



VITAMIN K

Summary

Vitamin K is the name we give a group of substances made by plants. It can also be made naturally by bacteria in our gut. It dissolves in fats and oils, so we can store it in our bodies.

Good sources of Vitamin K include leafy green vegetables like spinach, broccoli and cabbage, some vegetable oils, and fruits like blueberries and figs. There's also some in animal foods like meat, cheese, and eggs. It's slowly broken down by light.

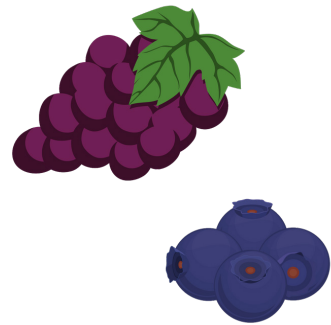
Vitamin K helps our blood to clot (it stops bleeding). It's needed for healthy bones and blood cells. Too little of it (a deficiency) could make us bruise easily or bleed easily. Sometimes new babies don't have enough and must be given it in hospital. Too much can cause blood clots to block our blood vessels.

What is it?

Vitamin K is a fat-soluble vitamin which occurs in two natural and three man-made forms. It dissolves in fatty/oily substances rather than water and we can store it in our liver and fatty body tissues.

What foods do we get it from?

Vitamin K can be produced by bacteria in our gut. But we also get some from our food. Good sources include leafy green vegetables like spinach, kale, brussels sprouts, cabbages, cauliflower and broccoli. It's also in some vegetable oils (soy, canola, olive) and fruits like blueberries, grapes, pomegranates and figs. Animal-based foods don't contain much Vitamin K, but it's there in small amounts in meat, cheese and eggs.



Why do we need it?

Vitamin K stops us bleeding: it's vital for making the proteins we need for normal blood clotting. It's also needed to make healthy bones and blood cells. If someone is taking anticoagulants (drugs which stop our blood clotting) they need to keep an eye on what they eat so that their levels of Vitamin K stay about the same - since more or less Vitamin K could produce unwanted clotting or bleeding.

What happens if we have too much or too little?

Too little Vitamin K (deficiency) is very rare - but newborn babies can have low levels, as can people with conditions that stop them absorbing Vitamin K in their gut. Large doses of antibiotics may also produce a temporary Vitamin K deficiency if they kill the gut bacteria which make it. Deficiency symptoms include bad bruising and bleeding, because it makes blood slow to clot. You are unlikely to get too much Vitamin K from natural food sources.

Is it affected by processing or storage?

Vitamin K can be degraded (broken down) by light but is pretty stable otherwise.

How does the Vitamin K content of some common foods compare?

Source	Total Vit K (ug)	Source	Total Vit K (ug)
1 cup (250 mL) raw spinach	145	Half cup raw blueberries	14
1 cup (250 mL) raw kale	113	1 cup (250 mL) raw iceberg lettuce	14
Half cup (125 mL) boiled broccoli	110	Roast chicken breast (85 g)	13
1 Tablespoon (15 mL) soybean oil	25	1 Tablespoon (15 mL) canola oil	10
Half cup (125 mL) edamame beans	21	1 Tablespoon (15 mL) olive oil	8

A microgram (ug) is one millionth of a gram (g), or one thousandth of a milligram (mg).
 Source: National Institutes of Health, 2016: <https://ods.od.nih.gov/factsheets/VitaminK-HealthProfessional/>

The NZ Nutrition Foundation's recommended daily dietary intake (RDI) of Vit K is about 45 micrograms (or 0.045 mg) for children aged 9 to 13, and 70 or 60 micrograms (or 0.07 or 0.06 mg) for women and men, respectively.

Funky facts

Bloodless plants don't need Vitamin K for blood clotting - but they definitely need it for something else important. It's vital for photosynthesis (the process in which the energy of sunlight is used to make nutrients from carbon dioxide and water).

In 1929 when Danish scientist Henrik Dam discovered a new vitamin, he first described it in a German journal as "Koagulationsvitamin" (meaning coagulation vitamin) because a lack of it caused bleeding. That's why it was later named Vitamin K in English.



USEFUL LINKS

Twenty Fun Facts About Vitamins. Retrieved from: <https://www.multivitamin.org/infographic/20-fun-facts-about-vitamins.html>



REFERENCES

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