A close-up portrait of a woman with long, dark hair, smiling warmly. She has light-colored eyes and is wearing a yellow top. The background is a solid, vibrant red. The text is overlaid on the top left and bottom right of the image.

Thousands of  
New Zealand women  
don't get enough  
iron

Are you  
one of them?

# Iron: What is it?

Iron is a mineral which is essential for good health and for physical and mental wellbeing.

## Iron is used in the body:

- To carry oxygen to all the body's cells.
- To maintain a healthy immune system and fight infection.
- To help release energy from foods.
- For normal growth and development in children.
- To ensure optimum learning in children.

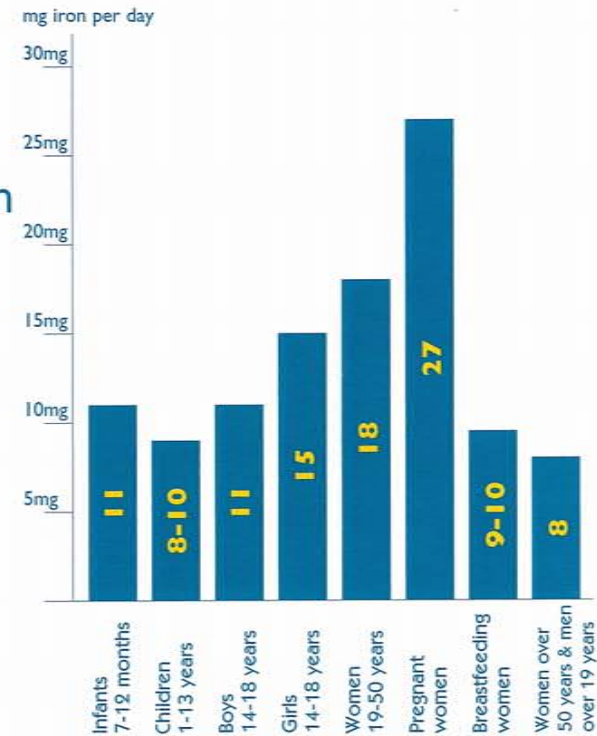
## Who needs iron the most?

- Pregnant women have the highest iron needs for increased blood levels and to build baby's iron stores.
- Infants, children and adolescents need iron because they are growing rapidly.
- Girls and women who have periods, due to regular monthly blood loss. Women in this age group need twice as much iron as men.
- Athletes and very active people.

Thousands of New Zealand infants, teenage girls, slimmers on fad diets, sportswomen and pregnant women are iron deficient.

- Up to one third of New Zealand children under three are iron deficient. Children with low iron can have impaired learning.
- Almost half of New Zealand women don't get enough iron in their diet (45% of teenage girls and 41% of women aged 20 – 49 years).
- Slimmers and vegetarians may not eat a wide enough range of foods to get sufficient iron.

How much iron do we need each day?

