VEGETARIAN & VEGAN NUTRITION

''Appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate, and may provide health benefits for the prevention and treatment of certain diseases. These diets are appropriate for all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, older adulthood, and for athletes''

Position of the Academy of Nutrition and Dietetics: Vegetarian Diets. Journal of the Academy and Nutrition and Dietetics, 2016

PROTEIN

Everyone, including children and athletes, can easily meet their protein needs on a vegetarian or vegan diet. One of the many benefits of following a plant-based diet is it contains adequate but not excessive protein; too much protein, especially animal protein, can lead to health problems.

"BUT WHERE DO YOU GET YOUR PROTEIN?"

This must be one of the most common questions asked of vegetarians and vegans. The answer is, "Everywhere!" Most foods contain protein. By eating a wide variety of fruits, vegetables, nuts and seeds, legumes, and other plant-based wholefoods, our bodies can get all the protein needed to thrive in our busy, active lives. An added bonus is that unlike animal products, plant-based foods are free from cholesterol and contain little to no saturated fats. The daily protein requirement, as recommended by the World Health Organisation, is 0.8 grams per kilogram of body weight. This translates to approximately 64g for an adult male and 46g for an adult female.

More and more people are choosing a vegetarian/vegan lifestyle, both in New Zealand and globally, as they become more aware of the health benefits it offers, along with environmental sustainability and reduced animal suffering. There is overwhelming evidence that a plant-based diet reduces risk for many of the current leading health conditions – heart disease, diabetes, obesity, stroke and cancer.

There is much misinformation about plant-based diets – that it's difficult to get enough iron, protein, calcium, B12, etc – yet numerous global health organisations such as the United Nations, World Health Organisation, Academy of Nutrition and Dietetics and Physicians Committee for Responsible Medicine have stated a plant-based diet is a healthy option.

The vegetarian diet, naturally high in phytonutrients and fibre, and low in cholesterol and saturated fats, is an excellent choice for health and longevity.

IS COMBINING PROTEINS NECESSARY?

It was once thought that plant protein foods should be combined at each meal in order to obtain "total protein". This is not necessary. Eating a variety of protein rich foods over a day will ensure an intake of all the essential amino acids.

SAMPLE MENU OF PLANT-BASED PROTEIN-RICH FOODS:

Breakfast: porridge, fruit and rice milk
Lunch: hummus and salad filled roll, fruit
Dinner: nachos with refried beans, guacamole, green salad, fruit and soy ice cream
Snacks: handful of nuts, pottle of soy yoghurt
Total protein intake: 68g

PROTEIN: TOO MUCH OF A GOOD THING?

Most New Zealanders consume more protein than recommended. Excessive intake of protein can damage kidneys and bones. The type of protein is also important. Animal proteins increase the risk for heart disease and some cancers. Replacing animal protein with plant protein has been shown to reduce health risk.[2]

CALCIUM

Plant foods, especially leafy green vegetables, tofu, nuts and seeds, are a good source of calcium. But it is the balance of calcium with other minerals in the diet and the acidity of the body – plus vitamin D intake and exercise - which creates optimum absorption and bone health.

Dairy products are widely promoted as being essential for bone health yet many plant-based sources offer more easily-absorbed calcium,[1] and studies have shown that drinking more cows' milk does not decrease fracture risk.[3]

CALCIUM BALANCE INHIBITORS

Lack of exercise, caffeine, salt, excess dietary fat and oxalates reduce calcium absorption. Too much protein, particularly animal protein (acidifying), is harmful for bone health, while plant-based diets (alkalinising) are beneficial.

Weight-bearing exercise is vital for building and maintaining bones.

VITAMIN D: THE SUNSHINE VITAMIN

Vitamin D assists in the absorption of calcium in the body and while it is present in some foods, we get most of our Vitamin D from exposure to the sun. Aim to get around 15 minutes of sensible sun exposure on your arms daily.

