

## **VITAMIN C AND THE IMMUNE SYSTEM**

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The old saying, 'An apple a day can keep the doctor away', may indeed have some truth behind it, as eating nourishing foods, rich in certain vitamins, can help your immune system fight off illness.

Vitamin C is one of the biggest immune system boosters of all. In fact, a lack of vitamin C can even make you more prone to getting sick.

## Foods rich in vitamin C include:

- Oranges
- Grapefruits
- Tangerines
- Strawberries
- Bell peppers
- Spinach
- Kale
- Broccoli



Daily intake of vitamin C is essential for good health because your body doesn't produce or store it. The good news is that vitamin C is in so many foods that most people don't need to take a vitamin C supplement (1). However, supplementation with vitamin C appears to be able to both prevent and treat respiratory and systemic infections (2).

## What does the Department of Health and Social Care advise?

You should be able to get all the vitamin C you need by eating a **varied and balanced diet**. If you take vitamin C supplements, do not take too much as this could be harmful. Taking less than 1,000mg of vitamin C supplements a day is unlikely to cause any harm (3).

Vitamin C is important to all animals, including humans, because it is vital to the **production of collagen**. Collagen is the most ubiquitous substance in the body because it is the most abundant of the fibres contained in connective tissue. Connective tissue gives our body form and supports our organs.

To give you an idea of how important collagen is, here is a list of the five types of collagen, and where they are used in the body:

- Type 1 Connective tissue of skin, bone, teeth, tendons, ligaments, fascia, organ capsules
- Type 2 Cartilage
- **Type 3** Connective tissue of our organs (liver, spleen, kidneys etc)
- **Type 4 and 5** The separating layer between epithelial and endothelial cells as well as between skeletal or smooth muscle cells (basal lamina), kidney glomeruli, lens capsule, and Schwann and glial cells of the nervous system.

As you can see, collagen is everywhere in the body, and vitamin C plays a role in the formation of collagen (4).

One way to ensure you are getting enough Vitamin C from your diet is to **eat a rainbow**. This will ensure a variety or vitamins and minerals including vitamin C are supporting your immune system and nourishing your body.

For more information on how to do this, check out my blog on rainbow eating: <a href="https://nutrition.nellsar.com/boosting-health-by-eating-a-rainbow">nutrition.nellsar.com/boosting-health-by-eating-a-rainbow</a>

## References

- 1. <u>heath.clevelandclinic.org</u>
- 2. <u>pubmed.ncbi.nlm.nih.gov</u>
- 3. www.nhs.uk/conditions/vitamins-and-minerals/vitamin-c
- 4. <u>health.howstuffworks.com/wellness/food-nutrition/vitamin-supplements/vitamin-c</u>