

Common Misconceptions

There are many myths and misconceptions surrounding food and nutrition. Here are some common ones explained:

1. Myth: Milk causes mucus. **FALSE**
Truth: This is one of the most common myths in regard to dairy foods. Numerous studies indicate milk does not cause mucus production. Some people may experience a thin, temporary coating over the mouth and throat after drinking milk. This is often mistaken for mucus but is simply milk's natural creamy texture and perhaps a little saliva production. This is not harmful and the sensation lasts for only a short period of time.

2. Myth: Milk causes asthma. **FALSE**
Truth: Milk is rarely a trigger for asthma. The major triggers for asthma are allergens such as house dust mites, pollens, infections, exercise and tobacco smoke. Foods, drinks and food chemicals affect less than 2% of all people with asthma. A healthy diet including a variety of foods is appropriate for people with asthma.

3. Myth: Dairy foods should be avoided when trying to lose weight. **FALSE**
Truth: A weight loss diet should still include dairy products to help meet nutrient needs – there are many low fat dairy foods available, e.g. skim milk, low fat yoghurt and reduced fat cheese. Getting enough calcium and other essential nutrients in the diet is difficult if dairy foods are not included. Research now suggests a diet high in dairy calcium results in greater weight loss than diets low in calcium (with equivalent total energy intakes). Low calcium intake may promote lipogenesis (the process of making body fat).¹⁴⁻¹⁶

4. Myth: If you take calcium tablets you don't need milk. **FALSE**
Truth: Milk is an excellent source of calcium but is also a good source of protein, carbohydrate, vitamins A, D, B₁₂ and riboflavin, potassium, magnesium, phosphorus and zinc. A calcium tablet won't provide all these other nutrients dairy foods add to the diet.

5. Myth: Young kids can drink low fat/skim milk. **FALSE**
Truth: Skim milks are not suitable for children under five. The food and nutrition guidelines recommend regular milk for children below the age of five to satisfy their energy, growth and development needs. Reduced fat milk can be introduced from two years of age if overall energy intake is adequate.

6. Myth: Those who have difficulty digesting lactose should avoid milk and other dairy products altogether. **FALSE**
Truth: Dairy foods do not need to be eliminated from the diet if you are lactose intolerant.¹⁷ Most people can consume up to 10g of lactose a day without symptoms. This is equivalent to a small (200ml) glass of milk. Cheese and yoghurt are usually well tolerated. Most cheeses are virtually lactose free. The bacteria in yoghurt help to digest lactose.

7. Myth: Drinking milk can cause kidney stones. **FALSE**
Truth: Milk can actually reduce the risk of kidney stones (formed by oxalates). The calcium in milk may be protective as it binds to oxalate making it unavailable for absorption, hence reducing the risk of developing kidney stones.

8. Myth: Those with high blood cholesterol have to avoid red meat. **FALSE**
Truth: Lean red meat is low in saturated fat so can be part of a heart-healthy diet. Only about half the fat in lean beef, lamb, pork and venison is saturated, and within that about a third is stearic acid, now known to have a neutral effect on cholesterol production. Lean beef, lamb, pork and venison also contain omega-3 fats. The Heart Foundation states women can include 100-150g of lean meat and men 150-200g of lean meat in their daily diet.¹⁸

9. Myth: Red meat causes cancer. **FALSE**
Truth: There are a number of factors that can promote cancer, including obesity, high alcohol consumption, smoking, a lack of physical activity and a low fibre intake, i.e. not eating enough fruit and vegetables. Research looking at meat eaters has only shown an increase in bowel cancer risk for those eating far more meat than the average New Zealander. Most association has been found with processed meats, but mainly in European countries where far greater amounts are eaten than in New Zealand. When the other factors influencing cancer, as listed above, are considered, any link with red meat consumption is reduced. Red meat is typically eaten with high fibre foods such as vegetables and potatoes, all of which are considered by scientists to have a protective effect against bowel cancer. Most scientists feel overall eating habits are more important than any one particular food, so recommend a healthy, balanced diet containing a wide variety of foods.¹⁹⁻²²

10. Myth: Those trying to lose weight have to avoid red meat. **FALSE**
Truth: Lean meat, both red and white, has a positive role in maintaining a healthy weight because it provides valuable nutrients and protein, without the burden of too much fat or energy. Protein-rich lean meat lessens hunger, gives sustained feelings of fullness, and therefore assists those trying to lose weight.³⁻⁸

11. Myth: Meat takes a long time to digest. **FALSE**
Truth: The digestibility of meat protein is very high – around 94%. This is similar to milk, eggs and fish, and higher than plant proteins such as beans, at 78%.²³ Meat will generally leave the stomach within 2-3 hours and be fully digested in 4-6 hours. The human digestive system is well designed to digest meat and absorb its wide range of essential nutrients.

