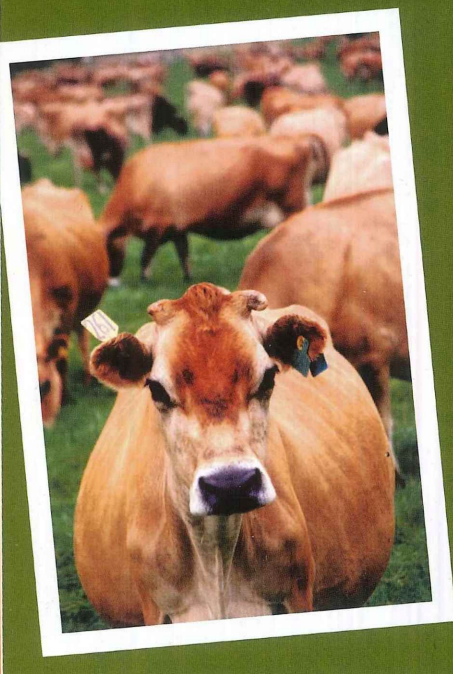




VEGANISM

by Ros Ben-Moshe



*"The greatness of a nation can be judged by the way its animals are treated."—
Mahatma Gandhi*

The vegan lifestyle is about much more than diet. It embraces the desire to contribute to building a better world by not only enhancing the welfare of animals, but by creating a more energy-efficient earth. Due to the complete absence of animal byproducts in veganism, nutritional concerns have been raised, leading to the much-asked question: Can veganism provide a nutritionally balanced diet? Critics of vegan and vegetarian diets often question how recommended requirements of calcium, iron and vitamin B12 are met. However with planning, information and effort, veganism can be a healthy way of life.

Veganism is a way of living exclusively on products from the plant kingdom. Vegans therefore avoid meat, milk, honey, eggs, butter and also leather, wool, cosmetics, soaps and shampoos tested on animals or derived from animal products. There are three main reasons why people choose to become vegan: first out of compassion for the animal kingdom, second in the belief that a vegan diet is healthful, and third as a recognition that animal production of food is an inefficient means of producing food.

The nutritional reality

Many critics of veganism say it is a nutritionally poor choice of diet. Although it may be more challenging, the vegan diet can, in fact, be successful if it includes all the protein, calcium, iron and other minerals, vitamins, carbohydrates, fats and fibre the body needs to function at an optimal level.

Calcium

Calcium is required for various bodily functions. Almost all the calcium in the body is contained in our bones, although a tiny amount found in the bloodstream is responsible for important functions such as muscle contraction, maintenance of the heartbeat and transmission of nerve impulses. We constantly lose calcium from our bloodstream and it is taken from the bones to assist these crucial bodily functions. Calcium-rich food is essential in replacing the lost calcium.

Many consumers think giving up dairy products means all calcium supply will be sabotaged. The good news is there are many foods that supply our bones and body with ample calcium. The RDA of calcium for adults aged 25 and older is 800 milligrams, and 1200 milligrams for those aged 11-24. Calcium requirements change throughout life. Until the age of about 30 we consume more calcium

than we lose. After 30, the body begins to slip into "negative calcium balance" where the bones start to lose more calcium than they receive. This is why it is especially important to supply good sources of calcium during childhood.

Vegan sources of calcium include:

5 dried figs	135mg
Tofu*, firm 115g	118mg
Turnip greens, 1 cup	249mg
Kale, 1 cup	179mg
Broccoli, 85g	89mg
Okra, 1 cup	176mg
Baked beans, 170g	80mg
Soya beans, 85g	65mg
Chickpeas, 85g	60mg
Bok choy, 1 cup	158mg
Tempeh, 1 cup	154mg
Tahini, 2 tablespoons	128mg
Soy milk, 250ml	300mg

* Tofu is usually processed with either calcium sulphate or nigari. For a higher calcium content choose tofu with calcium sulphate.

Iron

Iron is crucial to the body's health (see nutrient guide attached to this issue). Iron in food sources is in two forms: haem iron, found in meat; and non-haem iron, found in vegetables, pulses, whole grains, sea vegetables and cereals. It has been found that haem and non-haem iron are absorbed by two different pathways. Although the pathways are not yet fully understood, what is known is that only a small proportion of dietary iron (both types) is absorbed. It is generally agreed that about 20-30 per cent of haem iron is absorbed and is relatively unaffected by other dietary and physiological variables, whereas non-haem iron is less well absorbed and is affected by these variables. It is thought that only five per cent of non-haem iron is absorbed.

