

Cancer Association of South Africa (CANSA)



Fact Sheet on Living a Balanced Lifestyle

Introduction

There are many people who still wrongly believe that cancer is totally hereditary (except in children where cancer is largely caused by genetic predisposition), or it is a case of bad luck or even punishment for some wrongdoing and so they think that there is nothing they can do to prevent its occurrence or recurrence.

[Picture Credit: Balanced Lifestyle]

Scientific evidence shows that this is not the case but that lifestyle factors such as diet and exercise as well as the avoidance of carcinogens (cancer causing agents) can play a vital role in lowering the risk for cancer.

When one thinks of health, one might think about various ways to stay healthy - from hand-washing and vaccines to lowering the risk for cancer. The choices one makes every day go a long way toward promoting health.



It is equally important to pay attention to signs and symptoms that may present itself. Know which health warning signs merit medical attention, from unexplained weight loss or changes in bowel habits to shortness of breath and sudden headaches.

Regular physical examinations and health screening tests are an important part of preventive health care. Know which screening tests are needed and how often to have them done. Early detection is often the key to successful treatment.



A balanced lifestyle means that no aspect of life should overshadow any of the others. Many people follow a traditional approach to health and just focus on the body - physical health - but reliable research shows that one cannot separate body from mind, spirit, and lifestyle.

[Picture Credit: Wellness]

Carcinogenicity of Consumption of Red and Processed Meat

Red meat refers to unprocessed mammalian muscle meat – for example, beef, veal, pork, lamb, mutton, horse, or goat meat – including minced or frozen meat – which is generally consumed cooked.

Processed meat refers to meat that has been transformed through salting, curing, fermentation, smoking, or other processes to enhance flavour or improve preservation. Most processed meats contain pork or beef, but may also contain other red meats, poultry, offal (e.g. liver), or meat by-products such as blood.

Processed Meat Classified as Carcinogenic to Humans (Group 1)

The International Agency for Research on Cancer (IARC) classified consumption of processed meat as ‘carcinogenic to humans’ (Group 1) on the basis of sufficient evidence for colorectal cancer. Additionally, a positive association with the consumption of processed meat was found for stomach cancer.

Red Meat Classified as Probably Carcinogenic to Human (Group 2A)

IARC classified consumption of red meat as ‘probably carcinogenic to humans’ (Group 2A). In making this evaluation, IARC took into consideration all the relevant data, including the substantial epidemiological data showing a positive association between consumption of red meat and colorectal cancer and the strong mechanistic evidence. Consumption of red meat was also positively associated with pancreatic and prostate cancer.

How Processed and Red Meat Cause Cancer

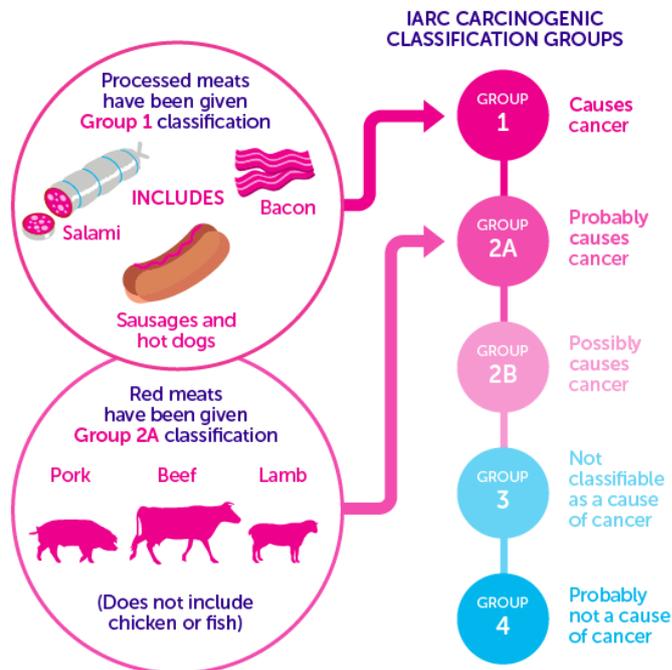
Researchers are still trying to pin down exactly *how* red and processed meat cause cells to become cancerous, but the main culprits seem to be certain chemicals found in the meat itself.

