How nutrition can support the immune system

by health expert and nutritionist, Kate Garden


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In the last few weeks our world has been turned completely upside down. Our new reality is staying at home, washing our hands and social distancing, as collectively we face the COVID 19 pandemic. Beside these important measures, what else can we do to support our health, and specifically what can we do to support our immune systems right now?

The web is awash with ideas about how to stay healthy through diet and lifestyle, but it's important to ensure that health information is accurate and evidence based. Local health expert Kate Garden, a registered nutritionist (mBANT) talks to us about how nutrition can support the immune system.

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Kate has been helping people's improve their health for over 20 years and has a dedicated nutrition clinic on Widcombe Parade, between the pharmacy and the Doctors Surgery where she and her team provide nutrition and lifestyle plans to hundreds of patients with a variety of health issues.

Nutrition and Immunity

A well functioning and robust immune system is important in order to carry out its job as our main line of defence against invading infections, such as viruses. Ordinarily it works without us knowing - we have armies of immune cells that patrol our body, recognising and combatting invaders and springing into action to protect us. But many of us don't realise that certain nutritional and lifestyle factors can either enhance our immune cells, augmenting their ability to fight infection or supress them and so reducing their capacity to protect us.

Although sleep, exercise and mindset are vitally important for the immune system to work well, this article will focus on key nutrients and foods. There are, of course, no miracle diets that will prevent one getting the coronavirus, but there are a number of important nutritional elements that will strengthen the resilience and immunity of our bodies.

Protein

Proteins are the basic component of all living cells and are the building blocks of our immune system. Immune cells such as immunoglobulins and immune complexes such as antibodies are all made from amino acids, the constituents of protein. Complete proteins are found in animal foods such as meat, fish or dairy. Vegetarians need to ensure that they are getting their full profile of amino acids by putting together certain food groups, combining, for example, grains (e.g. rice) and legumes (e.g.beans). The elderly can be particularly at risk for protein deficiency. It's a good idea to ensure a good quality protein source with each meal.

Pre-biotic fibre

70% of our amazing immune system resides in our guts, predominately in our gut bacteria, collectively known as our gut micro-biome. To effectively support our immunity we need to feed the microbes of the gut a diverse, colourful and mainly plant based diet. Fibre is the main substrate that our gut bacteria like to munch on and specifically, it's the non-digestible part of foods (in onions, garlic, beans and Jerusalem artichoke) known as prebiotic fibre that microbes want. This type of fibre travels through the small intestine remaining undigested but is fermented by the bacteria when it reaches the colon. Other great examples of pre-biotic foods are asparagus, leek and chicory.

Pro-biotic foods

Not to be confused with pre-biotics, pro-biotic foods actually contain live bacteria and are powerful tools for supporting our gut-immune integrity. Plain live yoghurt, olives, kimchi and sauerkraut are good sources. Many of these fermented wonders can be made at home over several weeks. For those needing instant goodness, Bath based company, Bath Culture House has some wonderful premade creations, available to buy. Probiotic bacteria can also be brewed in drinks such as kombucha (fermented tea) and kefir (fermented milk).

Zinc

Many different minerals are needed for immune health, but zinc is the most researched in terms of its anti-viral properties. Viruses have to reproduce to cause an infection and studies using cell cultures have shown that the mineral zinc can impair viral replication. Other studies have shown that zinc prevents upper viral respiratory disease, so optimising zinc levels makes sense. Zinc is found in shellfish (particularly oysters), nuts, seeds, red meat and legumes. The body does not store it and the elderly and heavy drinkers are more likely to be low, so it's important to eat zinc rich foods regularly to prevent deficiency. Like most nutritional requirements, individual needs are based on factors such as age, lifestyle and existing health conditions.

Quercetin

This is a natural pigment known as a polyphenol that is found in many fruits and vegetables, onions being particularly high in it. Quercetin acts as an antioxidant to help neutralise molecules that lead to cellular damage and inflammation. It has been studied to help immunity by a number of mechanisms, but particularly of note is that it assists the transport of zinc entering cells, to stop replication of a virus. Apples, cherries, broccoli and grapes are excellent quercetin containing foods.

Vitamin C

A star player for the immune system, vitamin C helps to reduce the severity and duration of the common cold and typical flu. Most colourful vegetables contain some amount of vitamin C but acerola cherries, blackcurrants, kiwi, oranges, papaya and green vegetables such as broccoli are particularly high.

Vitamin A

Whilst vitamin C usually hogs the limelight in terms of it's immune benefits, vitamin A must not be forgotten. It is a key nutrient for our immune system as it aids the immune system in making correct decisions about what is friend and what is foe. TREGS are types of immune cells that maintain order and tolerance and vitamin A is needed in sufficient amounts to produce these. Retinol is a form of vitamin A found in animal products but vitamin A, as beta-carotene can be found in brightly coloured fruit and vegetables such as sweet potato and carrots. This carotenoid then needs to be converted into vitamin A to be used by the immune system.

Vitamin D

Known as the sunshine vitamin, robust evidence suggests that Vitamin D is important for immunity, with those deficient being more at risk for immune related health issues. Most people, especially those with darker skin tone do not have optimal vitamin D levels. As it is not found in sufficient levels in food, the action of sunlight on the skin is important to create it. Supplementation in the form of D3, should be considered after finding out your blood levels, via a simple test through your nutritionist or doctor.

Reducing sugar

We all know that we need to eat less sugar overall but did you know that sugar directly impacts the gut micro-biome and can actually supress immune function for up to 5 hours after eating? Sugar comes in a variety of guises and refined flours and grains such as those in processed foods quickly convert to glucose in the body. The key message is to stick to real wholefoods and minimise packaged, processed food.

Fluids

It's easy to forget that fluid supports all bodily functions including that of immune function. Plenty (between 1-2 litres daily) of filtered water is needed but other drinks such as teas can be a powerful way to increase antioxidants to the body. Turmeric, earl grey, black and some herbal teas can help to enhance immune activity. Certain polyphenolic compounds called catechins in green tea have been studied for their anti-viral effects. So enjoy that cuppa whilst relaxing in the sunshine!

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HEALTH

Please get in touch with me via the website: **www.kategarden.co.uk**, or via social media.