Nausea
- Fatigue
- Irritability
- Depression
- Abdominal discomfort

The power of Vitamin B1

There is preliminary research to suggest that Vitamin B1 supplementation may be important in preserving and/or improving cognitive function in patients with Alzheimer's dementia. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 3: Vitamin B2 (Riboflavin)

Vitamin B2 supports your overall health by:

- Supporting your metabolism by converting carbohydrates found in food into fuel your body needs to function
- Supporting healthy nervous system and brain function
- Supporting healthy liver function
- Keeping your skin and hair healthy

What foods contain Vitamin B2?

Vitamin B2 can be found in both animal and plant foods. Try something from the list below to get your daily dose of Vitamin B2!

Plant sources include:

- Whole grains
- Wild rice
- Mushrooms
- Almonds
- Broccoli
- Brussel sprouts
- Spinach

Animal Sources include:

- Organ meats
- Eggs
- Milk
- Yogurt

How are you going to incorporate Vitamin B2 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B2?

Most healthy people who eat a well-balanced diet get enough riboflavin to stay healthy. However, elderly people and alcoholics may be at risk for riboflavin deficiency because of poor diet. Vitamin B2 deficiency can lead to:

- Fatigue
- Digestive problems
- Cracks and sores around the corners of the mouth
- Swollen magenta-coloured tongue
- Swelling and soreness of the throat
- Sensitivity to light

The power of Vitamin B2

Several studies have suggested that riboflavin supplementation may improve the frequency and severity of migraines. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 4: Vitamin B3 (Niacin)

Vitamin B3 supports your overall health by:

- Supporting your metabolism by converting carbohydrates found in food into fuel your body needs to function
- Supporting healthy nervous system and brain function
- Supporting healthy liver function
- Keeping your skin and hair healthy

What foods contain Vitamin B3?

Vitamin B3 can be found in both animal and plant foods. Try something from the list below to get your daily dose of Vitamin B3!

Plant sources include:

- Beets
- Sunflower seeds
- Peanuts

Animal Sources include:

- Beef liver
- Beef kidney
- Salmon
- Swordfish
- Tuna

How are you going to incorporate Vitamin B3 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B3?

Most healthy people can meet their body's needs for Vitamin B3 through diet. In high-income countries, the most common cause of Vitamin B3 deficiency is alcoholism. Vitamin B3 deficiency can lead to:

- Indigestion
- Fatigue
- Canker sores
- Vomiting
- Poor circulation
- Depression

The power of Vitamin B3

Preliminary research has suggested that niacinamide may improve arthritis symptoms such as increasing joint mobility and reducing the need for pain medication. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 5: Vitamin B5 (Pantothenic Acid)

Vitamin B5 supports your overall health by:

- Supporting your metabolism by converting carbohydrates found in food into fuel your body needs to function
- Supporting healthy nervous system and brain function
- Supporting healthy liver function
- Keeping your skin and hair healthy
- Maintaining healthy digestion

What foods contain Vitamin B5?

Vitamin B5 or Pantothenic acid gets its name from the Greek root pantos, meaning “everywhere,” because it is found in a wide variety of plant and animal foods. Try something from the list below to get your daily dose of Vitamin B5!

Plant sources include:

- Corn
- Cauliflower
- Kale
- Broccoli
- Tomatoes
- Avocado
- Legumes
- Lentils
- Split peas
- Peanuts
- Soybeans
- Sweet potatoes
- Sunflower seeds
- Whole-grain breads and cereals
- Wheat germ

Animal Sources include:

- Egg yolks
- Beef
- Turkey
- Duck
- Chicken
- Lobster

How are you going to incorporate Vitamin B5 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B5?

Vitamin B5 deficiency is rare, but may include symptoms such as:

- Fatigue
- Depression
- Vomiting
- Stomach pain
- Burning feet

The power of Vitamin B5

Research suggests that pantothenic acid (a derivative of Vitamin B5) has been shown to lower cholesterol in people at risk of heart disease. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 6: Vitamin B6 (Pyridoxine)

Vitamin B6 supports your overall health by:

- Supporting your metabolism by converting protein found in food into fuel your body needs to function
- Making antibodies needed to fight viruses, infections and other diseases
- Making hemoglobin needed to carry oxygen in your blood to surrounding organs and tissue.
- Regulating blood sugar levels

What foods contain Vitamin B6?

Vitamin B6 can be found in both animal and plant foods. Try something from the list below to get your daily dose of Vitamin B6!

Plant sources include:

- Whole grains and fortified cereals
- Banana
- Nuts
- Chickpeas
- Legumes

Animal Sources include:

- Tuna
- Salmon
- Beef
- Pork
- Poultry
- Salmon

How are you going to incorporate Vitamin B6 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B6?

Vitamin B6 deficiency is very uncommon, but can occur in people with kidney failure, liver disease or alcohol dependence.