In red meat, the problem starts when a chemical called haem - part of the red pigment in the blood, haemoglobin – which is broken down in the human gut to form a family of chemicals called N-nitroso compounds. These have been found to damage the cells that line the bowel, so other cells in the bowel lining have to replicate more in order to heal. It is this ‘extra’ replication that increases the chance of errors developing in the cells’ DNA – the first step on the road to cancer.

Furthermore, processed red meats contain chemicals that generate N-nitroso compounds in the gut, such as nitrite preservatives.

Cooking meat at high temperatures, such as grilling or barbequing, also creates chemicals in meat that may increase the risk of cancer. These chemicals are generally produced in higher levels in red and processed meat compared to other meats.

MEAT AND CANCER HOW STRONG IS THE EVIDENCE?



[Picture Credit: Meat and Cancer]

These categories represent how likely something is to cause cancer in humans, not how many cancers it causes.

Turesky, R.J. 2018.

“The Working Group of the International Agency for Research on Cancer classified the consumption of processed meat as carcinogenic to humans (Group 1), and classified red meat as probably carcinogenic to humans (Group 2A); consumption of both meat types is associated with an increased risk of colorectal cancer. These classifications are based on a compilation of epidemiology data and mechanistic evidence from animal and human studies. The curing of meats with nitrite can produce carcinogenic *N*-nitroso compounds (NOCs), and the smoking of meat produces polycyclic aromatic hydrocarbons (PAHs). The high-temperature cooking of meat also produces carcinogenic heterocyclic aromatic amines (HAAs). The ingestion of heme from meat can catalyze the formation of NOCs and lipid peroxidation products (LPOs) in the digestive tract. Many of these chemicals form DNA adducts, some of which can induce mutations and initiate carcinogenesis. Another recent hypothesis is that *N*-glycolylneuraminic acid, a non-human sialic acid sugar present in red meat, becomes incorporated in the cell membrane, triggering the immune response with associated inflammation and reactive oxygen species, which can contribute to DNA damage, tumor promotion, and cancer. The mechanisms by which these chemicals in meat induce DNA damage, and the impact of dietary and host factors that influence the biological potency of these chemicals are highlighted in this updated report.”

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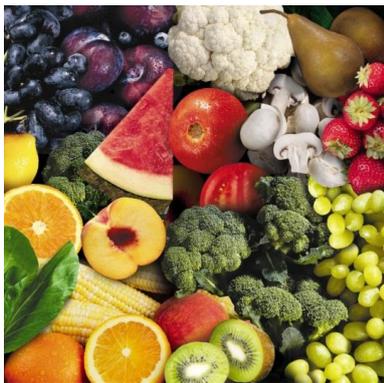
Nutrition

Mastering nutrition basics comes down to understanding the various food groups and becoming more aware of the roles that specific nutrients play in a healthy diet.

Although making healthy selections at the grocery store and at mealtime cannot guarantee cancer prevention, it may help reduce the risk for cancer.

[Picture Credit: Fresh Vegetables]

The following tips of Smart Eating will assist towards attaining and maintaining a healthy lifestyle:



Eat at least five (5) portions of fresh seasonal fruit and vegetables each day

[Picture credit: Fruit and Vegetables]

The evidence for a protective effect of lowering the risk for cancer of greater vegetable and fruit consumption is consistent for cancers of the stomach, oesophagus, lung, oral cavity and pharynx, endometrium, pancreas, and colon. The types of vegetables or fruit that most often appear to assist in lowering the risk for cancer are raw vegetables, followed by allium vegetables, carrots, green vegetables, cruciferous vegetables, and tomatoes. Substances present in vegetables and fruit that may help protect against cancer, and their mechanisms, include dithiolthiones, isothiocyanates, indole-3-carbinol, allium compounds, isoflavones, protease inhibitors, saponins, phytosterols, inositol hexaphosphate, vitamin C, D-limonene, lutein, folic acid, beta carotene, lycopene, selenium, vitamin E, flavonoids, dietary fibre, vitamins, minerals and antioxidants.

