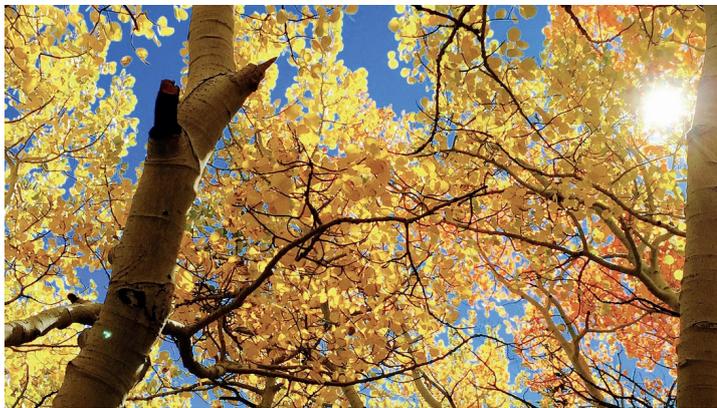


Vitamin D – The 'Sunshine Vitamin'

Vitamin D is best known for supporting healthy bones and preventing rickets. More recently however, research into the '**sunshine vitamin**' has exploded and vitamin D is now *known to be involved in almost every aspect of health*.¹



A recent study involving more than half a million people found higher vitamin D to be linked to reduced mortality from all causes. This large-scale study also found that people with severe vitamin D deficiency had almost twice the mortality rate from all causes as those with higher levels.² These findings have been replicated in additional large scale studies.³⁻⁴ The latest *National Diet and Nutrition Survey* has shown that deficiency rates are on the increase and perhaps even more worrying is the increasing incidence of nutritional rickets in children; an avoidable bone-softening disease associated with severe vitamin D deficiency.⁵⁻⁶

Needless to say, vitamin D has become a major public health concern.

WHY YOU NEED VITAMIN D!

- ✓ Bone health
- ✓ Muscle function
- ✓ Growth & development
- ✓ Mood, memory and brain function
- ✓ Heart health
- ✓ Balanced inflammation
- ✓ Reduced cancer risk
- ✓ Strengthen immune health
- ✓ Reduce autoimmune risk

The list goes on...

did you know?

Very few foods naturally contain vitamin D.

Wild, oily fish is by far the best dietary source, followed closely by fortified milk and egg yolks, but you certainly can't rely on food to deliver enough vitamin D. In fact, the **major source (80 – 100%) of vitamin D is actually the sun!**

Vitamin D is made in the body when bare skin comes into contact with the sun's UVB rays.

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Why is vitamin D deficiency such a big problem?

The simple answer is we don't get anywhere near enough sun. We work and play inside, our bodies are covered up, we travel in cars and live and work in cities where buildings block the sun. Liberal use of sunscreen, whilst needed for skin cancer protection, has an unfortunate downside, as it reduces skin production of vitamin D. It's easy to understand why low vitamin D is such a big health problem. Severe cases of deficiency continue to be reported and more worryingly, many may go unrecognised.

Sunlight, the best source of Vitamin D by far!

Wild salmon (100g) (grilled)	988 IU
Salmon (100g) (farmed, grilled)	332 IU
Eggs (100g) (whole, boiled)	128 IU
20–30 mins bare skin midday summer sun exposure (without sun cream)	10,000 IU

PUBLIC HEALTH ENGLAND – LATEST VITAMIN D ADVICE⁷

- **Adults and children aged 5** upwards should consider taking a daily supplement containing 400 IU vitamin D, particularly between October – March.
- **People who are at higher risk of deficiency, including babies under 1, and all children up to the age of 5** are advised to supplement all year round*.
- However, many people are already low or deficient in vitamin D so **you need to supplement with higher levels to get your levels back up to scratch if you're starting point is low or deficient.** Your GP can do a simple blood test to find out.
- Many health experts have questioned whether **supplementation levels set by the government may be too low**, especially when you consider that **your skin can produce 10,000 IU in response to 20-30 mins midday sun exposure.**

*Exceptions are babies receiving 500ml or more fortified formula milk daily, or breastfed babies where mum is certain that her breast milk contains optimal daily amounts. Getting enough vitamin D via breast milk is a challenge however and for most breastfed babies, a daily supplement will be required.

LOW VITAMIN D – WHO IS AT HIGHER RISK?

- ✓ **Pregnant women, breastfed babies and all children under the age of 5***
- ✓ **Elderly adults** – the body's ability to make vitamin D falls by at least half between the ages of 20 – 80 years
- ✓ **Limited time outside** – housebound, hospitalised or living in a care home
- ✓ **Obesity & underweight** – both can increase deficiency risk
- ✓ **Darker skin tone** – African & Asian populations have in-built sun protection and require at least 3-5 times longer sun exposure
- ✓ **Liberal use of sunscreen or extensive skin covering** – such as for religious or other reasons
- ✓ **Genetic factors** – common genetic changes are known to affect deficiency risk
- ✓ **Where you live / time of year** – risk increases the further away from the equator you live & during autumn & winter

SUPPLEMENT WITH VITAMINS D & K TOGETHER

Vitamin D is best supplemented as *D3 (cholecalciferol)* as this is the form naturally made in the skin in response to sunlight. Vitamins D and K work very closely together. **Vitamin D helps the body to absorb calcium from food and supplements, and rather like a chaperone, vitamin K helps to ensure this calcium is used in the bones.** Changing eating habits mean that many people don't get enough vitamin K2 from their diet. It is found naturally in high fat dairy products, liver and Japanese fermented foods such as natto. You will often find vitamin D3 & vitamin K2 (MK-7) together in supplements to support this dual role.

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