

Immune Support during the Covid-19 Crisis

Diet and nutrition are essential for our health and well-being. The current risk of Covid-19 to our society means that more than ever of us are looking for ways to help ourselves to support our immune health and nourish our bodies well.

Although there is no research into how food and nutrition can specifically help us with Covid-19, we can go some way to supporting our immune systems and improving our resilience with the foods that we choose to eat.

Vital Nutrition for a healthy immune system:

Eat a rainbow

The more colourful fruit and vegetables we can munch our way through, the better. The 5-a-day message is all too familiar, and hopefully you are well on your way to that target. With the risk to our immune system at an all time high, it's the perfect time to up your game, Aim for at least 4 portions (or 4 fistfuls) of vegetables a day, and 2 or 3 portions of fruit.

These ones are particularly important:

- Orange and green coloured fruit & veg contain beta-carotene and other antioxidants important for immune health and to support the respiratory tract.
- Berries and cherries are packed with bioflavonoids to support immune function.
- Citrus fruit contain vitamin C, hesperidin, rutin and ellagic acid for immune health and cell protection.
- Cruciferous veggies like broccoli, cabbage, cauliflower, brussel sprouts, kale, rocket – all supportive of liver health and immunity.
- Elderberry has been shown to have immune supporting effects and studies show it can help shorten the duration and severity of flu virus (no research with Covid-19).

*Eat a rainbow
of fruit and
vegetables*



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Keep well hydrated

Aim to drink about one and a half to two litres of water every day, Tea and coffee don't count, but herbal tea does. Try ginger or turmeric teas as they also have anti-inflammatory properties. It is thought that drinking small amounts of warm water regularly may help to wash any potential virus present down to the stomach.

It is recommended that we gargle with salty water as prevention and during infection.

Get spicy!

Herbs and spices are little powerhouses of nutrition. Packed with phytochemicals and bioactive ingredients, they not only make our food taste great, but they add a nutritional punch too. Use more than you usually do – they really are a concentrated source of nutrients.

These ones are particularly important:

- Garlic
- Turmeric
- Rosemary
- Thyme
- Ginger

Eat some probiotic foods

We know that a healthy gut microbiome makes for a stronger immune system. Probiotic foods include:

- Live/bio/probiotic yoghurt (but choose a plain one, not a flavoured one)
- Sauerkraut – here's my recipe for [red cabbage and orange kraut](#)
- Kombucha
- Kefir
- Kimchi

Fat is essential

Omega 3 fats from oily fish have anti-inflammatory properties. Fresh, frozen or tinned are fine.

- Salmon
- Mackerel
- Trout
- Sardines
- Herring

Go nuts! Have a big handful (about 2 dsp) nuts and seeds every day. Brazil nuts, almonds, hazelnuts, sunflower, pumpkin, sesame, chia, flaxseed – get as much variety as you can. Nuts and seeds are also a good source of zinc, which is essential for immune support.

Take a look at the Linwoods seeds enhanced with vitamin D, or coQ10 for extra support.

Immune Boosting Beta-glucans

Beta-glucans are naturally occurring polysaccharides that have been shown to increase our immune response, and reduce occurrence, symptoms and duration of upper respiratory tract infections. Good to take as a supplement, Beta-glucans are found in the cell walls of cereals like oats and barley, certain types of mushrooms (eg, reishi, shiitake, maitake), yeasts, seaweed, and algae.



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What to avoid:

1. Sugar has a detrimental effect on immunity, so although you may feel like bingeing on chocolate and biscuits as a way of comfort eating, it is not a good idea. Try some of these healthier alternatives instead to pack in the right nutrition for immune support:

These ones are particularly important:

- 2 oatcakes with nut butter – I love this [hazelnut and cocoa nut butter](#) when I need a wee chocolate hit (like a healthy version of Nutella!)
 - Chopped apple with peanut butter
 - A couple of dates with some brazil nuts
 - Really dark chocolate – at least 70% cocoa with some nuts
 - Natural yoghurt & berries
 - [My carrot cake energy balls!](#)
 - Houmous and veg sticks (carrots, celery, peppers, etc.)
 - Kale crisps – Preheat your oven to 150C. Wash, dry and chop 100g kale and put into a large bowl with a dessertspoonful of olive oil and a good pinch of sea salt. Massage into the kale and then tip it onto the trays and spread out in a single layer. Bake for 18-22 mins or until crisp but still green, then leave to cool for a few mins.
2. Refined and processed foods – cut the crap!
 3. Too much caffeine can make us jittery, anxious and stressed. Try herbal teas instead.
 4. Alcohol – although you might feel like having a big glass of wine or a couple of G&Ts to make you feel better in the midst of the current craziness, it is not a good idea to overconsume. Allow yourself a drink a couple of times a week, but keep it to one or two. None of us need the downer a hangover can give us at the minute.