Red fruits and vegetables - are coloured by natural plant pigments called lycopene or anthocyanins. Lycopene in tomatoes, watermelon and pink grapefruit, for example, are said to help reduce the risk of several types of cancer, especially prostate cancer. Lycopene in foods containing cooked tomatoes, such as spaghetti sauce, and a small amount of fat are absorbed better than lycopene from raw tomatoes.

[Picture credit: Red fruit & vegetables]



Beynon, R.A., Richmond, R.C., Santos Ferreira, D.L., Ness, A.R., May, M., Smith, G.D., Vincent, E.E., Adams, C., Ala-Korpela, M., Würtz, P., Soidinsalo, S., Metcalfe, C., Donovan, J.L., Lane, A.J., Martin, R.M., ProtecT Study Group, & PRACTICAL consortium. 2019.

“Lycopene and green tea consumption have been observationally associated with reduced prostate cancer risk, but the underlying mechanisms have not been fully elucidated. We investigated the effect of factorial randomisation to a 6-month lycopene and green tea dietary advice or supplementation intervention on 159 serum metabolite measures in 128 men with raised PSA levels

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(but prostate cancer-free), analysed by intention-to-treat. The causal effects of metabolites modified by the intervention on prostate cancer risk were then assessed by Mendelian randomisation, using summary statistics from 44,825 prostate cancer cases and 27,904 controls. The systemic effects of lycopene and green tea supplementation on serum metabolic profile were comparable to the effects of the respective dietary advice interventions ($R^2 = 0.65$ and 0.76 for lycopene and green tea respectively). Metabolites which were altered in response to lycopene supplementation were acetate [β (standard deviation difference vs. placebo): 0.69 ; 95% CI = $0.24, 1.15$; $p = 0.003$], valine (β : -0.62 ; $-1.03, -0.02$; $p = 0.004$), pyruvate (β : -0.56 ; $-0.95, -0.16$; $p = 0.006$) and docosahexaenoic acid (β : -0.50 ; $-0.85, -0.14$; $p = 0.006$). Valine and diacylglycerol were lower in the lycopene dietary advice group (β : -0.65 ; $-1.04, -0.26$; $p = 0.001$ and β : -0.59 ; $-1.01, -0.18$; $p = 0.006$). A genetically instrumented SD increase in pyruvate increased the odds of prostate cancer by 1.29 ($1.03, 1.62$; $p = 0.027$). An intervention to increase lycopene intake altered the serum metabolome of men at risk of prostate cancer. Lycopene lowered levels of pyruvate, which our Mendelian randomisation analysis suggests may be causally related to reduced prostate cancer risk.”



[Picture credit: Yellow fruit & vegetables]

Orange/yellow fruits and vegetables - are usually coloured by natural plant pigments called carotenoids. Beta-carotene in sweet potatoes, pumpkins and carrots is converted to vitamin A, which helps maintain healthy mucous membranes and healthy eyes. Scientists have also reported that carotenoid-rich foods can help reduce risk for cancer, heart disease and can improve immune system function.

Green fruits and vegetables - are coloured by natural plant pigment called chlorophyll. Some members of the green group, including spinach and other dark leafy greens, green peppers, peas, cucumber and celery, contain lutein. Lutein works with another chemical, zeaxanthin, found in corn, red peppers, oranges, grapes and egg yolks to help keep eyes healthy. Together, these chemicals may help reduce risk of cataracts and age-related macular degeneration, which can lead to blindness if untreated.



[Picture credit: Green fruit & vegetables]

The indoles in broccoli, cauliflower, cabbage and other cruciferous vegetables may help in lowering the risk for some types of cancer. Leafy greens such as spinach and broccoli are excellent sources of folate, a B vitamin that helps reduce risk of birth defects.

Gansukh, E., Mya, K.K., Jung, M., Keum, Y.S., Kim, D.J. & Saini, R.K. 2019.

