

Dried fruit and nuts and how they can fit into the immune system discussion

From a nutrition and health perspective, the COVID-19 pandemic has stimulated heightened interest and concern around healthy eating, both positive and negative. One consequence of lockdown appears to be that whilst many consumers have become more interested in home cooking, others have sought solace in comfort foods and drink; whilst many have become more concerned about diet and exercise, others have experienced reduced physical activity levels due to working from home, shielding and the detrimental effects of the pandemic on mental health.

Naturally enough, *immunity* has become a buzz word among social media and news/magazines, unfortunately with plenty of examples of misinformation around individual foods, drinks, pills, potions and notions that supposedly offer protection from catching or curing 'the virus'. Using the word itself could be misconstrued as meaning 'immune from catching the virus'! Let's be clear, no single food can prevent or treat COVID-19. If the solution was that easy, it's unlikely we'd still be in a pandemic situation! There's really no quick fix to protecting health, although there is a great deal we can do and say that can have a beneficial influence on overall health and wellbeing; and within this, on ensuring a normal, healthy immune system.

This article is a brief guide for FRUCOM members around the topic of immune function and diet, in the context of nuts and dried fruit; to provide consumers with accurate (EU compliant) and helpful nutrition and health information, without misleading or over stating the facts.

What's the benefit? Talking competently, using accurate nutrition and health information, can help greater numbers of consumers to confidently include more nuts and dried fruit in their daily diets!

Putting immune function into perspective (for nuts and dried fruit)

The immune system provides the body's defence against attack by physical insults, disease and all manner of infections. It is influenced by many factors including age, genetics, early life, diet, physical activity, vaccination history and smoking. Although our immune system is spread around the body (glands and lymphatics) a significant part is situated around the gut, essential protection from consuming anything potentially harmfulⁱⁱ. Our microbiome - the genetic fingerprint of microorganisms (the microbiota) that reside in us, particularly within our gut - works to support the immune system with far reaching influences throughout the body. The trillions of bacteria in our colon feed on and utilise what we consume. Hence what we eat and our microbiome are important influences on the immune system.

A healthy diet is essential for optimal health. We now know that looking after our gut can have benefits locally, as well as throughout the body – from digestion, vitamin synthesis, gut-brain interactions, allergies, safeguarding from pathogens, and immune functionⁱⁱⁱ. A

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balanced and varied diet with foods from the four main food groups (vegetables & fruits; meat & alternatives; dairy & alternatives; and starchy carbohydrates) is good insurance for keeping everything in optimal working order. This means choosing wholegrains, legumes, nuts and seeds, vegetables, salads and fruits, alongside animal and/or plant protein sources.

Key nutrients with a role in supporting the immune system, that are discussed within the scientific literature include vitamins A, B6, B12, C, D, E, folate, copper, iron, magnesium, selenium, zinc and omega-3 fatty acids^{iv v}. Nuts and dried fruit collectively provide very many of these nutrients and much more, although EU regulations are more specific and limited in what and how function health claims can be made. This is in order to avoid misleading consumers, or giving a false sense of security, for instance taking all these nutrients as a supplement would be no guarantee for 100% immune function! Additionally EU regulations do they allow information for generic groups to be used to support health claims for promoting any individual food or drink. As such, when including nutrition and health claims on pack or in any promotional material, it is necessary to ensure the claims are specific to the pack contents- whether for an individual nut, dried fruit or a mix.

Here are examples for hazelnuts, raisins and figs to illustrate specific claims that can be included relevant to current interest in our immune function. For more information on how to use nutrition and health claims in the EU, FRUCOM now have basic reference tools for hazelnuts, raisins and figs - please check out our website www.frucom.eu and contact us at info@frucom.eu

A balanced and varied diet and lifestyle, together with sufficient exercise and sleep and avoiding smoking and excessive stress is important for good health and optimising your immune system. Nuts and dried fruit can play a useful role as part of a balanced diet, contributing a range of nutrients, including an easy source of fibre. Specifically:

- **Figs are a source of copper, which contributes to the normal function of the immune system.**
- **Raisins are a source of iron and copper, which contribute to the normal function of the immune system.**
- **Hazelnuts are high in folate, copper and vitamin B6, and a source of iron and zinc, all nutrients which contribute to the normal function of the immune system.**

Some useful notes:

1. The health claims relate to the NUTRIENT and not the food directly. It is therefore essential to demonstrate (and state) that a food provides 'a source of' or is 'high in' the nutrient (as appropriate) in order to be able to utilise the claim.
2. Use of the word *normal* is of paramount importance because the nutrient function relates to the body's requirements for basic healthy functioning. This is quite distinct from helping to '*boost*', '*enhance*', '*repair*', or even '*optimise*', words which

should therefore be avoided, so as not to mislead the consumer. There are distinct nutrient function claims relating to 'growth'.

3. Medicinal claims, such as 'prevent', 'treat' or 'cure' are prohibited with food claims.
4. It is important to make clear that any contribution to health made by these foods is within the context of contributing to an overall balanced and varied diet and healthy lifestyle- hence the importance of the word *contribute*.
5. Claims are based on the nutrient content per 100g, the EU standard for calculating eligibility of nutrition claims. However where it is not reasonable to consume 100g of product in one day, it could be misleading to make such claims. It is therefore important to consider the validity of claims, in the context of advice around for example portion sizes/portions per day. It is practically feasible to consume 100g of nuts and/or dried fruit over the course of a day, and arguably this could be beneficial nutritionally compared to alternative snacks!
6. Nutrition labelling and claims made on any consumer media are the manufacturer's responsibility and appropriate nutrition/legal checks should be carried out on any packaging/materials.

With so much heightened interest in diet and lifestyle and increased plant-based eating for both health and sustainability, dried fruit and nuts have much to contribute. Accurate nutrition and health messages are important and potentially useful as part of the marketing mix.

ⁱ <https://www.asa.org.uk/news/food-supplements-covid-19-and-the-immune-system.html>

ⁱⁱ Childs et al. *Diet and Immune Function*. 2019 *Nutrients* **2019**, 11, 1933; doi:10.3390/nu11081933

ⁱⁱⁱ Valdes et al. *Role of the gut microbiota in nutrition and health*. *BMJ* 2018;361:j2179 <http://dx.doi.org/10.1136/bmj.j2179>

^{iv} Richardson and Lovegrove. 2021 *Nutritional status of micronutrients as a possible and modifiable risk factor for COVID-19: a UK perspective*. *British Journal of Nutrition* Volume 125 Issue 6678 – 684; doi.org/10.1017/S000711452000330X

^v Calder et al. 2020 *Optimal Nutritional Status for a Well-Functioning Immune System Is an Important Factor to Protect against Viral Infections*. *Nutrients* 12 1181; doi:10.3390/nu12041181