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Lifestyle Adjustments

- Do what you can to manage stress levels.
- Go to bed early and get a good night's sleep. This will help you feel better tomorrow and is really important for a healthy immune system.
- Include some form of relaxation every day. This could be arts and crafts, mindful meditation or prayer, gardening or reading a book.
- Connect with people. In this time of social distancing, it is more important than ever to stay connected. Facetime your folks, phone a friend or connect with your gang on social media.
- Get outside every day. Step out onto your balcony or into your garden and listen to nature – birds singing, wind in the trees, the sound of rain – all of these things help keep us connected to the natural world and can help us feel more grounded when we are overcome with stress or anxiety.
- Be considerate and socially responsible – we will only solve this if we act responsibly and together! We are all feeling weird, stressed and anxious, so be gentle with each other and we will get through this together.

Key nutrients

- **Vitamin C**

Prolonged infection depletes vitamin C and studies show that it is effective against some strains of virus. It reduces incidence and severity of pneumonia. Chinese officials have recommended vitamin C for prevention and treatment of COVID-19 with positive results, and with clinical trials ongoing – these are early days!

Good sources of vitamin C include:

- Broccoli
- Cantaloupe melon
- Cauliflower
- Kale
- Kiwi
- Oranges and orange juice
- Papaya
- Red, green or yellow pepper
- Sweet potato
- Strawberries
- Tomatoes



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• Vitamin A

Supports immune response and protects the epithelium and mucus integrity of the body, such as in the gut and lungs. Deficiency increases the risk of measles and severity of infection. It also helps to regulate inflammation.

Good sources of vitamin A include:

- Cod liver oil
- Eggs
- Fortified breakfast cereals
- Orange coloured vegetables and fruits
- Most dark green, leafy vegetables – broccoli, spinach, kale, rocket, etc.



• Vitamin D

Enhances natural immune response against various infections, including flu and upper respiratory tract infections and inhibits chronic inflammation. Vitamin D is the 'sunshine vitamin' and most of us are low in this between Oct-May, so it is a good idea to supplement. It is recommended that adults supplement around 2000iu in winter months.

You can get a test from Better You here:

<https://betteryou.com/vitamin-d-test-kit>

It is £32.95. A pinprick blood test. They send your results to you and a free vitamin D spray supplement suitable for your needs.

It is not widely found in food, but some sources include:

- Oily fish, like mackerel, and salmon
- Foods fortified with vitamin D, like some dairy products, orange juice, soy milk, and cereals
- Beef liver
- Cheese
- Egg yolks



• Beta-glucans

Increase immune response, including increasing secretory IgA (SIgA), and reduce occurrence, symptoms and duration of upper respiratory tract infections.

Sources of Beta-glucans include:

- Barley
- Oats and whole grains
- Oriental mushrooms e.g. reishi, maitake and shiitake mushrooms
- Seaweed
- Algae



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- **Probiotics**

Certain strains or combinations of probiotics such as LAB4 reduce the risk of upper respiratory tract infection. Lactobacillus rhamnosus GG has proven effective in decreasing the number, severity and duration of respiratory tract infections in children.

Probiotic foods include:

- Live/bio yoghurt
- Komcucha
- Kefir
- Sauerkraut
- Kimchi



- **Zinc**

Enhances immune cell activity, including the function of many cells, such as natural killer cells. It also inhibits viral replication and may shorten the duration of colds by 7 days.

Good sources of zinc include:

- Meat
- Shellfish
- Pulses e.g. chickpeas, lentils and beans
- Seeds
- Nuts
- Dairy
- Eggs
- Wholegrains



- **Elderberry**

Blunts the 'spikes' on the outside of viruses and stops them entering cells to reproduce. It increases immune system activity against flu, showing 93% more rapid recovery. It appears to inhibit coronavirus in preliminary studies – HCoV-NL63, and a strain of pathogenic coronavirus found in chickens.