“The present investigation was designed to determine molecular and cellular events involved in anticancer properties of lutein derived from marigold (*Tagetes erecta*) petals using Human

cervical carcinoma (HeLa) cell lines. In vitro experiments demonstrated that lutein at concentration of 10 μ M significantly inhibited proliferation of HeLa cells by up to 62.85% after 24 h of treatment and 84.85% after 48 h of treatment. In addition, lutein inhibited proliferation of HeLa cells in a dose-dependent manner by inducing apoptosis. Lutein-treated HeLa cells also showed enhanced accumulation of reactive oxygen species (ROS) correlated with significant downregulation of Bcl-2 (anti-apoptotic) expression and upregulation of Bax (pro-apoptotic) expression. Furthermore, lutein mediated activation of caspase-3 and imbalance between Bax and Bcl-2 expression, causing significant loss of mitochondrial membrane potential of HeLa cells. TUNEL assays revealed significant damage of nuclei DNA in lutein-treated HeLa cells, demonstrating a critical role of lutein in the final stage of apoptosis. Taken together, the results indicate that lutein-induced apoptosis of HeLa cells occurs through enhanced ROS production, interaction with mitochondrial factors, and upregulation of caspase-3-mediated pathway, leading to fragmentation of nuclei DNA. Therefore, lutein could be potentially useful as a chemotherapeutic and/or chemopreventive biomolecule against Human cervical carcinoma.”



[Picture credit: Blue/Purple fruit & vegetables]

Blue/purple fruits and vegetables - are coloured by natural plant pigments called anthocyanins. Anthocyanins in blueberries, grapes and raisins act as powerful antioxidants and offer anti-inflammatory, anti-viral, and anti-cancer benefits. They may also help to reduce the risk for stroke and heart disease. Other studies have shown that eating more blueberries is linked with improved memory function and healthy aging.

Han, Y., Huang, M., Li, L., Cai, X., Gao,,Z., Li, F., Rakariyatham, K., Song, M., Fernández Tomé, S. & Xiao, H. 2019.

“Cranberries (*Vaccinium macrocarpon*) are full of polyphenols, which display various health benefits. Most studies have focused on extractable polyphenols (EPs) rather than non-extractable polyphenols (NEPs) but NEPs may possess important biological functions. The objective of this work was to characterize EP and NEP fractions from whole cranberries and determine their potential as anti-inflammation and anti-colon-cancer agents. Our results showed that of the identified polyphenols, anthocyanins were the major ones in the cranberry EP fraction, while phenolic acids were most abundant in the NEP fraction. The oxygen radical absorbance capacity (ORAC) of the NEPs was significantly higher than that of the EPs. Both the EPs and NEPs showed anti-inflammatory effects in inhibiting LPS-induced production of nitric oxide in macrophages. At the concentrations tested, the NEPs showed significantly higher inhibition of the production of nitric oxide in macrophages than the EPs, which was accompanied by decreased expression of inducible nitric oxide synthase (iNOS) and increased expression of HO-1. EP and NEP samples showed anti-cancer capacities in HCT116 cells. And the NEPs showed stronger inhibitory effects on the viability and colony formation capacity of human colon cancer HCT116 cells than the EPs. In a flow cytometry analysis, the NEPs caused cell cycle arrest at the G0/G1 phase and induced significant cellular apoptosis in colon cancer cells. Overall, our results suggested that both the EP and NEP fractions from cranberries were bioactive, and importantly, the NEP fraction showed promising anti-inflammation and anti-colon-cancer potential.”

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White fruits and vegetables - are coloured by pigments called anthoxanthins. They may contain health-promoting chemicals such as allicin, which may help lower cholesterol and blood pressure and may help to reduce the risk for stomach cancer and heart disease. Some members of the white group, such as bananas and potatoes, are also good sources of the mineral potassium (North Dakota State University).

[Picture credit: White fruit & vegetables]



Eat more fibre

Examples of fibre include fruit and vegetables with skins included and whole-grain foods such as Bokomo Weetbix and Bokomo Oats (both **CANSA Smart Choices**), mealie pap, brown rice and sorghum.

Dietary fibre is found in cereals, fruits and vegetables. Fibre is made up of the indigestible parts or compounds of plants, which pass relatively unchanged through our stomach and intestines.

Dietary fibre is mainly needed to keep the digestive system healthy. It also contributes to other processes, such as stabilising glucose and cholesterol levels. In countries with traditionally high fibre diets, diseases such as bowel cancer, diabetes and coronary heart disease are much less common than in the West.

