

PROJECT FACTSHEET

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BIOCAR

Studying the impact of divalent minerals on carotenoid bioavailability.



Inspiration

Dietary intake of carotenoids, especially in the form of fruits and vegetables, has been associated with a number of potential health benefits, such as the prevention of several chronic diseases. However, carotenoid absorption is generally low (ca. 5-20%) and may be further hampered by multivitamin/multimineral supplements rich in divalent ions, such as calcium.

Innovation

The influence of divalent minerals on carotenoid bioavailability has never been studied systematically, and not in humans. In BIOCAR, we will conduct the first clinical nutrition study in Luxembourg with healthy subjects to investigate the negative impact that minerals appear to have on carotenoid absorption, looking at both complete food items and supplements.

Impact

The BIOCAR study should reveal whether, and to what extent, minerals and trace elements have the potential to alter the micellarization, uptake, and absorption of carotenoids, which could be especially important for many dietary supplements, and therefore many stakeholders in this domain. The results will be relevant for producers of food supplements and nutraceuticals, consumers interested in optimising their nutritional health, and health agencies providing recommendations on dietary intake of nutrients and phytochemicals.

Partners

Luxembourg Institute of Health (LU)

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