12. Myth: Eating red meat regularly gives you too much iron. **FALSE**
Truth: Iron overload does exist, and it can be a problem, but it is rare. Iron deficiency is a lot more common. It is important to keep these two issues in perspective. There are two ways in which iron overload can occur. Firstly, a rare hereditary (genetic) defect called 'haemochromatosis', which results in increased iron absorption that can cause organ damage. The other is by taking too much iron. Although iron absorption in the body is very efficiently controlled, absorption of iron given as supplements is not as well controlled as that from the diet.

13. Myth: All pork meat is fatty. **FALSE**
Truth: Today's pig is bred and fed by farmers to produce lean meat. 'Trim Pork' is a brand of boneless, skinless, trimmed cuts so low in fat they are eligible to carry the Heart Foundation Tick (less than 4% saturated fat). Trimming any visible fat before cooking is an effective way to further reduce fat intake.

14. Myth: Fish contain dangerous amounts of mercury and should be avoided by pregnant women. **FALSE**
Truth: There are only a few species of fish which may contain very high levels of mercury. These include dogfish, school shark, swordfish, marlin, and fish caught in geothermal waters, such as trout, and should only be eaten during pregnancy once every one or two weeks. Other species of which to be mindful include orange roughy, hapuka, groper, ling and bluenose, being limited to four servings (each of about 150g)/week. Eating fish regularly during pregnancy offers many health benefits. More commonly eaten species, such as tarakihi, blue cod, hoki, salmon and all canned fish are of little concern. They should continue to be included as part of a healthy, balanced diet.²⁴

15. Myth: Eggs with brown shells are better than those with white shells. **FALSE**
Truth: Shell colour is determined by the breed of the hen, and has no effect on the nutritional value, flavour or quality of the egg.

16. Myth: You should limit the number of eggs you eat. **FALSE**
Truth: For the general population, eggs can be included as part of a normal, varied diet.¹⁸

17. Myth: Plant-based diets are better than omnivorous diets. **FALSE**
Truth: Omnivorous diets contain the full range of nutrients needed for optimum health. Plant-based can also contain all the required nutrients, although the bioavailability of some micronutrients, such as iron and zinc, is lower in plant sources.

What does this mean for the health professional?

New Zealanders can enjoy naturally nutrient-rich foods of animal origin as part of a balanced diet. They are an important supplier of many essential nutrients to the New Zealand diet. Our very physiology shows we are designed to eat a mixed, omnivorous diet. Those who exclude all foods of animal origin from the diet are at risk of inadequate intakes of several nutrients, in particular iron, zinc, calcium, vitamin B₁₂ and D. Dietary planning will be required for those who do not consume these foods and the reduced bioavailability of iron, zinc and calcium from plant-based sources should also be considered.

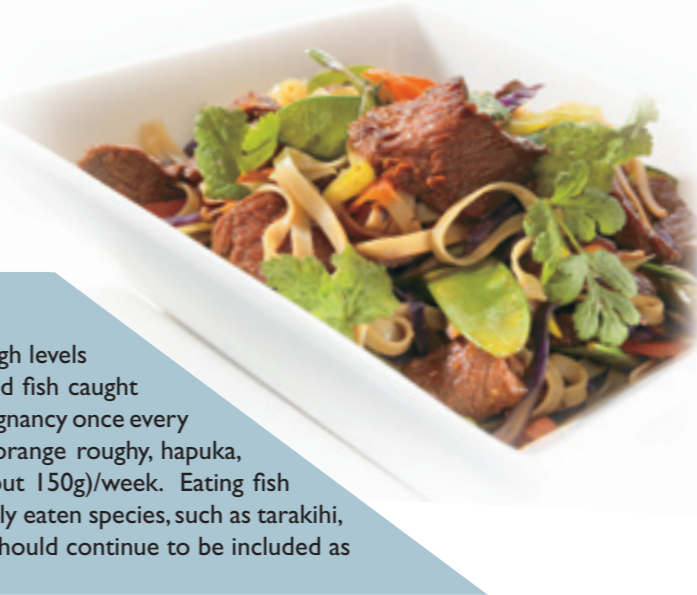
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The full report 'The Nutritional Importance of Foods of Animal Origin in a Healthy New Zealand Diet' was reviewed by:
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Copies of the full report are available by contacting The New Zealand Beef and Lamb Marketing Bureau on 0800 733 466.