Fortified foods may contain vitamin D2 or vitamin D3. Vitamin D3 (cholecalciferol) is of animal origin from fish or lanolin in sheep wool. Vitamin D2 (ergocalciferol) is produced from yeast and is suitable for vegans.

IRON

"Vegetarians who eat a varied and well balanced diet are NOT at any greater risk of iron deficiency anaemia than non-vegetarians."[6]

There is a lot of concern around iron yet there is no evidence that vegetarians are any more likely to be deficient and there are plenty of plant-based iron sources. The iron in a vegetarian diet is non-haem, which is less easily absorbed than haem iron from animal products, but recently the haem iron in red meat has been shown to increase mortality.[4] Absorption of non-haem iron can be significantly enhanced by including vitamin C with the meal.

Extra care is required for women of childbearing age, pregnant women and babies (6-12 months). The iron found in breastmilk is highly bio-available however supplements may be necessary during pregnancy to ensure iron levels are being met. This is also a consideration for non-vegetarian mothers.

IRON ABSORPTION INHIBITORS

Some foods should be avoided with high iron meals:

- tea and coffee (contain tannins)
- eggs (contain phosvitin)
- dairy products (calcium)

Good PLANT BASED SOURCES OF VITAMINS AND MINERALS

PLANT BASED FOOD	PROTEIN	IRON	CALCIUM	B12
Almonds	✓	✓	✓	
Apricots		✓	✓	
Baked beans	✓	✓	✓	
Blackstrap molasses		✓	✓	
Broccoli	✓	✓	✓	
Brown rice	✓	✓		
Cashews	✓	✓	✓	
Chickpeas, lentils	✓	✓	✓	
Figs		✓	✓	
Kale		✓	✓	
Marmite		✓		✓*
Oats	✓	✓	✓	
Pumpkin seeds	✓	✓		
Wholemeal bread	✓	✓	✓	
Plant-based milks	✓	✓	✓*	✓*
Tahini	✓	✓	✓	
Tofu	✓	✓	✓	
Vegetarian sausages	✓	✓		✓*

**Fortified*

IRON ABSORPTION ENHANCERS

- Vitamin C (peppers, tomatoes, broccoli, citrus fruits, berries, kiwifruit)
- Onion and garlic (increase bio-accessibility of iron and zinc from grains and legumes[5])

IRON TOO MUCH OF A GOOD THING?

Consult your doctor before taking iron supplements. Studies have found links between excessive iron intake and heart disease.

OMEGA 3

Omega 3 fatty acid (DHA) is important for joint, brain and mental health. Good plant-based sources include freshly ground flaxseed (linseed), flaxseed oil, chia seeds, walnuts and pumpkin seeds. Aim for 2 tablespoons ground flaxseed or 1 tablespoon flaxseed oil daily.

VITAMIN B12

Vitamin B12 is the only nutrient that is not provided naturally by a vegan diet. Despite this, it is not difficult to get sufficient amounts provided vegans include 2-3 servings of B12-fortified foods each day, such as plant milks, marmite or some Sanitarium products. Alternatively a supplement can be taken.

Around 1-3mg per day is required. Only small amounts of vitamin B12 can be absorbed at any time, so small frequent daily amounts are ideal. Bear in mind that as we age, absorption of vitamin B12 often decreases.

B12 ANALOGUES

It has been thought that some plant foods, such as fermented soy (tempeh, miso), seaweeds, spirulina, nutritional yeast and mushrooms contain dietary B12, but the B12 is not usable by the body and these cannot be considered reliable sources of B12.

VITAMIN B12 DEFICIENCY

Clinical vitamin B12 deficiency is very rare and usually reversible with administration of vitamin B12. However, it can be serious and irreversible, especially in the young, so it is important for everyone, particularly pregnant and breastfeeding mothers, to ensure a regular vitamin B12 intake.

TESTING VITAMIN B12 STATUS

The most accurate test for levels of B12 is the Abbott Architect B12 testing method (if it is available in your area). Blood homocysteine testing and methylmalonic acid (MMA) testing are also available and can help determine a more accurate B12 status than the commonly performed test.

References

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