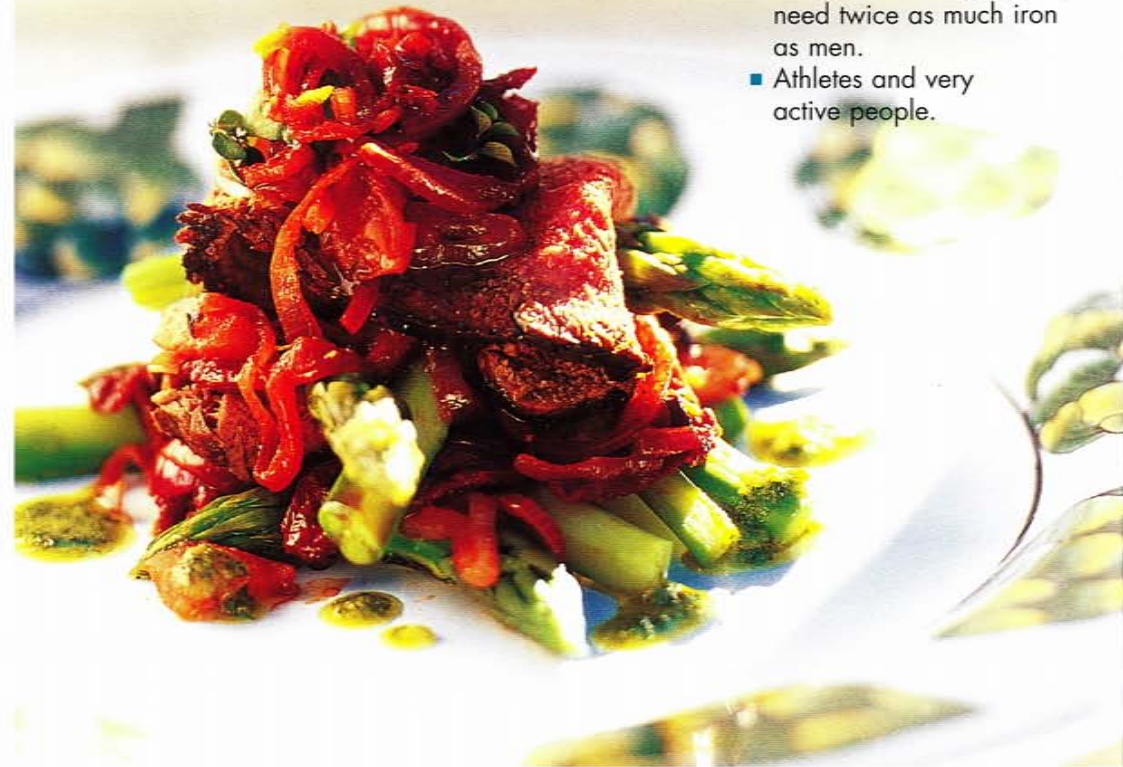


Source: National Health and Medical Research Council (2006). Nutrient Reference Values for Australia and New Zealand including Recommended Dietary Intakes. Canberra: NHMRC, Wellington: Ministry of Health.

## Could I be iron deficient?

We can become iron deficient if we don't eat foods that provide enough iron. The symptoms of iron deficiency are often attributed to 'a busy lifestyle' or 'a bug going around'. But if you can tick any of the boxes it may be because you are not getting enough iron.

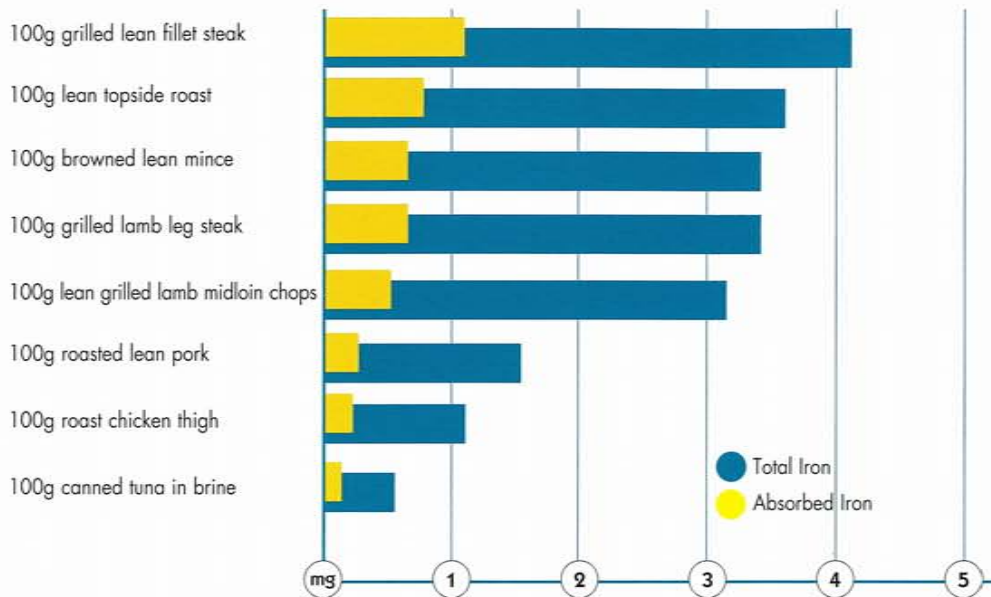
- |                          |                     |                          |                             |
|--------------------------|---------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | Tired or lethargic  | <input type="checkbox"/> | Feel the cold               |
| <input type="checkbox"/> | Irritable or grumpy | <input type="checkbox"/> | Tire easily when exercising |
| <input type="checkbox"/> | Frequent infections | <input type="checkbox"/> | Reduced concentration       |



