

## Red meat and cancer



In the human body cells are renewed and replaced constantly. This is carefully regulated by a complex system of checks and balances.

However, alterations or damage to cells can occur which, over time, may result in uncontrolled growth and the beginnings of cancer. There are many types of cancer but all start as a single cell that has lost control of its normal growth, replication and termination.

Researchers have determined that cancer can be caused by many different factors. These include factors within the body, such as genetics, inflammation and hormones, or external factors, such as radiation, toxic substances, infections, smoking and poor diet and lifestyle. Cancer may be caused by a single factor (e.g. asbestos) or, more usually, a combination of factors. The development of cancer generally takes several years or decades to progress. Early diagnosis and better treatment have improved survival rates for most cancers.

Researchers have tried to determine the role of diet in cancer and red meat is one of many factors being considered. The type of cancer most studied in relation to red meat has been bowel cancer.

### What do we know?

Establishing a link between any dietary factor and cancer is difficult. Cancer develops over a long period of time so it is not possible to assess immediate effects of certain foods on the risk of cancer.

Although some studies have linked high red meat intakes (e.g. more than 100 g per day) with increased risk of bowel cancer, the effect size is relatively small, compared with, for example, the very large impact of smoking on lung cancer risk. The definition of red meat and processed meat are also not uniform across these studies and methods for measuring intakes vary. The UK Department of Health has concluded that eating a lot of red and processed meat probably increases your risk of bowel cancer. However, it is important to remember that red and processed meat is only one of many factors which may increase our risk of bowel cancer and that it is the overall balance of our diet that is most important.

Risk factors vary between men and women and with height, weight and age. Also as we are living longer our chances of developing bowel cancer increase. All this makes it impossible to single out one particular food group, such as red meat, as a cause.

### **What can I do to reduce my risk of cancer?**

Choosing a healthier lifestyle is the best way of reducing cancer risk. This includes:

- Stopping smoking
- Being sun smart
- If you drink alcohol, doing so within recommended limits
- Eating a healthy diet, including eating a variety of fruit and vegetables and plenty of fibre (roughage)
- Being active
- Maintaining a healthy body weight

### **Recommendations for red meat intake**

The Department of Health highlights that red meat is a good source of protein, and vitamins and minerals such as iron, selenium, zinc and B vitamins. It is also pointed out that red meat is one of the main sources of vitamin B<sub>12</sub>, which is only found in foods from animals, such as meat and milk, and foods made from certain microbes e.g. yeast extract.

For these reasons the Department of Health does not recommend we exclude meat from the diet. However, it is recommended that we choose healthier meats, such as lean cuts of meat and leaner mince, where possible. It is also recommended that we consider our frequency of consumption and portion size.

### **How much red meat do we consume in the UK?**

Overall our intake of red meat in the UK diet has fallen during the last few decades. In the UK the average total red meat consumption for men is around 84 g per day while, for women, it is around 47 g per day. This gives an average of 65 g per day for all adults.

Those who eat more than 90 g are considered to have a relatively high intake, compared with the average. It is recommended that these people cut down, so that their consumption is no more than 70 g per day, closer to the current average.

According to UK dietary surveys, around 4 in 10 men and 1 in 10 women eat more than 90 g of red and processed meat a day. Therefore most people do not need to make any changes to their present consumption patterns in order to meet the recommendation. More than 90 g of cooked weight per day is considered to be a large amount<sup>1</sup>. Cooked meat weighs about 70% of its uncooked weight, mainly because it contains less water. So 90 g of cooked meat is equivalent to about 130 g of uncooked meat.

Examples of a 70 g portion of meat are:

- one medium portion shepherds pie
- two standard beef burgers
- one lamb chop
- two slices of roast lamb, beef or pork
- three slices of ham

As a further guide 1 rasher of bacon 25 g, 1 slice of ham 23 g, 1 small grilled sausage 20 g, 1 large grilled sausage 60g, rump steak 102g , slice of pâté 40g

### **In Conclusion:**

The best way of reducing risk of cancer is by choosing a healthy, active lifestyle most of the time. Meat and meat products make a significant contribution to nutrient intakes and, when consumed in moderation, can be enjoyed as part of a healthy, balanced diet.

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<sup>1</sup> Department of Health 2011 [www.dh.gov.uk/en/MediaCentre/Pressreleases/DH\\_124670](http://www.dh.gov.uk/en/MediaCentre/Pressreleases/DH_124670)