

Red meat and zinc

Zinc has a wide range of functions in the body. It is needed for the growth of body cells. Zinc also contributes to normal fertility and reproduction, the normal function of the immune system and the maintenance of normal hair, skin and nails. Zinc is essential for good health.

Meat, especially beef and lamb, is a good source of zinc with 33% of the our average zinc intake coming from meat and meat products overall¹. Red meat is the main source within this food group contributing 31% of total zinc intake for men and 21% for women¹. Compared with the zinc in vegetarian foods, red meat zinc is well known to be better absorbed. This explains why zinc intake can be lower in people who eat no red meat.

Zinc intake

The Reference Nutrient Intake (RNI) or recommended intake² for zinc is 9.5 mg/day for men and 7.0 mg/day for women. Around 6% of adults (aged 19-64 years) and 19% of children (aged 11-18 years) have intakes below the Lower Reference Nutrient Intake. This is the minimum intake needed for normal health in the majority of people.¹

Zinc in the diet

The amount of zinc absorbed overall depends on the foods present in the diet. It has been estimated that between 30-50% of the zinc in a mixed diet (containing meat and vegetable proteins) is absorbed. However, when diets are low in meat and rich in cereals which are rich in phytate³ - a type of dietary fibre, zinc absorption can be as low as 15%.⁴

¹ Bates B et al. National Diet and Nutrition Survey. Results from Years 5-6 (combined) of the Rolling Programme (2012/13 – 2013/14), Public Health England, 2016.

² Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Department of Health, 1991.

³ Phytate is a substance found in the hulls or outer coatings of grains, seeds and nuts, which binds minerals such as zinc and iron and reduces their absorption from the gut.

⁴ EFSA Scientific Opinion on Dietary Reference Values for zinc. European Food Safety Authority Panel on Dietetic Products, Nutrition and Allergies (NDA), 2015.

Therefore, eating meat therefore contributes not only to the amount and quality of zinc in the diet but also the amount of zinc absorbed by the body.

Zinc content of various types of red meat compared with other foods

Food. Per 100g	Zinc (mg)	Food. Per 100g	Zinc (mg)
Lean grilled rump steak	5.6	Grilled chicken breast	0.8
Lean roast beef topside	5.6	Roast chicken, dark meat	2.2
Lean braised steak	9.5	Cheddar cheese	4.1
Lean grilled lamb cutlets	3.6	Semi-skimmed milk	0.4
Lean roast leg of lamb	4.6	Seeded bread	1.5
Lean diced lamb shoulder, grilled	5.6	Cooked wholemeal spaghetti	1.1
Lean grilled pork loin chops	2.4	Bran flakes	2.1
Lean roast pork leg joint	3.2	Canned kidney beans	0.7
Lean diced pork, casseroled	3.6	Mixed nuts	3.5

In Conclusion

Eating red meat contributes not only to the content of zinc in the diet but also improves the amount of zinc absorbed from the whole diet. People consuming no red meat can be at much greater risk of zinc deficiency than people who regularly eat red meat

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