Symptoms of Vitamin B6 deficiency include:

- Confusion
- Depression
- Irritability
- Burning, tingling, numbness in hands or feet

The power of Vitamin B6

A few studies suggest that Vitamin B6 may help to improve pre-menstrual syndrome (PMS) symptoms, such as anxiety and menstrual cramps, in some women. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 7: Vitamin B7 (Biotin)

Vitamin B7 supports your overall health by:

- Supporting your metabolism by converting carbohydrates and protein found in food into fuel your body needs to function
- Supporting healthy nervous system and brain function
- Supporting healthy liver function
- Strengthening your skin, hair and nails

What foods contain Vitamin B7?

Vitamin B7 can be found in both animal and plant foods. Food-processing techniques can destroy biotin, so opt for whole, unprocessed foods to make sure your body is getting the biotin it needs. Try something from the list below to get your daily dose

Plant sources include:

- Whole grains
- Banana
- Nuts
- Mushrooms
- Cauliflower
- Soybeans
- Legumes

Animal Sources include:

- Cooked eggs (especially egg yolks)
- Sardines

How are you going to incorporate Vitamin B7 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B7?

Vitamin B7 deficiency is very uncommon but can occur in people taking antiseizure medication or antibiotics long term and in people with Crohn's disease that may have trouble absorbing Vitamin B7 in their diet. Symptoms of Vitamin B7 deficiency include:

- Hair loss
- Dry scaly skin
- Dry eyes
- Cracking in the corners of the mouth
- Swollen, painful tongue that is magenta in colour
- Loss of appetite

The power of Vitamin B7

Preliminary research suggests Vitamin B7 supplementation can be used as a potential therapeutic treatment for nerve pain, especially in those with diabetes. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 8: Vitamin B9 (Folic Acid)

Vitamin B9 supports your overall health by:

- Supporting brain function and maintaining mental and emotional health
- Producing DNA and RNA, the boy's genetic material, to support cell growth and development especially during pregnancy
- Making hemoglobin needed to carry oxygen in your blood to surrounding organs and tissue

What foods contain Vitamin B9?

In Canada, all types of flour, enriched pasta and cornmeal are fortified with added Vitamin B9. Try something from the list below to get your daily dose of Vitamin B9!

Plant sources include:

- | | | |
|---------------------|--------------------|----------------|
| • Spinach | • Brussels sprouts | • Bulgur wheat |
| • Dark leafy greens | • Lima beans | • Kidney beans |
| • Asparagus | • Soybeans | • White beans |
| • Turnips | • Root vegetables | • Mung beans |
| • Beets | • Whole grains | • Orange juice |
| • Mustard greens | • Wheat germ | • Avocado |

Animal Sources include:

- Milk
- Salmon
- Beef liver

How are you going to incorporate Vitamin B9 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B9?

Vitamin B9 deficiency is relatively common but can occur in people with kidney failure, liver disease or alcohol dependence. Symptoms of Vitamin B9 deficiency include:

- Poor growth
- Tongue inflammation
- Loss of appetite
- Shortness of breath
- Diarrhea
- Irritability
- Forgetfulness

It's important to note that pregnant women will need more folic acid to help their baby's brain and nervous system develop properly. In this case, food alone won't be sufficient to give your growing baby what it needs. Speak to your doctor about folic acid supplementation if you are planning future pregnancy.

The power of Vitamin B9

Some research has suggested that individuals with depression are more likely to have low levels of Vitamin B9 in their blood. Researchers have gone on to investigate whether Vitamin B9 supplementation can improve symptoms of depression or compliment antidepressant therapy. The results are mixed but generally support the use of Vitamin B9 supplementation in depression. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 9: Vitamin B12

Vitamin B12 supports your overall health by:

- Supporting brain function and maintaining mental and emotional health
- Supporting your metabolism by converting carbohydrates and protein found in food into fuel your body needs to function
- Making hemoglobin needed to carry oxygen in your blood to surrounding organs and tissue

What foods contain Vitamin B12?

While there are many animal foods rich in Vitamin B12, this important vitamin is not present in many plant foods. The body also absorbs Vitamin B12 from animal sources much better than plant sources, so people following a vegetarian or vegan diet will need additional supplementation. Try something from the list below to get your daily dose of Vitamin B12!

Plant sources include:

- Some fortified breakfast cereals and nutritional yeasts

Animal Sources include:

- Organ meats
- Shellfish
- Poultry
- Eggs
- Milk and milk products

How are you going to incorporate Vitamin B12 into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin B12?

Vitamin B12 deficiency is very common, especially in people over the age of 50, following a vegetarian or vegan diet or those with digestive system conditions like Crohn's Disease or Celiac Disease. Low levels of Vitamin B12 can cause:

- Anemia
- Dementia
- Loss of balance
- Numbness or tingling in the arms and legs
- Weakness

The power of Vitamin B12

Recent research has suggested that Vitamin B12, along with other B Vitamins may protect against age-related macular degeneration (AMD), a disease affecting your central vision and leading cause of blindness in high-income countries. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 10: Vitamin C

Vitamin C supports your overall health by:

- Supporting the growth and repair of cells
- Making collagen, an important component of skin, bone cartilage, tendons and blood vessel
- Healing wounds
- Maintaining healthy bones and teeth
- Supporting absorption of iron

What foods contain Vitamin C?