DIET, DIVERSITY & WELLBEING

The Nutritional Importance of a Mixed Diet for Healthy New Zealanders

- ▶ **How do foods of animal origin contribute to the health of New Zealanders?**
- ▶ **What are the potential consequences of not including them in the diet?**
- ▶ **Myths and misconceptions explored and exploded.**

"It's really important to encourage people to continue to eat a mixed diet because that's what their body's designed to handle"

Professor Robert Pickard, Director General, British Nutrition Foundation

► Man cannot live by bread alone

A number of physical factors indicate we are designed to eat a mixed, omnivorous diet:

- Our teeth include incisors for eating meat, as well as molars for grinding plants.
- Our digestive system contains a mixture of bacteria and enzymes, all designed to digest a wide range of animal and plant foods alike.

In New Zealand we enjoy a mixed diet of foods from the four major food groups:

1. **vegetables and fruit**
2. **breads and cereals**
3. **milk and milk products**
4. **lean meat, poultry, seafood, eggs, nuts, seeds and legumes.**

We are fortunate to have access to a wide range of foods which are both enjoyable and good for us. Foods of animal origin have always played a central role in the eating patterns of New Zealanders. These include beef, lamb, pork, venison, dairy, eggs, poultry and seafood and fall into two of the food groups recommended for a healthy, balanced diet.

Foods of animal origin are naturally nutrient-rich. They contribute a wide variety of nutrients, including protein, dietary fats, vitamins A, B₁, B₂, niacin, B₁₂ and D, plus the minerals iron, zinc, calcium, magnesium, copper, potassium, phosphorus, selenium and iodine. The Ministry of Health food and nutrition guidelines for all age groups, plus those for pregnancy and breastfeeding, advise the inclusion of animal foods on a daily basis as part of a healthy, balanced diet. They recommend at least two servings per day of milk and milk products, and at least one serving per day of lean meat, poultry, seafood, eggs and alternatives.

► Essential Vitamins and Minerals found in Foods of Animal Origin

	Milk ^a	Cheese ^b	Yoghurt ^c	Eggs ^d	Beef ^e	Lamb ^f	Pork ^g	Venison ^h	Chicken ⁱ	Seafood ^j
Folate	•	•	•	•	•	•	•	•	•	•
Niacin	•	•	•	•	•	•	•	•	•	•
Riboflavin	•	•	•	•	•	•	•	•	•	•
Thiamin	•		•	•	•	•	•	•		•
Vitamin A	•	•	•	•			•		•	•
Vitamin B₆	•		•	•	•	•	•	•	•	
Vitamin B₁₂	•	•	•	•	•	•	•	•	•	•
Calcium	•	•	•	•						•
Iron				•	•	•	•	•	•	•
Potassium	•	•	•	•	•	•	•	•	•	
Selenium	•	•	•	•	•	•	•	•	•	•
Zinc	•	•	•	•	•	•	•	•	•	•

Source: Athar, N., et al. (2006). The Concise New Zealand Food Composition Tables. 7th Edition. Palmerston North: New Zealand Crop & Food Research Ltd; Wellington: Ministry of Health.

^a Milk, fluid, standard (250ml)

^b Cheese, cheddar, mild (40g)

^c Yoghurt, plain, unsweetened (150g)

^d Eggs, size 7 egg, boiled (50g)

^e Beef, composite cuts, lean, cooked (100g)

^f Lamb, composite cuts, lean, cooked (100g)

^g Pork, leg steak, lean, grilled (100g)

^h Venison, leg, roasted (100g)

ⁱ Chicken, flesh, cooked (100g)

^j Seafood, tarakihi, flesh, baked (100g)



► Power pack of nutrients: Important Sources and Health Consequences of Inadequate Intakes

New Zealanders obtain a range of essential vitamins and minerals by eating a mixed diet which includes naturally nutrient-rich foods of animal origin. Excluding all foods of animal origin from the diet may result in inadequate intakes of several nutrients, particularly iron, zinc, calcium and vitamins B₂, B₁₂ and D. Careful planning is required to ensure the required nutrient intakes are maintained if foods of animal origin are not consumed. The reduced bioavailability of nutrients such as iron, zinc and calcium from plant-based sources should also be considered.

