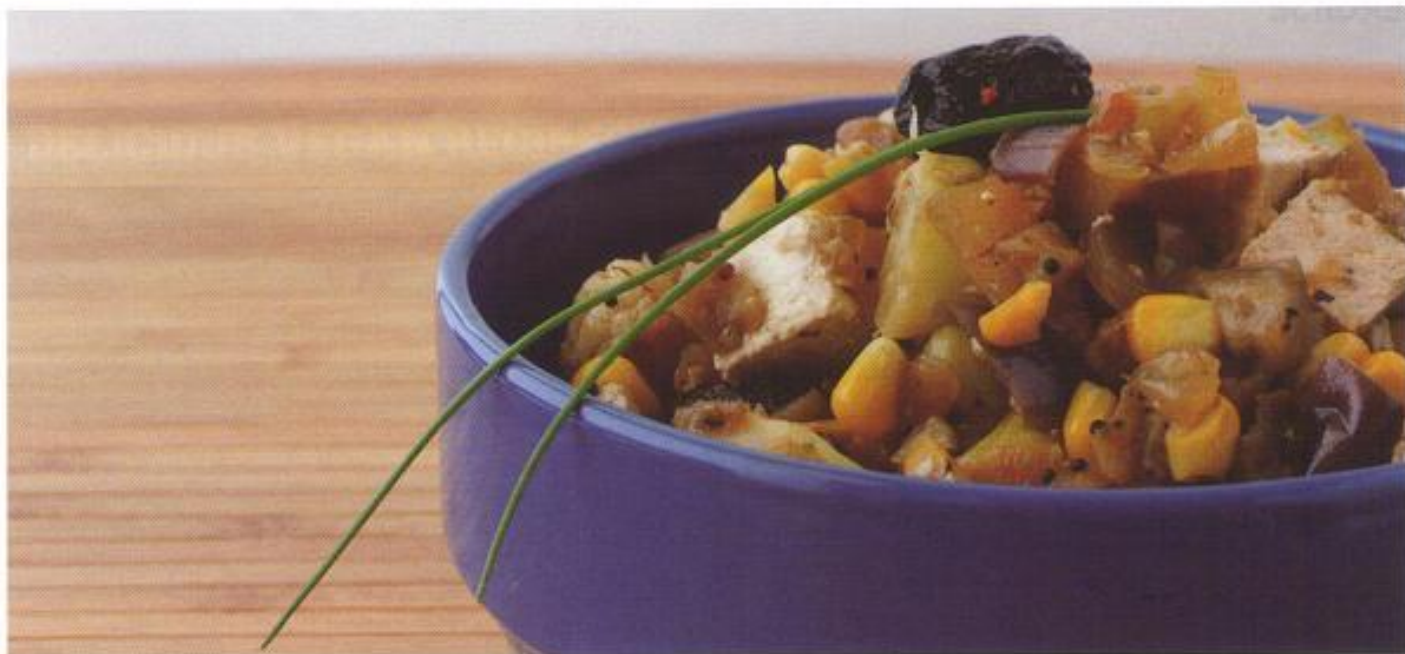




GOING VEGAN

It's a widely recognised fact that going vegetarian can improve one's health and may even extend one's lifespan. But can eating only plants-based food be enough to sustain the energy and nutritional requirements of a long-distance runner or endurance athlete?

Text Jaclyn Reutens



If there is one food trend that is on the rise, it is vegetarianism. We may not have the exact figures but going by anecdotal evidence, more and more people are ditching meat not just for religious and cultural reasons but also for health's sake.

A vegetarian is someone who does not consume animal food or animal-derived products. It is a broadly used term that can be classified under the following categories.

- **Vegan:** Excludes animal foods, milk and milk products, eggs, honey and animal-derived food additives.
- **Lacto-vegetarian:** Excludes animal products and eggs. Includes milk and milk products such as milk, cheese and yoghurt.
- **Ovo-vegetarian:** Excludes animal products, milk and milk products. Includes eggs.
- **Lacto-ovo vegetarian:** Excludes animal products. Includes eggs, milk and milk products.
- **Pescetarian aka 'Quasi' vegetarian:** Excludes animal products except fish and shell fish. May sometimes include eggs, milk and milk products.

Besides reasons of cultural and moral beliefs, some endurance athletes exclude red meat from their diet thinking that it is high in fat and cholesterol which is detrimental to their running performance. This does not mean they are 'vegetarian'. They should be described more as 'fussy meat eaters'.

Some runners also give up red meat to meet their increased need for carbohydrate and to be at an optimum weight. They follow a near-vegetarian type of diet but are not strict with their food intake once the race or competition is over.

There have also been success stories with winners who adopted vegetarian diets that have fuelled the interests in these diets.

