

# Why Hereford beef is important whatever your age

— By Fiona Carruthers

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Humans have been eating meat for millions of years. We know this from the world's oldest human skull discovered in Africa, estimated to be seven million years old. It shows canine teeth required specifically for tearing meat, as well as incisors and molars for chewing and grinding a variety of foods. As well as our teeth, the type of bacteria and enzymes in our gut, and an inability to digest plant cellulose, indicate we are designed to eat meat as part of an omnivorous diet.

Hereford beef has been contributing to our meat intake for over 200 years, with the oldest herd, founded in 1780, still run today by the Norman family just outside Pembridge in Herefordshire. It's good to know then that Hereford beef contains a range of health-promoting nutrients. Most of these nutrients are needed throughout life but some are particularly important at specific times.

## Pregnancy: Iron

During pregnancy, a woman's blood volume doubles increasing the amount of iron she needs in her diet by two to three times. Although iron is found in a number of foods, meat and seafood are the only sources of haem iron, which is more easily



used by the body. On average 25% of haem iron is absorbed compared to 5% of non-haem iron, found in foods such as vegetables and cereals. Consequently, we obtain about the same amount of iron from a 120g lean beef steak as from 1kg spinach.

## Babies: Omega 3s

Iron is also important for babies as birthweight triples in the first year. Equally vital to their growth and development are omega 3s. A baby is born with billions of brain cells, but in order to start functioning after birth those cells need to connect to each other. This requires omega 3s, one of the fats found in beef.

## Grass & Grain

There's on-going debate about the nutritional differences between meat derived from animals raised on pasture and meat from animals raised on grain. Those nutritional differences centre on the fat profile, in particular the omega 3s. The omega 3 level of meat derived from animals raised on pasture is higher per gram of total fat, but as meat from animals raised on grain tends to be higher in total fat, the difference in omega 3 content is often insignificant. Omega 3 levels also appear to vary according to pasture and season, so comparisons are not straightforward. In addition, oily fish will always contain more omega 3s than meat, but meat does make a valuable contribution. In Australia, almost a third of the population's omega 3 intake is derived from beef and lamb. The bottom line: all beef makes a contribution, particularly for those who eat little fish.

## Toddlers: Zinc

Levels of iron deficiency in babies have long been a concern but the vulnerability of toddlers is becoming increasingly apparent – where low levels of zinc are seen in addition to iron. Toddlerhood is a time when a youngster's individuality takes shape, often best seen at the meal table, through 'fussiness' and its resulting food restrictions. It is also the time most children are transitioning from nutrient-rich breast milk or fortified baby milks onto cow's milk, lower in both iron and zinc. Zinc has a number of functions, but for toddlers, its greatest importance comes from the role it plays in growth and DNA formation. Meat, including beef, is a major source of zinc for this age group.

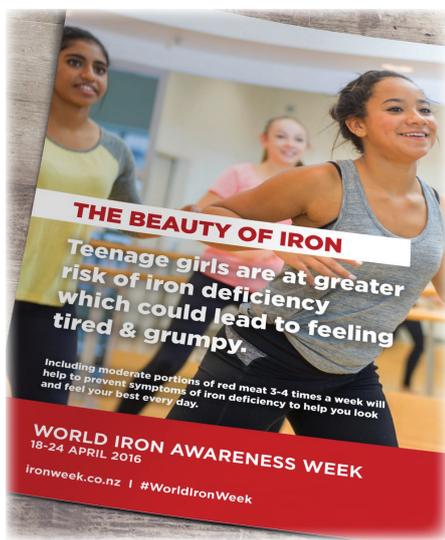
## Children: Protein

Growth remains a theme throughout childhood, for which high quality protein is an essential component of the diet. The protein in beef is just that – high quality. It contains all the essential constituents of protein called amino acids. That's not the case for non-meat protein sources, so these foods need to be combined with one another, e.g. baked beans on toast, in order to provide the full range of building blocks critical to growing children.

