

Vitamins

How to serve a vitamin-rich meal

Fresh or frozen vegetables – which is better?

Depending on transportation and storage time, fresh vegetables can show a high level of loss in some vitamins. Therefore, the nutritional value of frozen vegetables can be higher. Canned vegetables are subject to more processing and a longer storage time, so they have a lower vitamin content than fresh or frozen vegetables.

Fruits and vegetables – no longer a good vitamin source?

Some news reports have indicated a decrease in vitamins in fruits and vegetables over the last decades. But vitamin content depends on several factors, such as soil nutrients, climate, harvesting times and the type of fruit or vegetable. For example, the vitamin C content of an apple varies not only between different types, but also between the same type, depending on harvesting time and region. A comparison of specific foods over a long period shows that the vitamin content of our food has remained quite constant on average.



Tips

General

- Offer a fresh component (e.g. fresh fruits, salad or steamed vegetables) for every meal
- Regularly use a high-quality vegetable oil, e.g. canola, sunflower or soybean oil – it is a good source of vitamin E
- Serve whole-grain bread or pasta whenever possible – they are a good source of vitamin E, vitamin B₁
- Serve low-fat milk and dairy products every day – they are a good source of vitamin K, B₂ and B₁₂
- Serve or offer salt-water fish as often as possible – it contains a lot of vitamin D
- As vitamin K is very sensitive to light, vitamin K-enriched food (e.g. dairy products, green leafy vegetables) should be stored in a dark place

Specific to fruits and vegetables

- Offer seasonal fresh fruits and vegetables every day
- Try to use regional vegetables and fruits; vitamins are lost during transportation
- Serve daily vegetables in all the colours of the rainbow
- Serve vegetables raw whenever possible
- Offer only 100% vegetable or fruit juice
- For take-away: Serve vegetable or fruit sticks with different kinds of low-fat dips
- If you serve vitamin A-rich or carotenoid-rich food (e.g. carrots, tomatoes, dark leafy vegetables), use a small amount of oil – this increases the bioavailability of carotenoids and is also a good source of vitamin E
- Try to serve food rich in folic acid (e.g. green leafy vegetables, broccoli, corn, tomatoes) every day as salad or raw

Specific to salads

- Use native oil for salads – it contains more vitamin E
- As toppings for salads use:
 - Nuts or seeds as a vitamin E source – but be careful with the calories
 - Wheat germ and soybean sprouts as a folic acid source
 - Sunflower seeds or peanuts as a niacin source

Recommended intake

| Vitamins | Recommended intake for adults (USA) |
|------------------|-------------------------------------|
| A | 700–900µg/day |
| B ₁ | 1.1–1.2mg/day |
| B ₂ | 1.1–1.3mg/day |
| B ₆ | 1.3–1.7mg/day |
| B ₁₂ | 2.4µg/day |
| D | 5–15µg/day |
| E | 15mg/day |
| Folic acid | 400µg DFE/day |
| K | 90–120µg/day |
| Niacin | 14–16mg NE/day |
| Pantothenic acid | 5mg/day |
| Vitamin C | 75–90mg/day |