One such example is Scott Jurek, a famous American ultramarathoner who has scored countless 100-mile podium finishes and wrote "Eat & Run: My Unlikely Journey to Ultramarathon Greatness". In the book, he shares how he transformed his diet from all-meat to all plants-based and how this has propelled him to even greater heights as an athlete.

THE PROS & CONS

Adopting a vegetarian diet does appear to have a positive effect on lowering the risk of lifestyle diseases such as diabetes and heart disease if designed correctly. A vegetarian tends to put emphasis on wholegrains, fruits, vegetables and plant protein. This is great for meeting and in reality, exceeding the requirements of fibre, vitamins, minerals, antioxidants and beneficial phytochemicals such as soy phytoestrogens. In terms of energy levels, the runner/athlete does consume a good amount of carbohydrate to meet energy needs.

The primary concern of any variation of a vegetarian diet would be the amount of protein obtained from the diet. Vegan athletes/runners run the highest risk of protein deficiency as their demands would be increased two-fold given their training demands and just by being a vegan. They do require special advice from a sports dietitian so as not to be malnourished in the long term. Plant food sources of protein often contain low levels of the essential amino acids and sometimes have a lower digestibility compared to animal food sources. Therefore complementing protein foods are important to meet daily requirements.

One of the potential pitfalls of a vegetarian diet is the over-substitution of protein with fat.

Too much fat intake can lead to weight gain in spite of the numerous hours of training. Excessive amounts of fat will make the athlete/runner sluggish and slow. Fat can be in the form of the excessive use of salad dressings, cooking oil, cheese and cream (for lacto-vegetarians), fried mock meat, peanut butter, Nutella and margarine.

Iron, calcium and zinc are three other nutrients that are also key concerns to vegetarian athletes/runners as they are found predominantly in animal foods.

A low-iron status is more apparent for female athletes as they are also menstruating and may not be replenishing iron stores efficiently, this can lead to iron-deficiency anaemia. Runners, both male and female, often get foot-strike haemolysis which is the damaging of red blood cells every time their foot hits the ground upon impact. Prolonged impact decreases haemoglobin levels putting vegetarian runners more at risk of iron deficiency anaemia.

Low calcium levels impair bone health that could lead to early onset of osteoporosis. Therefore, if the diet is unable to meet calcium requirements, taking a calcium supplement (1000mg daily) is recommended.

Zinc is required for the healing and maintenance of healthy skin and tissues. Runners are always repairing their muscle tissues and cells, thus have a high demand for zinc.

Given the many key nutrient concerns of a vegetarian diet, a well-planned vegetarian diet is able to address and avoid nutrient deficiencies. **R**

IDEAL ALTERNATIVES

The alternative to animal protein foods would be nuts, seeds, tofu, soy milk, bean curd, lentils, chick peas, all types of beans (red beans, green beans, black beans).

The table here shows you the amount of protein found in the commonly eaten foods to meet protein requirements. On average, you would need twice or more of the volume of a vegetarian protein option to be equivalent to a regular serving of an animal protein option.

Animal Food	Protein (g)	Plant Food	Protein (g)
100g cooked fish	22.8	1 cup baked beans	14.0
100g cooked chicken	30.5	1 cup cooked lentils	16.5
1 cup baked beef	30.6	100g cooked silken tofu	5.2
2 slices of cheese	8.4	1 egg	7.0
1 cup of low-fat milk	10.1	1 cup of soy milk	10.0
150g low-fat yoghurt	6.3	14 almonds	4.0

QUICK TIPS TO MEET YOUR PROTEIN INTAKE

- Drink 1 to 2 glasses of soy or almond milk during the day.
- Experiment with different ways of cooking lentils, chick peas and the many types of beans.
- Try red/green bean soup or a red bean bun as a snack.
- For lacto-vegetarians, all your snacks must include low-fat dairy foods.
- For ovo-vegetarians, include egg whites as often as you can as part of meals.

NO-MEAT MEAL PLANS

Based on an 80kg male runner, these meal plans have 3200-4000kcal and 120-160g protein.