Zinc

Zinc is important for a healthy immune system. Inadequate intakes can lead to impaired growth and development in children and lower resistance to infection.

Iron

Animal foods contain the better absorbed 'haem' iron and contribute 31% of adult iron intake.¹ When the increased absorption rate is considered, these foods contribute 54% of absorbed iron in adults. Symptoms of iron deficiency can include impaired behavioural and cognitive development in babies, impaired energy metabolism, fatigue and lowered resistance to infection.

Calcium

Calcium is essential to the development of strong teeth and optimal bone health. Too little calcium increases the risk of fractures and osteoporosis as well as poor dental health.

Protein

The protein in animal foods contains a complete range of amino acids – the building blocks for growth and repair. These foods have also been shown to have an effect on satiety, assisting in weight management, particularly with respect to dietary compliance and total body fat loss.²⁻⁷

Selenium

New Zealand soils are low in selenium, which in the past has led to relatively low selenium intakes amongst New Zealanders. Fish and seafood contribute almost 30% of selenium intakes.⁸

Vitamin A

About half of New Zealand children's vitamin A intake comes from retinol, the biggest contributors being dairy products.⁹ The milk produced from grass-fed cows in New Zealand has higher levels of beta-carotene compared to that of grain-fed cows overseas.

Vitamin B₁₂

Vitamin B₁₂ is only found naturally in foods of animal origin, so both New Zealand adults and children obtain most vitamin B₁₂ from these foods.¹ Vitamin B₁₂ has a role to play in a healthy nervous system. An inadequate intake can impair cognitive function and increase the risk of pernicious anaemia.

Vitamin D

Around a third of New Zealand children have been shown to have a low vitamin D status, with the same number of adults having vitamin D insufficiency.¹ Most of our vitamin D is made in the skin as a result of exposure to sunlight, but with cancer prevention messages including advice about reducing time in the sun, dietary sources of vitamin D are becoming increasingly important. There are few natural dietary sources of vitamin D, and most are foods of animal origin. Vitamin D works with calcium, having a major role in optimising bone health.

Iodine

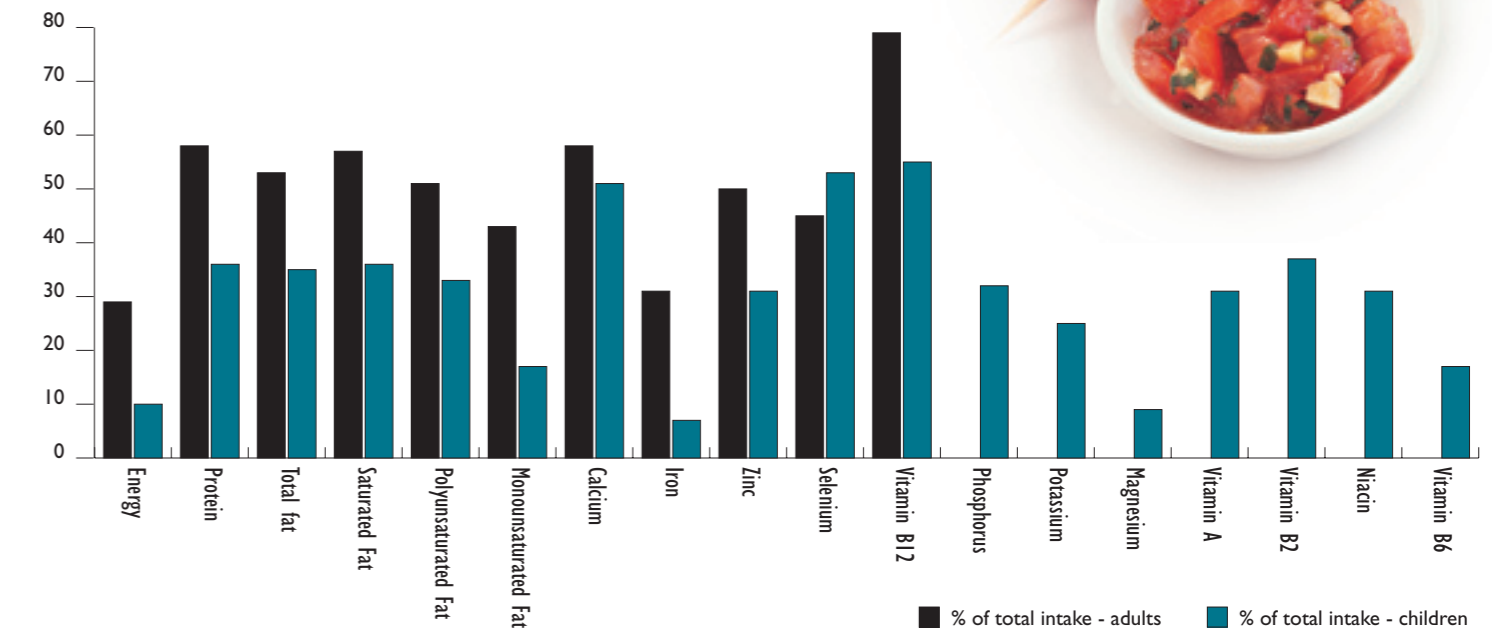
Iodine intakes have been falling in New Zealand to levels below those recommended.¹¹ Eggs, fish and seafood, including seaweed, are good dietary sources.



