

What supplements should you be taking?

Updates in technology have empowered us towards improved evidence-based personalised health, helping us tailor our medicine, dietary nutrition, lifestyle and the supplements we take, to our own physical and mental needs. This can help prevent key vitamin and mineral deficiencies and toxicities and prevent the under and over-consumption that leads to poor health. Vitamin B12, or Cobalamin, is an essential vitamin for fertility and for making new cells including red blood cells and for making DNA (our genetic information). It is a water-soluble vitamin and so we do not store it (like the fat-soluble vitamins A, D, E and K) and so must consume enough of it from our diet each day to stay healthy.

How testing your biochemistry, helps you determine whether or not to take a supplement

Red blood cells carry oxygen which we use in a process called respiration to make energy. Therefore, deficiencies in B12 are associated with low energy levels, lethargy, worsened physical and cognitive (academic and professional) performance and poor mental health. Red blood cells contain Iron, needed for metabolism and energy, so less B12 can cause anaemia (reduced iron), weight gain and fatigue. Less B12 and Iron is associated with reduced metabolism.

B12 also plays a vital role in fertility as it helps to make egg and sperm cells, and in child growth in pregnancy, and therefore low B12 levels are associated with increased infertility risk, miscarriage and increased risk of genetic diseases such as Downs syndrome in pregnancy. The main dietary source of B12 is meat, fish and dairy products, and therefore vegans and vegetarians have an increased risk of B12 deficiency. Testing for this key vitamin can help ensure that you are receiving enough B12 for your happiness and health from your diet and that you are supplementing appropriately if necessary. Too much B12 is rare as it is a water-soluble vitamin and so most excess is excreted in the urine. However, over-artificial-supplementation excess has been associated with cause hypermetabolism, weight loss, diarrhoea and anorexia. Balance is necessary. Most people are deficient in B12. Great dietary sources include fish, eggs, meat and some cereals and plant-based milks, are fortified with this key vitamin.



B9, or Folate, is another key water-soluble vitamin. It is called Folic Acid in its dietary supplement form. It is closely linked to B12, as both are needed to make DNA and red blood cells. Deficiencies in B9 can cause impaired cell division (resulting in cell abnormalities such as genetic diseases and cancers), abnormal gut mucus levels (which can cause IBS and nutritional deficiencies), anaemia (reduced iron levels), reduced reproductive function (and miscarriage and pregnancy disorders) and damage to nerve cells (the sensation and brain cells in the body).

Deficiency in B9 can also mask B12 deficiencies and too much is also sub-optimal for health. Men and women with conception difficulties (difficulties having a child) are often advised to take more B9. Great dietary sources include green leafy vegetables, beans, fruits such as melons and citrus fruit, yeast (such as in bread and yeast extract spread), animal meats and potatoes. Women are often given supplements of this vitamin in pregnancy. Testing for this key vitamin can ensure that you receive the fertility, energy and vitality B9 requirements, suitable for your personal health. Vitamin D comes in two forms, D2 and D3, both of which are needed for calcium and phosphorus absorption for our bones and teeth. This is a fat-soluble vitamin (so we need dietary fat to absorb it) which also plays an essential role in our immune system (defence against disease) and mental health. Low levels of Vitamin D are associated with Osteoporosis (weak, brittle bones) from low calcium levels and increased risk of disease.

The main source of Vitamin D is from exposure to UVB from the sun, which our skin uses to make this vitamin. However, especially in colder climates and autumn and winter seasons and where women and men cover their skin for cultural and religious reasons, few receive sufficient levels of this from the sun. Melanin (the skin pigment that tans and darkens skin to prevent excess UV exposure in hot climates) also reduces UVB absorption and so those with darker skin are more susceptible to deficiencies, especially in countries with less sun presence during the year already. The best dietary sources of vitamin D include oily fish and red meat and eggs, and therefore again many vegans and vegetarians are deficient in this key vitamin. Over-supplementation can cause hypercalcaemia, where you have too much calcium, which can damage the bones and kidneys. Testing for this key vitamin can ensure that you do not have less or more vitamin D than you require and protect your physical and mental health in the long term.



How can NPH Group help?

Want to improve your mental and physical health based on your own personal biochemical evidence and ensure you reach your optimum health capacity?

For more information, please get in touch info@nph-group.co.uk.