

# PHYTO THERAPY PTY LTD

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## Inulin & Calcium Absorption

- Information for Consumers by Jan Roberts, Nutritionist

Getting enough calcium? The answer is easier than you think...

A study published in April 2009 has found that vegan women, who eat only plant-based foods, have bones as healthy as those of non-vegetarian women. In the research involving 105 post-menopausal vegan Buddhist nuns and 105 non-vegetarian women, the researchers were surprised to find that their bone density was identical.

Lead researcher Professor Tuan Nguyen from Sydney's Garvan Institute of Medical Research says "In this work we showed that although the vegans studied have lower protein and calcium intakes, their bone density is virtually identical to that of people who eat a wide variety of foods, including animal protein. The nuns' calcium intake was very low, only about 370 mg a day, where the recommended level is 1,000 mg. Their protein intake was also very low at around 35 g a day, compared with the non-vegetarian group, which was 65 g."

You might ask if the calcium intake of these vegans is approximately one third of the recommended daily allowance and when dairy food (which they don't eat) is widely considered to be the superior source of calcium, why is their bone strength not compromised at all? Well, we now know that part of the answer lies with a substance called inulin. Inulins are a group of naturally occurring polysaccharides (several simple sugars linked together) produced by many types of plants. Inulin is used by some plants as a means of storing energy and is typically found in the roots or rhizomes.

In the colon, bacteria metabolise inulin to produce short chain fatty acids which in turn reduce the pH in the gut (making it acidic). This turns calcium into its free ionic form—similar to the positive effect that stomach acid has on absorption in the small intestine. This ionic form of calcium helps increase the passive trans-cellular transport making the calcium free to move across the gut lining into the blood stream. This interaction between calcium and inulin results in improved calcium bio-availability.

Inulin has several other positive attributes - it is a soluble fibre that dissolves in water to form a gelatinous material that may help lower blood cholesterol. Because inulin does not elevate blood sugar levels it may also be helpful in the management of diabetes and other blood-sugar related illnesses. Finally and most importantly, inulin is a prebiotic - "a selectively fermented ingredient that allows specific changes, both in the composition and/or activity in the gastrointestinal microflora that confers benefits upon health and well being." Stimulating the growth of beneficial bacteria in the gut will improve your digestion, restore bowel regularity, enhance the effectiveness and intrinsic strength of your immune system and improve the absorption of all nutritional factors, not only calcium.

ESSENTIAL 8 ORGANICS® *with prebiotic inulin* contains 50% of Essential 8 Organics super concentrate with 50% Jerusalem Artichoke organic prebiotic inulin. It has a high antioxidant value of >2000 ORAC and is still equivalent to more than one third of your daily requirements of vegetables by concentration. This product is ideal if you want to get your digestive system in order while still getting your vegetables and fruit as part of a balanced diet.

Approx 20-25 serves / 240g container

Directions for use: Place 1 heaped tablespoon into 200mls of water or favourite beverage.

#### REFERENCES:

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