There are so many delicious plant foods high in Vitamin C. This vitamin is sensitive to heat, so you'll get the most Vitamin C if you eat fruits and vegetables raw or lightly cooked. Try something from the list below to get your daily dose of Vitamin C!

Plant sources include:

- | | | |
|-----------------|----------------|-------------------------------|
| • Oranges | • Cantaloupe | • Tomatoes |
| • Green peppers | • Strawberries | • Brussels sprouts |
| • Watermelon | • Kiwi | • Cauliflower |
| • Papaya | • Mango | • Cabbage |
| • Grapefruit | • Broccoli | • Citrus juices |
| | | • Raw and cooked leafy greens |

How are you going to incorporate Vitamin C into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin C?

Vitamin C deficiency is very uncommon. Smoking cigarettes lowers your Vitamin C levels, so smokers may need additional supplementation. Severe Vitamin C deficiency leads to a condition known as Scurvy. Low levels of Vitamin C can cause:

- Dry hair
- Gingivitis (inflammation of the gums) and bleeding gums
- Rough, dry, scaly skin
- Decreased wound-healing rate
- Easy bruising
- Nosebleeds
- Increased risk of infection

The power of Vitamin C

Some studies have suggested that Vitamin C may help reduce blood pressure levels in those with high blood pressure. This is likely due to the antioxidant effects of Vitamin C that removes free radicals, harmful substances that impact healthy cell functioning and increase your risk of health conditions like heart disease and cancer. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 11: Vitamin D

Vitamin D supports your overall health by:

- Helping your body absorb calcium
- Building and maintaining strong bones and teeth

What foods contain Vitamin D?

Vitamin D occurs naturally in very few foods and is most often found in fortified foods where Vitamin D has been added. Unlike other vitamins, your body has the ability to make Vitamin D when exposed to sunlight. In Canada, sunlight can be unreliable, so if you are unable to get Vitamin D through food, you should speak to your doctor about supplementation. Try something from the list below to get your daily dose of Vitamin D!

Plant sources include:

- Margarine
- Fortified plant-based beverages

Animal Sources include:

- Fatty fish such as: salmon, arctic char, rainbow trout
- Egg yolks
- Milk

How are you going to incorporate Vitamin D into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin D?

Vitamin D deficiency is common, especially if you live in Canada. Symptoms of Vitamin D deficiency include:

- Muscle pain
- Bone pain
- Tingly sensation in hands or feet
- Muscle weakness

The power of Vitamin D

There is increasing evidence to suggest that low levels of Vitamin D may increase your risk of Multiple Sclerosis (MS), an autoimmune disease that affects the brain and nervous system. Preliminary findings on Vitamin D supplementation to improve symptoms of MS have mixed results and further research is needed. Always speak to your doctor before starting vitamin supplementation.

VITAL VITAMINS

Day 12: Vitamin E

Vitamin E supports your overall health by:

- Helping your body make red blood cells, necessary to oxygen delivery around the body
- Helping your body absorb iron

What foods contain Vitamin E?

The best source of Vitamin E is wheat germ, the part of the wheat berry that sprouts to grow into a new plant. If wheat germ isn't for you, don't worry – there are lots of other foods rich in Vitamin E that you can try. Try something from the list below to get your daily dose of Vitamin E!

Plant sources include:

- Nuts
- Sunflower seeds
- Corn-oil margarine
- Cold-pressed vegetable oils
- Dark green leafy vegetable
- Cereal grains
- Greens -- beet, collard, mustard, turnip
- Sweet potatoes
- Avocado
- Asparagus
- Yams

Animal Sources include:

- Liver
- Eggs
- Mayonnaise

How are you going to incorporate Vitamin E into your day?

Take a moment to write down an idea or recipe that features one of the delicious foods listed above. _____

What happens when you don't have enough Vitamin E?

Vitamin E deficiency is relatively uncommon. Supplementation may be needed in people who have digestive system conditions like Crohn's Disease or Celiac Disease and have trouble absorbing nutrients through food. Symptoms of Vitamin E deficiency include:

- Muscle weakness
- Loss of muscle mass
- Abnormal eye movements
- Vision problems
- Unsteady walking

The power of Vitamin E

Research suggests that Vitamin E may help reduce symptoms of anxiety, depression, food cravings and water retention associated with Pre-menstrual syndrome (PMS). Always speak to your doctor before starting vitamin supplementation.



Congratulations on completing the **Vital Vitamins** Challenge

The journey of wellness is ongoing, and each step, no matter how small, is a victory to be celebrated. Keep pushing forward, embracing each day as an opportunity to live your best life.