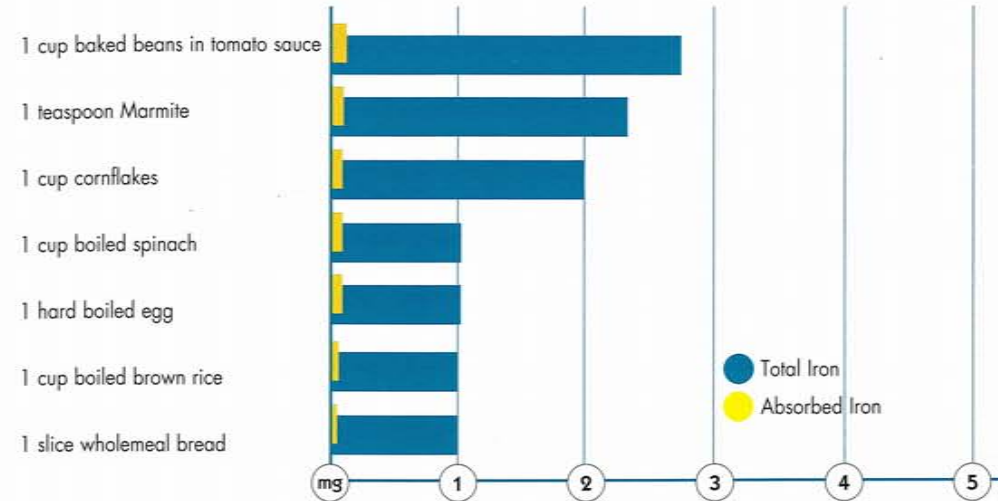
# Iron: Where is it?

Iron is found in a number of foods, including red meat. In general, the redder the meat, the higher the iron content. But not all iron is the same. Iron is found in two forms: haem and non-haem. The body absorbs haem iron more easily, with about a quarter being used, whereas only about 5% of non-haem is absorbed. Red meat can help to increase absorption though, boosting the use of non-haem iron by up to four times. Vitamin C also has a similar effect. Eating a combination of foods high in both haem and non-haem iron will ensure an iron-rich diet.

## Haem iron foods – beef, lamb, liver, kidney, pork, poultry, seafood



## Non-haem foods – vegetables, bread, breakfast cereals, eggs, legumes, nuts, fruit



## Absorption Example

For a woman to get half her daily iron she needs to eat just 120g of lean beef steak. To get the same amount of iron from spinach, she needs to eat a massive 3kg!



## Follow these easy steps to increase your iron intake

- Eat foods high in haem iron (red meat).
- Eat foods high in non-haem iron (plant foods), combining them with haem iron foods, to boost absorption.
- Eat foods high in Vitamin C (fruit and vegetables) with every meal to boost non-haem iron absorption.



### Breakfast

A glass of juice or Vitamin C-rich fruit such as kiwifruit will boost iron absorption from foods such as cereal, toast and peanut butter. Avoid tea and coffee as they reduce absorption of non-haem iron.

#### Iron source:

Breakfast cereal, peanut butter, toast

#### Absorption booster:

Orange juice

### Lunch

Lean red meat is a rich source of iron. Red meat will also help your body absorb up to four times more iron from vegetables and bread. Vitamin C in an orange or tomato helps further still.

#### Iron source:

Sliced lean lamb, bread

#### Absorption booster:

Tomato, orange, lean lamb



### Dinner

Combine a rich source of haem iron with a rich source of non-haem iron. A lean beef and vegetable stir-fry with brown rice makes a delicious, iron-rich meal.