Limit meat and rather eat more fish, beans, lentils and soya products

The association between consumption of red and processed meats and cancer, particularly colorectal cancer, is very consistent. Those who eat a Western-style diet high in red and processed meats, desserts, refined grains, and French fries have an increased risk of heart disease, cancer, and death from other causes (WebMD: The truth about red meat; Life is Beautiful).



[Picture credit: Meat]

Regular Red Meat Consumption and Cancer

Epidemiologic evidence suggests that high consumption of red meat like beef, lamb, goat and pork is associated with an increased risk of several types of cancer. The evidence for an association with red meat intake is strongest among case-control studies.

Regular red meat consumption has been linked to:

- Colorectal cancer
- Breast cancer
- Stomach cancer
- Oesophageal cancer
- Nasopharyngeal cancer

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- Pancreatic cancer
- Bladder cancer
- Glioma
- Non-Hodgkin's Lymphoma

Avoid food that is fatty, sugary and salty such as chips, potato crisps, sweets and fast foods

Many of the foods we eat every day are loaded with kilojoules, factory-created fats, salt, artificial flavours, sweeteners, colourings, chemicals that alter texture, and preservatives. Such foods are unhealthy and do not ensure the necessary daily intake of vitamins and minerals. No matter how good it tastes, if one cares for one's health one should cut down on such 'junk' foods.

French fries - French fries (even home-made french fries) is very unhealthy food. French fries are loaded with kilojoules, sodium and fats. The average portion of french fries (170 g) contains 30g of fat and up to 1 200mg of sodium. The high kilojoule content contributes to obesity, high cholesterol and heart disease. French fries are cooked in ultra-hot oil which is high in trans fats.



[Picture credit: French Fries]

Many fast-food restaurants use trans fats to deep-fry foods because oils with trans fats can be used many times in commercial fryers.

Hamburgers - Hamburgers, cheeseburger, deli sandwiches, etc. are a source of unnecessary kilojoules and fat and have no nutritional value, as it lacks vitamins, minerals and fibre.

There is a difference among restaurants in terms of fat and calories content of burgers. Depending on cooking methods and ingredients, a regular hamburger with condiments, vegetables and without mayonnaise has about 1 172 kilojoules (about 15% of the needed daily value) and more than 13g of fat (about 20% of the needed daily value).

Frequent consumption of hamburgers is associated with weight gain and obesity. The food that one eats may influence body fat distribution. Researchers have found that high intake of hamburgers is associated with abdominal obesity primarily in women.



Burgers have a lot of saturated and trans fats. Everything that was said earlier about trans fats in french fries is also true for burgers. Trans fats raise total cholesterol levels, bad LDL, and highly increase the risk for heart disease. Unacceptably high amounts of industrially-produced trans fats may produce a negative effect on the human foetus and on newborns.

[Picture credit: Hamburger]

Most burgers contain more than 1 000mg of sodium (45% of recommended daily value) and can promote water

retention and high blood pressure.

High contents of kilojoules, fat and nitrates make hot dogs a very unhealthy choice. Hot dogs have little nutritional benefit and also may be called 'empty kilojoules. Regular dogs contain 13 or more grams of fat per serving and do not provide much protein.

Hot dogs - Hot dog meat may contain mutagenic heterocyclic amines, some of which are proven carcinogens. These compounds are formed during the cooking of meat. To increase shelf life and preserve flavour, processed foods tend to contain trans fats (hydrogenated fats). Hydrogenated fats take a longer time to go rancid due to their stability. Trans fatty acids can cause coronary heart disease.



[Picture credit: Hot dog]

Hot dogs are prone to carry the bacteria called *listeria* that causes foodborne illness. It also contains high amounts of sodium. High salt content will promote water retention. Sodium nitrite (or nitrate) is used as a preservative, colouring and flavouring in hot dogs and other processed meats.

Bacon – Fried bacon can drastically increase the level of cholesterol. It is also high in salt (sodium) and full of both nitrites and nitrates.

Eating cured meat like bacon and hot dogs is linked to increased risk of colorectal cancer and lung disease. Nitrites are added to cured meat as preservative, colour or as anti-bacterial agent. It is thought to generate reactive nitrogen species in the body, molecules that cause structural damage to lung tissue, in a similar way to emphysema.



