

Red meat and women

Red meat is a source of highly bioavailable nutrients, such as iron, zinc and protein. The significance of this for women is that, due to their smaller size, they generally require and consume less energy than men. But because they eat less food in total, their intakes of micronutrients such as vitamins and minerals also tend to be lower. Moreover many women reduce their food intake still further because of attempts to lose weight. Vitamin and mineral intake is correlated with energy intake. In other words as energy intake falls, so does the intake of micronutrients. This makes food selection even more critical to ensure adequate intakes of vital micronutrients are consumed from nutrient dense sources such as red meat.

Women's Nutrient Requirements

Despite a generally lower intake of nutrients, women's requirements for vitamins and minerals and trace elements are not less than those of men and in some instances (e.g. iron) are higher, primarily due to menstrual losses. Women may also have an increased need for micronutrients such as folate, zinc and vitamin B12 as a result of pregnancy and lactation. Women are therefore more vulnerable to dietary inadequacy than men. Younger women are particularly vulnerable for a number of reasons. These include a high physiological need, poor diets and unhealthy lifestyle practices such as excessive alcohol intake, skipping meals, and low levels of physical activity.

Evidence of Inadequate Intake

The National Diet and Nutrition Survey (NDNS) found that low micronutrient intake and status were more common in women, particularly younger women, than in men. Overall, more than 90 per cent of women had intakes of iron below the Reference Nutrient Intake (RNI) compared with 16 per cent of men. A quarter of women (and over 40 per cent of those aged 19-34 years) had intakes of iron below even the Lower Reference Nutrient Intake (LRNI) compared with only 3 per cent of men.¹

The RNI for iron for adult women is 14.8mg/day while for men it is 8.7mg/day. Not surprisingly, in the NDNS, the proportion of women with evidence of anaemia or low

¹ Henderson et al 2003. National Diet and Nutrition Survey. Adults aged 19 to 64 years. Volume 3. London: The Stationery Office, 2003

iron stores was also significantly higher.² The proportion of women with intakes of zinc below the RNI was also high at almost half the female adult population.

Current Advice

The recently published Department of Health report on Iron and Health (SACN 2011)³ recommended that health professionals need to be vigilant of poor iron status in vulnerable groups, such as women of childbearing age and teenage girls. The symptoms of iron deficiency include tiredness, fatigue, breathlessness, pallor, impaired physical work performance and poor cognitive function. These should prompt investigation followed by appropriate dietary advice on how to increase iron intake.

The use of iron supplements should be considered if required, but the current evidence does not support the routine iron supplementation of pregnant women unless they have haemoglobin concentrations below 110g/L in the first trimester and 105g/L at 28weeks (NICE 2008)⁴.

Dietary Awareness

Although women, especially older women, tend to be more proactive than men in terms of taking care of their health, their perception of what is important is not always accurate. A survey by online resource www.meatandhealth.com (2010) found that almost half of women believed spinach to be the best source of iron. In fact, you would need to eat a large amount of spinach to get the same amount of iron as there is in a 4oz (100g) sirloin steak. Three quarters of the women surveyed did not know that the RNI for iron is (14.8mg/day). This falls to 8.7mg for women over 50 years. The vast majority of women (90%) did not know the difference between haem and non haem iron. Haem iron is the highly bioavailable form of iron found in meat and animal tissues, while non-haem iron is found in vegetables and cereals and is less bioavailable.

Top tips for boosting iron intake:

² Ruston et al. National Diet and Nutrition Survey. Adults aged 19 to 64 years. Volume 4. London: The Stationery Office, 2004

³ SACN (Scientific Advisory Committee on Nutrition) (2010) www.sacn.gov.uk/pdfs/sacn_iron_and_health_report_web.pdf

⁴ NICE (National Institute for Clinical Excellence) (2008). Antenatal care.

- Use extra-lean mince to make lasagne, spaghetti Bolognese, meatballs, cottage pie and homemade burgers. A dinner of spaghetti Bolognese with whole-wheat pasta will provide 6.6mg iron – that's 47% of the RNI – while a burger in a wholemeal bap with salad provides 5.4mg of iron, and a plate of cottage pie, contains 3.7mg iron.
- Choose red meat – the darker the flesh, the higher the iron content. This means that beef contains more iron than lamb and pork. Leg meat in poultry is generally higher in iron than breast meat, which in turn contains more than most types of salmon.
- Start the day with a bowl of breakfast cereal and semi-skimmed milk. Many breakfast cereals are fortified with iron so that a standard bowl provides 6mg of iron. This iron isn't as well absorbed as the iron in meat so add a vitamin C-rich fruit such as strawberries, kiwi, or a glass of fruit juice to help the body absorb this iron.

In Conclusion

Within a healthy balanced diet lean red meat can play an important role in preventing nutrient deficiency for women due to its rich vitamin and mineral content.

Health promotion for women should emphasise the importance of a healthy, balanced diet for reducing the risk of micronutrient deficiencies, and in particular how women can improve their intakes of food sources of iron and zinc to protect their health.

Please visit www.meatandhealth.com for more information.