## Teenagers: Iron

The teenage years are a busy time





emotionally and physically. Whilst growth continues, the importance of iron re-emerges with the onset of puberty, particularly for girls. The symptoms of insufficient iron are tricky to spot and separate from the general demeanour of this age group - irritability, difficulty concentrating and tiredness. These probably sound familiar to the parents of teenagers! It's also a time many teenage girls experiment with fad diets and food exclusions, including meat. This can put their nutritional status at risk if care isn't taken to ensure excluded foods are replaced adequately.

### Adults: Selenium

Adulthood spans several decades and therefore a range of dietary needs. Micronutrients, such as iron and zinc, remain significant for younger adults through their child-bearing years. But it is selenium which becomes central to the nutritional needs of middle-aged adults as we begin to outlive our 'natural' lifespan. Ageing involves oxidation, the same process seen when metal rusts or an apple goes brown. It also occurs in common degenerative diseases, such as heart disease and cancer. Selenium is a powerful antioxidant so works to protect against the oxidative process. Meat and cereals contribute the greatest amount of selenium in the UK diet.

### Older adults: Vitamin B12

As quantity of life increases, the quality of life can also be enhanced by aiming

to maintain good health and prevent illness. Eating well can help achieve this although a declining appetite and inability to use nutrients as efficiently can make this harder. As a result, many older people go short on vitamin B12, required at this age for a healthy nervous system and good digestion. Vitamin B12 is only found naturally in animal foods, e.g. meat, fish and eggs. Offal meats, such as liver and kidney, are especially rich, cost effective and convenient sources of this vitamin for those in their later years.

### A lot in a little

Despite highlighting one nutrient of particular significance during each life stage, the whole bundle of nutrients found in beef is beneficial throughout life. Most are needed most of the time. Beef contains a lot in a little, and whilst some is good, more is not usually better, hence the benefit of nutrient-rich foods, such as meat, over dietary supplements.

### Myths and misconceptions

Having established beef is such a nutritious food, why then does it attract negative press, and is it justified? Let's unwrap some of the most common 'allegations'.

#### Do we eat too much red meat?

The average meat intake in most countries does not exceed the recommended amount. There are however individuals at the extremes of intakes for every food, some eating too much and some too little. Dr Elsie Widdowson, pioneer of nutrition in the UK and designer of the wartime diet, once suggested we should eat "a little bit of everything and not too much of anything" and these remain wise words today.

#### Does red meat cause cancer?

No single food causes cancer and that includes meat. Most studies investigating whether there is a link between meat and cancer are epidemiological. This type of study only looks at associations between two factors and cannot determine cause and effect. For example, breast cancer is associated with wearing a skirt, but wearing a skirt does not cause breast cancer. The same is true for studies showing an association between a food and a particular type of cancer; however big or small the association, it does not show one causes



the other. The greatest diet-related factor influencing cancer is obesity, which itself has many causes.

The type of risk being quoted also needs to be considered when looking at the results of scientific studies. Relative risk is often reported, but the absolute risk determines the potential impact of that increase when put in context. For example, if the increased risk of something occurring is 50%, but the absolute risk of it is low, e.g. 0.001%, even with a 50% increase in risk, the likelihood of it happening is still very low.

#### Does avoiding red meat help you lose weight?

No. The protein in meat helps us feel full for longer, so is an important part of a balanced diet for those trying to lose weight.

#### Is red meat high in fat?

Much of the fat on beef is visible so can be removed, making lean beef a low fat food. Almost all lean cuts of beef are below 10% fat, compared, for example, with cheese, cakes and biscuits having fat contents of over 20% in many cases.

When myths are heard often enough, they can become accepted as true, irrespective of the evidence, or lack of it, underlying them. "There is nothing either good or bad, but thinking makes it so" from Shakespeare's Hamlet reflects this well, and describes how untruths can be thought into being. The meat industry has suffered as a result of this.

Many of the so-called claims about beef are unfounded; lean beef is not high in fat or fattening, and does not cause cancer, heart disease or obesity. Hereford beef remains an important part of a healthy, balanced diet as it has been for over 200 years. It contains a bundle of essential nutrients, offering something to everyone whatever their age.