► New Zealanders' Eating Patterns

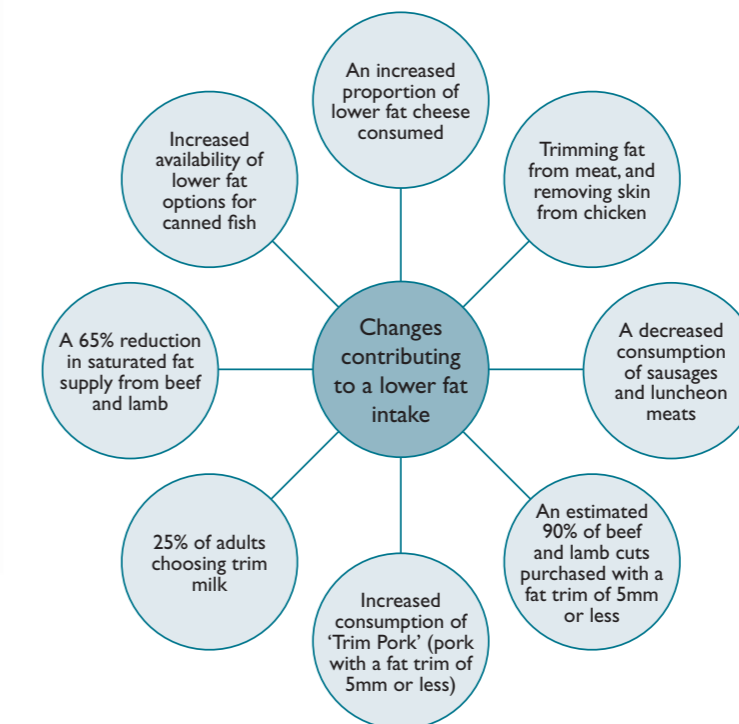
Two major national nutrition surveys, carried out in the last 10 years, have provided a 'picture' of our national diet today, for both adults and children.^{1,2} Ninety four percent of adults and over 95% of children in New Zealand eat an omnivorous diet, which is one containing foods of animal origin. This increases to 99% of children in rural areas.

% Contribution of animal foods to total dietary intake of New Zealand adults and children



► Dietary Fat

Only around half the total and saturated fat intakes of adults comes from foods of animal origin. In children they provide just over a third. Some of the changes which have contributed to a reduction in fat intake include¹²:



Monounsaturated fat

Animal foods provide almost half of New Zealanders' monounsaturated fat, more commonly associated with olive oil, which only contributes 5%.¹

Polyunsaturated fat

Seafood and meat both contain useful amounts of the two types of polyunsaturated fat, omega-3 and omega-6 fatty acids. These are important for heart health and normal brain function. Contrary to some recent press reports, studies have found regular consumption of fish and fish oils has beneficial effects on heart health.¹³ Oily fish, such as salmon, tuna, kahawai and sardines, is the richest source of omega-3 fatty acids. Useful amounts are also found in meat derived from New Zealand grass-fed animals, as well as eggs enriched in omega-3 fatty acids.

Trans Fat

The main sources of trans fat in the New Zealand diet are margarine and hydrogenated fats. These are used in commercially-produced cakes, biscuits, pastries and vegetable oil-based spreads, due to the hardening of vegetable oil. Intake of trans fat is low, however, relative to the consumption of saturated fatty acids, the reduction of which remains the public health priority.

Many foods of animal origin meet the Heart Foundation's criteria to carry the 'Tick'.