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FOODS	KEY NUTRIENTS	BENEFITS	NOTES
Cruciferous vegetables (broccoli, cabbage, kale, brussel sprouts, cabbage, watercress, rocket, pak choi, etc.)	Indole-3-carbinol Sulphur Glucosinolates	Detoxification Protect DNA	Eat 2-3 cupfuls daily
Yellow, green & orange veg (e.g. carrots, peppers, green vegetables, apricots...)	Vitamin A & C, carotenoids lutein fibre	Antioxidant protection Immune support	
Citrus fruit	Vitamin C limonoids, hesperidin, rutin, ellagic acid	Antioxidant Protective Enhance detoxification Immune enhancement	Limonene is found in the pith, so eat it too
Dark berries & red grapes	Bioflavonoids (anthocyanidins, resveratrol)	Immune enhancement Antioxidant Cell protective Detoxification	
Flaxseed/chia seed	Lignans Omega 3 Fibre	Detoxification Immune support Anti-inflammatory	
Matcha green tea	Polyphenols (epigallocatechin-3-gallate EGCG)	Antioxidant Theanine – stress support	Best to take early in the day as contains caffeine
Garlic & onions	Allicinn, S-allyl-cysteine, seleium, flavonoids, quercetin	Antioxidant Immune support	Do not overcook garlic. Best to eat raw or slightly cooked.
Herbs & spices – rosemary, turmeric, ginger	Carnosol, curcumin, flavones	Antioxidant Anti-inflammatory Immune support Anti-nausea (ginger)	
Nuts and seeds	Vitamin E, omega 3 sterols, selenium, fibre, zinc	Antioxidant	
Mushrooms especially shitake, reishi, chaga	Polysaccharides, Beta-glucans, fibre	Immune enhancement	

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What about supplements?

Here are my recommendations, based on advice from BANT <https://bant.org.uk/> (my professional body) and the Institute for Functional Medicine, for supplements that might just help support our immune systems at this difficult time.

Please note this does not mean that you will not contract the Covid-19 virus, but it may help support and strengthen your immune system to help you body deal with the virus more effectively.

Supplement Recommendations

Please check with me if you are on any medication!!!

For Specific Immune Support:

Supplement	Recommended options	Ingredients	How to take
Beta-glucans complex	Solgar Beta-glucans and elderberry complex	2 capsules contain: Elderberry 83:1 extract, equivalent to 4 grams of dried elderberry fruit 2,000 IU Vitamin D3 400 mg of Ester-C 15 mg of Zinc 250 mg of Beta 1,3/1,6 glucans	1 x with breakfast 1 x with dinner
Vitamin C powder	Lamberts, Biocare or Higher Nature		1-4g daily
Multivitamin and mineral	Solgar, Lamberts, Higher Nature, Viridian	Vitamins and minerals	As directed
Probiotic	Optibac every day	Probiotic bacteria	1 x day

General support

- Use a good [multinutrient](#) containing vitamin A, zinc, selenium etc.
- Support your levels of gut bacteria with a strong probiotic product, at least 16 billion bacteria.

If you develop viral symptoms

- Gargle with salty water as prevention and during infection.
- Also, increase your intake of immune-supporting and antiviral nutrients – **Beta-glucans, zinc, lysine, elderberry** and **vitamin A**, and **D**.
- **Vitamin C** in particular may be taken at higher dose, short-term – up to 6-8g per day.





Stay at home to stop coronavirus spreading

The current government advice (as of 23rd March 2020) is to stay at home even if you are well, only going outside for food, health reasons or essential work, stay 2 metres (6ft) away from other people and wash your hands as soon as you get home.

- Stay at home if you are unwell.
- Regular handwashing – Hand washing is a really simple yet highly effective strategy that everyone can do. Hand washing is especially important before eating or touching any part of your face. General advice is to wash your hands with warm water and soap for at least 30 seconds.
- Hand sanitiser gel – When you don't have access to hand washing facilities use an ethanol-based hand sanitiser gel with at least 60% ethanol content. Avoid touching any part of your face (especially eyes, nose, mouth) with unwashed hands.
- Practice cough / sneeze etiquette – Cough or sneeze into a tissue and then dispose of it immediately. If you don't have a tissue, cough into the sleeve of your inner elbow rather than your hand.
- Avoid close contact with people who are unwell.
- Wipe as you go – Regularly wipe down frequently touched objects and surfaces in your home.

For full guidance please click on the following link: <https://www.gov.uk/coronavirus>

You will also find more information in these Vital Nutrition blogs:

<https://vital-nutrition.co.uk/coronavirus-wellbeing/>

<https://vital-nutrition.co.uk/coronavirus/>