Iron absorption is inhibited by the tannin in tea, phytates, oxalates and phenols that occur in plant-based foods. Many foods have an inhibitory effect on iron absorption, including soya beans (they contain the phytate protein). The good news is that vitamin C effectively enhances iron absorption. The addition of 200ml pure orange juice, providing 75mg of vitamin C, can increase iron absorption three to four fold. The only catch is that the vitamin C needs to be consumed as part of the same meal. As there are many vitamin C-rich fruit and vegetables, a well-balanced meal should provide the body with sufficient iron stores. It is also important to note that the body naturally increases iron absorption rates if iron stores are depleted. Conversely, if iron stores are increased, iron absorption is reduced.

Vegan sources of iron

Below is a selection of iron-rich foods. For a full listing see *The Healing Power of Foods — Nutrition Secrets for Vibrant Health and Long Life* by Michael T Murray ND, page 72.

All foods are based on a 100-gram serving.

Kelp	100mg	Sunflower seeds	7.1mg
Brewer's yeast	17.3mg	Millet	6.8mg
Blackstrap molasses	16.1mg	Parsley	6.2mg
Wheatbran	14.9mg	Almonds	4.7mg
Pumpkin seeds	11.2mg		

Vitamin B₁₂

Vitamin B₁₂ deficiency can have quite serious effects. Vitamin B₁₂ occurs naturally in animal products. It is important for vegans to include foods with B₁₂ at least three times a week. The best way to

do so is by either taking a good-quality vitamin supplement or by drinking soy milk enriched with Vitamin B₁₂, tempeh (a fermented beancurd product), miso (a fermented soy bean paste), brewer's yeast, seaweeds and (to lesser effect) mushrooms.

Protein

Statistics show the average Australian woman consumes over 70 grams of protein in a day, while men consume, on average, 100 grams. The World Health Organization (WHO) recommends much less protein — 29 grams a day for women and 37 grams for men. Athletes, people who expend a lot of physical energy and those with special requirements will tend to need slightly more protein than this as they need a higher calorific intake. See your health care practitioner about your own requirements. As with other excesses, too much protein can cause serious health conditions such as kidney disease, some cancers and osteoporosis.

Grains, vegetables, pulses and soy products have all the essential amino acids needed to provide good-quality protein.

Some foods with a high percentage of calories as protein

Vegetables	Legumes	Grains	
Spinach	47%	Tofu	43%
Broccoli	47%	Lentils	29%
Cauliflower	40%	Split peas	28%
Mushrooms	38%	Kidney beans	26%
Parsley	34%	Navy beans	26%
Lettuce	34%	Chickpeas	23%
Peas	30%		
Nuts & Seeds	Fruits		
Peanuts	18%	Lemon	16%
Sunflower	17%	Cantaloupe	9%
Walnuts	13%	Orange	8%
Almonds	12%	Grape	8%

The vegan pregnancy

In any pregnancy, pre-conception health is crucial to providing an unborn child with the best chances for optimum health. During pregnancy nutritional requirements change with a need for increased iron, calcium, folic acid and protein. A well-balanced diet rich in fruit, vegetables, grains, soy products, nuts and seeds will help provide all the essential nutrients needed for mother and foetus. It is also important that you get enough essential fatty acids. Good sources include walnuts and flax seeds.

It is recommended that at least four servings of calcium-rich food are taken daily. Calcium-fortified soy milk and breakfast cereals are particularly good choices.

Among the many plant foods abundant in iron, excellent sources include dark green vegetables, beans, molasses, nuts, seeds and whole grain or fortified breads and cereals. Vitamin C should be included at the same meal for optimum iron absorption. Some women, especially in the later months of pregnancy, may need to take an iron supplement. A healthcare practitioner should be consulted to discuss how much additional iron is needed.

During pregnancy the body needs 30 per cent more protein. Regular intake of the basic protein foods already listed should provide ample amounts.

There is sufficient folic acid in many foods in a well-balanced vegan diet, but supplements can be considered. As mentioned, B₁₂ is not found in significant amounts in plant foods. Refer to foods high in B₁₂ already listed and where appropriate, it may be included in supplement form. It is recommended that during pregnancy one serving of B₁₂ be consumed daily.

Vegan kids

Where children are concerned, especially babies and young children, it is crucial that a well-balanced diet including all essential nutrients is provided. A vegan diet can meet these needs but extreme care should be taken. It is not recommended that a child switch suddenly to a vegan diet. Changes should be gradual and a nutritional expert should be consulted for further guidance.

