

Immunity, Nutrition, Cystic Fibrosis and COVID-19

With the coronavirus pandemic in full swing, you have probably been wondering if there is anything you can do help 'BOOST' the immune systems of your family members with cystic fibrosis (CF). In this article Australia's dedicated CF dietitians have teamed up to give you some practical advice.

How CF affects the immune system

Most people with CF have good immune systems, except for those post transplant who are immunosuppressed. Having cystic fibrosis does not limit the body's ability to fight viruses such as the common cold and the novel coronavirus. However, people with CF are at increased risk of lung infections post viral infections due to interactions between their immune systems and inflammation. Inflammation spurs the creation of more mucus, which can block the airways and allow infection to grow.

The role of nutrition in immune function

Optimal nutrition is essential for adequate function of the immune system. There are many nutrients that are involved with normal functioning of the immune system and therefore we encourage eating a variety of healthy foods each day in order to support immune function.

What diet should I be following for my child/adolescent/adult with CF during the COVID-19 pandemic?

People with CF have specific nutritional needs (usually high fat, high energy and high salt). It is important that you continue to follow the dietary recommendations made by your CF team.

Maintaining optimum fat-soluble vitamin status is important for people with CF. Many people with CF will be on a regular vitamin supplement (e.g. VitABDECK, Sastra). Here are some additional suggestions for maintaining fat-soluble vitamin levels:

- *Vitamin D – fundamental to good bone health and immune function*

Get out in the sunshine over winter before 10am and after 3pm (with skin exposed and without sunscreen) - walk the dog, do some gardening. And remember to take additional vitamin D supplements if they are prescribed as well as VitABDECK.

- *Vitamin A – vital for night vision*

Good food sources of preformed vitamin A (retinol) include chicken pate, polyunsaturated margarines, butter, double cream, egg yolk, sour cream, cheese, and full cream milk. Vitamin A in these foods is easiest for the body to absorb.

Good food sources of provitamin A (beta-carotene) include orange and red coloured fruit and vegetables – think sweet potato, carrots, tomatoes and tomato paste. Maybe use tomato paste to make some Homemade pizza.

- *Vitamin E – an important antioxidant*

Fats/oils (sunflower, olive, peanut, margarine, butter), nuts/seeds/legumes (sesame seeds, sunflower seeds, almonds, peanuts, peanut butter, soya beans lentils), whole grain breads and cereals all provide good sources of Vitamin E.

- *Vitamin K- vital for normal blood coagulation and important for good bone health*

Green leafy vegetables provide good sources of Vitamin K, these include vegetables such as parsley, silverbeet, spinach, coriander.

Can I boost my immune system through diet?

Simply put, you cannot 'BOOST' your immune system through diet and no specific food, supplement or health product will prevent you from catching COVID-19. Proper hygiene can help reduce the risk of infection or spreading infection to others.

What nutrition advice would you give for someone who is self-isolating?

If you are self-isolating and especially if you have symptoms, it is important to maintain good nutrition and hydration. Make sure you are eating and drinking regularly, with additional salt supplementation - even if you have a low appetite.

Ways that the CF community is being supported to access food.

Families affected by CF in Australia can access the Woolworths Priority Access Service for grocery home delivers – your local Cystic Fibrosis Australia state representative for more information (e.g. Cystic Fibrosis Tasmania, CF Community Care Victoria)

Pantry ideas and what should I do to prepare?

We recommend that you stay at home and go grocery shopping (online and delivered) once a week. Ideally your food choices should be both healthy and high energy if you need it – and

make sure you include your favourite foods in your weekly shop (even dietitians like us are needing our chocolate in this stressful time!)

Currently, it makes sense to stock up on non-perishable food items. It is easier on the supply chain if people gradually build up their household stores instead of making large-scale purchases all at once (hence why the supermarkets have imposed limits on certain food and toiletry items). There is no need to panic buy food as Australia has good supplies.

To do this, you can add a few extra items to your grocery cart every time you shop. Good options are easy-to-prepare foods like:

- Dried pasta and sauce
- Prepared canned soups
- Canned vegetables and beans
- Cheese
- Yoghurts
- Chocolates, biscuits
- Frozen meals

Having these supplies on hand will ensure that you do not need to leave your home at the peak of the outbreak.

Should I continue to breastfeed my baby?

The Royal College of Paediatrics and Child Health and Royal College of Obstetricians and Gynaecologists (United Kingdom) have issued wide ranging advice relating to breastfeeding COVID-19/coronavirus and pregnancy. They make the following recommendations:

“At the moment there is no evidence that the virus can be carried in breastmilk, so it’s felt that the well-recognised benefits of breastfeeding outweigh any potential risks of transmission of coronavirus through breastmilk.

The main risk of breastfeeding is close contact between you and your baby, as you may share infective airborne droplets, leading to infection of the baby after birth.

A discussion about the risks and benefits of breastfeeding should take place between you and your family and your maternity team.

If you choose to breastfeed your baby, the following precautions are recommended:

- *Wash your hands before touching your baby, breast pump or bottles*

Adapted from a Tasmanian resource. March 2020

- *Try and avoid coughing or sneezing on your baby while feeding at the breast;*
- *Consider wearing a face mask while breastfeeding, if available*
- *Follow recommendations for pump cleaning after each use*

If you choose to feed your baby with formula or expressed milk, it is recommended that you follow strict adherence to sterilisation guidelines. If you are expressing breast milk in hospital, a dedicated breast pump should be used.”

<https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services>

Adapted from a Tasmanian resource. March 2020