#### Iron source:

Lean beef, brown rice

#### Absorption booster:

Capsicum, broccoli, rock melon, lean beef

## Tuscan Beef & Pasta

*An iron-rich meal for all the family*

- 500g lean minced beef
- 4 Tbsp olive oil
- 1 onion, finely diced
- 2 garlic cloves, peeled and crushed
- 130g tomato paste
- 500g jar pasta sauce
- 1 Tbsp instant dried beef stock
- 1 tsp allspice
- 1 tsp cinnamon
- 1 tsp paprika
- 2 – 3 fresh or dried bay leaves
- Dash Worcestershire sauce

Heat oil in a frying pan and brown the onion, garlic, beef and spices over a high heat. Add the remaining ingredients, stirring well. Reduce the heat and gently simmer, uncovered for 30 minutes, stirring occasionally. Serve over your favourite fresh pasta accompanied by parmesan cheese, and a spoonful of basil pesto (optional).

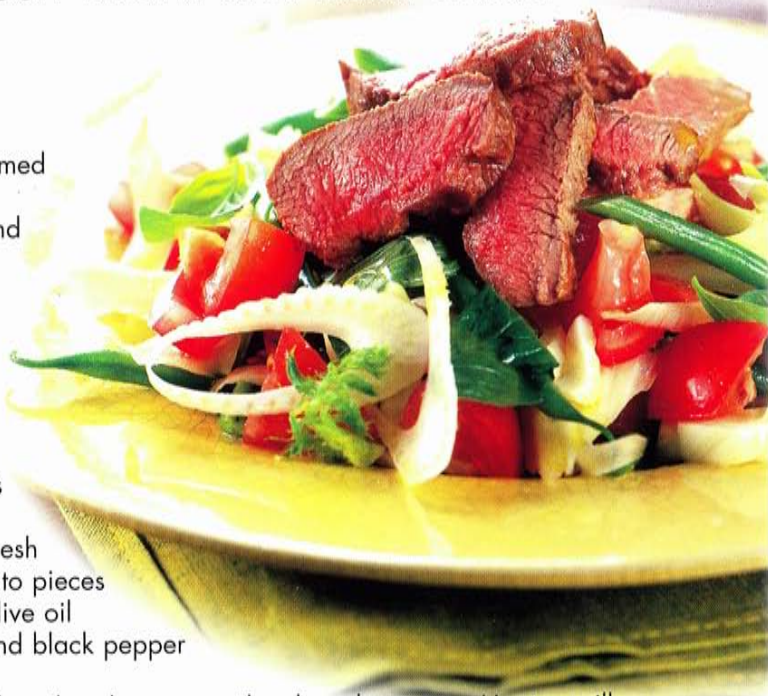


# Grilled Lamb Loin with Fennel, Tomato, Green Beans and Basil Salad

Serves 6

675g New Zealand  
lamb loin fillet, trimmed  
3 Tbsp olive oil  
Salt and freshly ground  
black pepper

For the salad:  
200g green beans,  
topped and tailed  
3 fennel bulbs  
2 Tbsp lemon juice  
6 large ripe tomatoes  
cut into chunks  
2 good handfuls of fresh  
basil leaves, torn into pieces  
2 Tbsp extra virgin olive oil  
Salt and freshly ground black pepper



Brush the lamb with the oil and season with salt and pepper. Heat a grill or griddle pan to very hot and cook the lamb for about 2-3 minutes on each side. Ideally the loin should still be pink on the inside. When cooked, rest the lamb for 5 minutes in a warm place. Slice into half cm pieces.

Cook the green beans in boiling water for 2-3 minutes. Rinse in cold water and drain well. Finely slice the fennel and toss in the lemon juice. To assemble the salad, mix together the beans, fennel, tomatoes, basil and olive oil. Season with a little salt and pepper. Divide between 6 plates, then lay the sliced lamb on top.



**For more information about iron and health and/or recipes,  
please contact Beef and Lamb New Zealand,  
PO Box 33648, Takapuna, Auckland 0740.  
Freephone 0800 733 466 or visit [www.beeflambnz.co.nz](http://www.beeflambnz.co.nz)**