

# FOCUS ON NON-COMMUNICABLE DISEASES

## RED MEAT AND CANCER

- ✓ More than 13% of all deaths globally are related to cancer<sup>1</sup>
- ✓ It is estimated that about 70% and rising of all cancer deaths occur in industrialised countries with the incidence rising<sup>1</sup>
- ✓ The burden of cancer is increasing in developing countries as more people live to older ages while adopting western lifestyles, such as smoking, higher consumption of saturated fat and energy dense foods, and reduced physical activity<sup>2</sup>

### South African statistics<sup>3</sup>

- ✓ 1 in 6 men have a lifetime risk of developing cancer - including prostate cancer (1 in 23), lung cancer (1 in 69), esophageal cancer (1 in 82) or colorectal cancer (1 in 97)
- ✓ 1 in 8 women have a lifetime risk of developing cancer - including breast cancer (1 in 29), cancer of the cervix (1 in 35) or colorectal cancer (1 in 162)

Cancer is considered a largely preventable disease. Studies consistently show changes in patterns of cancer development as populations shift, and projections indicate that rates of cancer are liable to increase as countries progress towards westernised diets. However, cancer remains a disease of genes which are vulnerable to mutation, particularly over the increasing human lifespan.<sup>4</sup> Normally various inherent and environmental factors act together or in sequence to initiate or promote carcinogenesis, and it should be remembered that no single study can prove that a single factor is a cause of, or is protective against, any specific type of cancer.

### The most common risk factors for the development of cancer

Ranking	Risk Factor
1	Growing older
2	Tobacco
3	Sunlight
4	Ionizing radiation
5	Certain chemicals and other substances
6	Some viruses and bacteria
7	Certain hormones
8	Family history of cancer
9	Alcohol
10	Poor diet, lack of physical activity, or being overweight

**A balanced diet builds upon the foundation of healthful foods from a variety of food groups, including whole grains, fruit, vegetables, dairy products and lean meats. In order to promote a healthy cancer-fighting diet, emphasis should be placed on a varied diet rich in vegetables, fruit and other fibre rich foods in combination with a moderate intake of lean red meat. Caution should be placed on Westernised lifestyle habits such as the consumption of refined sugars, processed foods, alcohol and smoking.**

**REFERENCES** 1. WHO. 2012. Cancer. Fact sheet No 297. Accessed August 2012. Available online at <http://www.who.int/mediacentre/factsheets/fs297/en/>. 2. American Cancer Society. 2007. Global Cancer Facts & Figures. Accessed August 2012. Available online at [http://www.cansa.org.za/cause\\_data/images/1056/Research\\_-\\_Global\\_Facts\\_&Figures\\_2007.pdf](http://www.cansa.org.za/cause_data/images/1056/Research_-_Global_Facts_&Figures_2007.pdf). 3. NHLS. 2012. Chairpersons Report. National Cancer Registry. Available online at [http://www.nioh.ac.za/?page=chairpersons\\_report&id=67](http://www.nioh.ac.za/?page=chairpersons_report&id=67). 4. WCRF/AICR (World Cancer Research Fund / America Institute for Cancer Research). 2007. Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective. Washington, DC. 5. Alexander et al. 2010. Red Meat and Processed Meat Consumption and Cancer. A Technical Summary of the Epidemiological Evidence. Health Sciences Practice, Exponent, Inc.



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### Red meat and cancer

- ✓ A critical review of thousands of epidemiologic studies found the totality of the available scientific evidence not supportive of an independent association between red meat or processed meat and cancer<sup>5</sup>
- ✓ The link between cancer and red meat consumption is likely to be in relation with other westernised lifestyle factors, including obesity and low physical activity, increased consumption of refined foods, alcohol and smoking and a decreased consumption of vegetables and fruits
- ✓ A moderate amount of up to 500g cooked lean red meat per week is recommended by the World Cancer Research Fund. This is in line with the current recommendations of the South African Food-Based Dietary Guidelines<sup>4</sup>

### Expert opinion:

Dr Carl Albrecht, Head of Research at the Cancer Association of South Africa (CANSA) and the first Cancer Research Advocate in South Africa helping to translate cancer research results into policy, said: "CANSA's main message concerning diet and cancer avoidance is:

- > *Eat and drink moderately using a balanced and varied diet.*
- > *We also emphasise avoiding carcinogens and emerging carcinogens such as BPA, PAHs, acrylamide, aflatoxin, plasticisers and too much sodium nitrite that can form nitrosoamines.*
- > *At the same time we recognise that to lower the risk of cancer, our cells must be exposed to natural balances of nutrients that existed when our biochemistry was evolving. An important example is the need for sufficient omega-3 essential oils (ALA, DHA and EPA) compared to a possible overload of omega-6. This particular balance of about two to one for omega-6 to omega-3 also holds for meat.*
- > *Our dietary vigilance must continue to involve the most crucial aspect of the entire eating exercise, namely our cooking methods, especially of red meat cooked over an open fire. Although this extremely popular pastime may kindle Neolithic nostalgia it is a dangerous exercise because pyrolysis products of meat, such as PHAs, have been linked to prostate, colorectal and pancreatic cancers in epidemiological studies.*

**From this it is clear that the moderate consumption of red meat per se is not the problem. The real problem is what we do to this meat before eating it.**