VEGAN MEAL PLAN

Breakfast: 2 cups of oatmeal cooked with soya milk with 2 tablespoons of nuts, 1 pear, 1 glass of orange juice

Snack: 2 slices of bread with peanut butter, 1 can (330ml) sports drink

Lunch: 1.5-2 cups of rice/noodles, 1.5-2 cups of pan-fried tofu, 1 cup of vegetables, 1 wedge of honeydew

Snack: 1 cup of assorted nuts, 1 glass of soya milk

Dinner: 1 large sweet potato, 1.5 cups of lentils stew, 1 cup of vegetables, 1 kiwi fruit

Snack: 1 slice of bread with hummus, 1 can (330ml) of sports drink

LACTO-VEGETARIAN MEAL PLAN

Breakfast: 4 Weetabix with low fat milk, 1 apple, 1 glass of orange juice

Snack: 1 large banana, 1 can (330ml) sports drink

Lunch: 1.5 to 2 cups of rice, 1.5 cups pan-fried tofu, 1 cup of vegetables

Snack: 1 cheese sandwich, 1 can (330ml) sports drink

Dinner: 1 large baked potato, 1.5 cups of baked beans and 1 tablespoon of low-fat cheese, 1 cup of salad vegetables, 1 orange

Snack: 150g of low-fat yoghurt topped with 1 tablespoon of untoasted muesli, 1 can (330ml) sports drink

OVO-VEGETARIAN MEAL PLAN

Breakfast: 2 cups of cereal with soya milk, 15 small grapes, 1 glass of orange juice

Snack: 2 slices of bread with 3 egg whites, 1 can (330ml) sports drink

Lunch: 1.5-2 cups of rice, 1.5-2 cups of pan-fried tofu with 1 whole egg, 1 cup of vegetables, 1 wedge of papaya

Snack: 1 bowl of bean curd pudding, 1 can (330ml) of sports drink

Dinner: 1 large bowl (300g) of egg noodles, 2 egg whites, ¾ cup of firm tofu, 1 cup of vegetables

Snack: 1 cup of assorted nuts, 1 can (330ml) of sports drink

DELICIOUS VEGAN RECIPES

ALMOND PILAF WITH BROCCOLI

Serves: **2**

INGREDIENTS

- 1 teaspoon almond oil
- ½ cup chopped onions
- 1 ½ tablespoons slivered almonds
- 1 ½ cups vegetable broth
- ½ cup bulgur (cracked wheat)
- ½ large broccoli, cut into florets and sliced
- 2 dried apricots, chopped
- Salt and pepper to taste

DIRECTIONS

- In large saucepan, heat almond oil over medium heat.
- Add onions and almonds and sauté until almonds are toasted.
- Add remaining ingredients.
- Heat to boiling over medium heat.
- Simmer about 20 minutes or until bulgur is tender.
- Serve.

NUTRITION PANEL

Nutrient	Per Serving
Energy (kcal)	268
Protein (g)	14.8
Total Fat (g)	8.1
Carbohydrate (g)	32.3

LENTIL AND CARROT SOUP

Serves: **2**

INGREDIENTS

- 2 cups vegetable broth
- ½ medium onion, finely chopped
- ¾ cup dry lentils
- 1 cup diced carrots
- ½ cup tomato paste
- 1 ½ tablespoons molasses
- ½ teaspoon prepared mustard
- Salt to taste

Optional: Dinner rolls or rice

DIRECTIONS

- In a large saucepan, bring vegetable broth to a boil.
- Add lentils and onion, stir once, and simmer, covered, for 20 minutes.
- Add carrots and simmer for 20 minutes.
- Stir in remaining ingredients, and heat through.
- Serve. (Optional: serve with dinner rolls or rice)

NUTRITION PANEL

Nutrient	Per Serving
Energy (kcal)	265
Protein (g)	19
Total Fat (g)	1.6
Carbohydrate (g)	45.5

CAJUN TOFU BURGERS

Serves: **2**

INGREDIENTS

- 225g firm silken tofu
- ½ large carrot, grated
- 1 stalk celery, finely chopped
- 80g water chestnuts, finely chopped
- ½ cup fine bread crumbs
- ½ teaspoon Cajun seasoning
- 1 teaspoon oil
- Pinch of salt
- 2 whole wheat burger buns
- Lettuce leaves

DIRECTIONS

- Place ingredients (except oil) in a food processor bowl and blend until well mixed.
- Heat oil over medium-high heat in a large non-stick frying pan.
- Form 2 large burger patties with mixture.
- Pan-fry the burgers for 10 minutes on each side.
- Serve warm with lettuce on a whole wheat bun.

NUTRITION PANEL

Nutrient	Per Serving
Energy (kcal)	405
Protein (g)	22.2
Total Fat (g)	12.9
Carbohydrate (g)	52.8

THE PRIMARY CONCERN OF ANY VARIATION OF A VEGETARIAN DIET WOULD BE THE AMOUNT OF PROTEIN OBTAINED FROM THE DIET. VEGAN ATHLETES/RUNNERS RUN THE HIGHEST RISK OF PROTEIN DEFICIENCY AS THEIR DEMANDS WOULD BE INCREASED TWO-FOLD GIVEN THEIR TRAINING DEMANDS AND JUST BY BEING A VEGAN.