The environment

John Robbins' seminal work, *Diet for a New America*, provides some statistics on diet and environmental factors. Studies have indicated that of all the toxic chemical residues in the American diet, between 95 and 99 per cent are found in meat, fish, dairy products and eggs. In the US, the livestock population produces as much excrement as the entire human population of the country, of which half (over a billion tons per year) cannot be recycled.

One half of the earth's land mass is grazed by livestock. When water and energy consumption are factored in, the impact on the environment starts to become apparent. Furthermore, world livestock production is a major contributor to the emission of two of the four global warming gases: carbon dioxide and methane, with 100 million tons of methane emitted annually by the world's cattle population.

Good health

Lower incidence of heart disease, certain cancers and other diseases is associated with a diet high in primary foods such as vegetables and grains and low in saturated fats. The bottom line for vegans and non-vegans alike is to follow a healthful diet that provides sufficient complex carbohydrates, protein, iron, calcium and other essential nutrients. This can easily be done by including a wide variety of vegetables, both raw and cooked; fruits, fresh and dried; nuts and seeds including spreads such as tahini; grains and grain products in breads, flour and pasta; sea vegetables and their derivatives such as agar agar; soy products such as tofu, tempeh, miso, soy milk and soy flour; pulses including the many varieties of beans, peas and lentils; and fresh herbs and spices wherever possible.

It can't be all that bad when you consider the root words for vegetable are *vegetabilis*, meaning animated, and *vegetus*, meaning vigorous or lively!

References available on request

RECIPES

Scrambled tofu

250 grams firm tofu, mashed
 2 tablespoons fresh chives, finely chopped
 2 tablespoons fresh parsley, medium chopped
 ½ teaspoon curry powder (or mix of turmeric and cumin)
 1 tablespoon soy sauce
 1 small carrot, grated
 sea salt and ground black pepper
 1 tablespoon olive oil, for frying

In a frying pan, heat the oil then add the curry powder. Heat until the aromas are released. Add the tofu and saute for a minute before adding the carrot. Add remaining ingredients and saute for a further 3-5 minutes. Serve with wholegrain bread, with a side serving of spinach and grilled tomatoes, and a glass of orange juice.

Bok choy salad

1 bunch bok choy (about 6 cups), washed and trimmed
 2 cups broccoli, cut into florets
 1 cup beanshoots
 3 tablespoons slivered almonds, toasted

The dressing:

2 tablespoons tahini
2 tablespoons water
1 tablespoon canola oil
1 teaspoon root ginger, grated
Juice of ½ orange (lemon may be used)

Blanch broccoli and bok choy. Place in a large bowl and add the beanshoots and almonds. In a separate small bowl, mix tahini and water first to avoid curdling, then add remaining ingredients. Just before serving, drizzle the dressing over the vegetables.

Note: This dressing doubles as a great dip with vegetable crudites.

Moroccan chickpea stew

1 400g tin chickpeas (or equivalent fresh soaked and pre-cooked)
1 400g tin chopped tomatoes (or equivalent fresh chopped)
2 tablespoons tomato paste
2 cups zucchini, cut into 3cm chunks
2 cups cauliflower, cut into florets
2 onions, cut into wedges
2 tablespoons parsley, freshly chopped
1 teaspoon paprika
¼ teaspoon cayenne pepper
2 cups water
olive oil for frying
sea salt and ground black pepper

In a large saucepan heat oil. Add onions and fry for a few minutes. Add cauliflower and zucchini and saute for a further couple of minutes before adding remaining ingredients. Bring to the boil then simmer for about 40 minutes. Serve on a bed of brown rice.

Veggie crumble

2 medium apples, peeled and grated
2 medium carrots, grated
2 medium potatoes, grated
2 tablespoons olive oil
½ cup wholewheat flour
1 tablespoon sesame seeds
1 tablespoon sunflower
1 tablespoon tahini
sea salt and pepper

The crumble:

1 cup wholewheat flour
1 cup mixed chopped nuts
3 tablespoons olive oil
1 teaspoon cinnamon

Preheat oven to 180°. Mix vegetables together with the flour, tahini, salt and pepper. Place in a greased baking dish. For the crumble, rub the oil into the other ingredients and mix until it resembles bread-crumbs. Crumble over the vegetable mixture, cover with foil then bake for 40 minutes. Remove foil and bake for a further 20 minutes.

EVER THOUGHT OF YOUR BLOOD AS THE RIVER OF LIFE?

This is particularly true while you are pregnant, when your baby relies on all of its nutrients from the nutrients available in your blood. If you are low in an essential nutrient, your baby will be too.

If you want to help maintain the health and vitality of your baby and yourself, you will be making sure that you are eating all the right things, making sure you get enough rest and ... iron. The trouble is iron is so difficult for the body to absorb.

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