Nutrient Core Report

This test analyses how gene variants can affect food tolerance (and intolerance), appetite control and blood sugar balance, vitamin and mineral needs, detoxification ability, and susceptibility to inflammation and infection.

Nutrient Core will help you understand the fundamental genetic interactions with diet and lifestyle and indicate whether specific functions require further genetic testing. It includes genes that have been shown to affect:

- Food response gluten (coeliac) and lactose intolerance
- Caffeine sensitivity and metabolism
- Microbiome diversity
- Vitamin need vitamins A, B9 (folate), B12 (cobalamin), C, D and K
- Blood pressure sodium-potassium balance & salt sensitive hypertension
- Detoxification glutathione
- Metabolism blood sugar control (insulin), appetite (leptin)
- Inflammation specific (infection response) and systemic
- Circadian rhythm early bird or night owl predisposition

Genes Included

Food Response: HLA-DQA1, HLA-DQB1 and LCT

Caffeine: CYP1A2 and ADORA2A

Microbiome: FUT2

Vitamins: BCO1, MTHFR, FUT2, TCN2, SLC23A1, COL1A1, GC, VDR and

VKORC1

Blood Pressure: ACE and AGT

Detoxification: GSTM1

Metabolism: FADS1/2, FTO, TCF7L2, PGC1A and LEPR

Inflammation: TNF and IFNG

Circadian Rhythm: CLOCK and PER1

Nutrient Core Vitamins

Vitamin D

Vitamin D is a fat soluble vitamin which is best known for its role in bone health. It promotes calcium absorption in the gut and maintains serum calcium and phosphate concentrations needed to mineralise bone. Vitamin D is also involved in muscle metabolism, neurological function, cardiovascular health and immunity.

It is called the 'sunshine vitamin' because the body can make its own vitamin D when skin is exposed to sunlight. Whilst sunlight is the best source, vitamin D is also present in a few foods and can be obtained from supplements. Once in the body, vitamin D is converted to calcidiol and subsequently to calcitriol, the biologically active form.

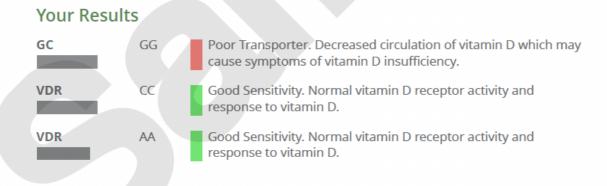
Vitamin D deficiency can result in lower bone density, rickets, osteomalacia and osteoporosis. Other symptoms of vitamin D deficiency include muscle weakness, difficulty thinking clearly and unexplained fatigue.

Too much vitamin D can cause high blood concentrations of calcium, leading to overcalcification of bones, soft tissues, heart and

Genetic variances can significantly impact vitamin D availability and response. The GC gene controls the supply of vitamin D Binding Protein (VDPR) which is important for transporting vitamin D in the circulation, actin scavenging (muscle recovery) and fatty acid binding. Variances on the VDR (Vitamin D Receptor) gene impact sensitivity to vitamin D and mediate various aspects of the immune system, dopamine synthesis and bone formation.

Nutrition Advice

The best food sources of vitamin D are oily fish, such as mackerel, salmon, tuna and sardines. Smaller amounts can be found in beef, pork, chicken, cheese, egg yolks and mushrooms.



To understand more about how Vitamin D can impact health we recommend the Thyroid Balance and Nervous System reports.