

Fact Sheet: Cancer and red meat

Schönfeldt, H.C. & Hall, N

Institute of Food, Nutrition & Well-being, University of Pretoria, Pretoria, South Africa

On 26 October 2015, the International Agency for Research on Cancer (IARC) published a summary of their evaluation of red and processed meat in the British Medical journal *The Lancet Oncology*, and the World Health Organization (WHO) Press Release No 240 swiftly followed.

The IARC is part of the WHO with a mission to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The report concluded that the **consumption of red meat as “probably carcinogenic to humans”**, and that the **consumption of processed meat as “carcinogenic to humans”**.

What we need to understand from the evaluation

- The particular evaluation did not introduce any new evidence and was based on a review of existing scientific literature.
- The IARC represents the opinion of a selected group of scientists and this opinion is not based on consensus in the global scientific community.
- No group member was from a developing country, and no study from the African continent was included in the review.
- The evaluation involved a hazard analysis, not a risk assessment. This distinction is important. It means that the panel members considered whether processed meat and red meat at some level, under some circumstance, could be a hazard. The fact that it did not include a risk assessment means that it did not take into account the real exposure to the substance linked to its potential to cause cancer.
- Despite not conducting a risk assessment, the report continued to publish a risk, namely that eating 50 grams of processed meat each day can increase the risk of colorectal cancer by 18%.
- The final classifications for the 2015 report were based on a majority agreement, and not on unanimous consensus of all members of the working group.

How the report affects South Africans

- Food culture of people differs around the world. The majority of South Africans consume mostly chicken, then beef, followed by pork, lamb or mutton and then processed meat (BFAP, 2015).
- Our processed meat looks significantly different to processed meats found in other countries, i.e. in most viennas, polonies and even fresh wors, the main ingredient is often not derived from red meat, but vegetable proteins and mechanically deboned chicken.
- South Africans in fact consume a low level of processed meat, at an average of 12g per person, per day.

- If a South African does decide to consume more than 50g processed meat each day, the report states an 18% increase risk for colorectal cancer. The normal lifetime risk for developing colorectal cancer in South Africa is 1.03% for men, and 0.62% for women. Increasing this risk by 18%, means your risk of getting colorectal cancer will increase to 1.22% for a male, and 0.73% for a female – remaining a relatively low risk.
- No quantifiable risk for the consumption of fresh red meat was published in the report. Despite being a meat-loving nation, South Africans consume less red meat than what is often perceived. On average South Africans eat notably less protein-source foods (11 to 18%) compared to recommended levels by the World Health Organisation (WHO) which state that 20% of total dietary energy should be from protein (Mchiza et al., 2015).
- Food energy of South Africans are mainly derived from carbohydrates such as maize meal and bread (between 57% and 69%) (Mchiza et al., 2015), which is significantly higher than the recommended 45%. This may be more linked to affordability than to choice.

General

- Cancer is a multi-complex problem that cannot be solved or blamed on one specific product or food group. The best way to minimize your cancer risk is to live a healthy lifestyle, including:
 - Do not smoke
 - Maintain a healthy weight
 - Enjoy regular physical activity
 - Accompany red meat with plenty of vegetables and whole grains
 - If you do drink alcohol, drink responsibly
- Enjoy red and processed meat as recommended in our Food-Based Dietary Guidelines:
 - Eat a variety of food
 - Fish, chicken, lean meat or eggs could be eaten daily
 - Consume up to 90g cooked, lean meat daily.
- Be a conscientious cook:
 - Stay by the grill or barbecue and flip the meat more often to avoid overcooking and possible charring of the meat surface.
 - Avoid direct exposure of the meat to an open flame.
 - Panfry red and processed meat over medium versus high heat.
 - Marinate meat in marinades containing citrus juices like lemon or lime and add spices such as garlic or onion.