[Picture credit: Bacon]

Eating large quantities of cured meats like bacon could damage lung function and increase the risk of lung disease. According to the International Agency for Research on Cancer (IARC), 50g of processed meat a day – less than two slices of bacon – increases the chance of developing colorectal cancer by 18%.

The presence of nitrates and nitrites in food is associated with an increased risk for gastrointestinal cancer, negative effect in vascular and immune function and, in infants, methaemoglobinaemia (Hord, *et al.*).

Chips (Crisps) - Corn chips, potato chips and tortilla chips have literally no nutritional benefits. Almost all brands contain harmful levels of sodium and fat.



Fried potato products such as chips (crisps) may contain substantial amounts of carcinogenic substances like acrylamide. High temperatures used to cook them potentially causes the formation of acrylamide, and this risk remains even if the trans fats are removed.

[Picture credit: Potato crisps]

Chips (crisps) contain large amount of added trans fats (hydrogenated oils). Trans fats act like saturated fats in the body and tend to increase blood cholesterol levels and are linked to heart disease.

Try to eat at least one vegetarian meal per week

Going meatless once a week may assist in reducing the risk of chronic preventable conditions like cancer, cardiovascular disease, diabetes and obesity. It can also help reduce one's carbon footprint and save precious resources like fresh water and fossil fuel.

Advantages of having at least one vegetarian meal per week (Meatless Monday):

Limit cancer risk: Hundreds of studies suggest that diets high in fruits and vegetables may assist in reducing cancer risk. Both red and processed meat consumption are associated with colon cancer.

Reduce heart disease: Recent data from a Harvard University study found that replacing saturated fat-rich foods (for example, meat and full fat dairy) with foods that are rich in polyunsaturated fat (for example, vegetable oils, nuts and seeds) reduces the risk of heart disease by 19%

Fight diabetes: Research suggests that higher consumption of red and processed meat increase the risk of type 2 diabetes.

Curb obesity: People on low-meat or vegetarian diets have significantly lower body weights and body mass indices. A recent study from Imperial College, London, also found that reducing overall meat consumption can prevent long-term weight gain.

Live longer: Red and processed meat consumption is associated with modest increases in total mortality, cancer mortality and cardiovascular disease mortality.

Improving one's diet: Consuming beans or peas results in higher intakes of fibre, protein, folate, zinc, iron and magnesium with lower intakes of saturated fat and total fat.

Choose low-fat milk and hormone-free dairy products

Examples include Fair Cape Free Range Rooibos Yoghurt – a **CANSA Smart Choice**. Together, low-fat and fat-free milk, cheese, and yogurt provide a unique package of nine essential nutrients, including calcium, potassium, phosphorus, protein, vitamins A, D and B12, riboflavin, and niacin (National Dairy Council).

Use Canola Oil

It is rich in Omega-3 and has the best ratio (2:1) of Omega-6 to Omega-3. Canola oil has a very high smoke point of 230°C which is the temperature at which heated oil breaks down and burns.

Choose Canola margarine products (Blossom Canola Margarine is a **CANSA Smart Choice**), also with the best ratio of Omega-6 to Omega-3 and it is trans fats free. Trans fats are now restricted to less than 2% by law.



Trans fatty acids and saturated fats have been part of western diet for decades. Only recently has it become clear that these two fats can undermine health. Saturated fats are long ridged molecules usually derived from animal sources like fat attached to meat and full cream dairy products, while polyunsaturated fats derived from plant seeds are more pliable. Saturated fats make fat hard while polyunsaturated fats make the fat soft to the point of being an oil.

[Picture Credit: Trans Fat]

The hard fats have been known for decades to precipitate cardiovascular disease. Only recently has a connection been found with cancer.

[Picture Credit: Margarine]

There is evidence that the amount of polyunsaturated fats, i.e. the oils in the diet, assists in reducing the risk for breast cancer while saturated fats do not have this capability.

The rise of margarine went hand in hand with the rise of trans fats. It was found that exposing plant oil like sunflower seed oil to a high temperature and pressure, hydrogen gas and a nickel catalyst, resulted in the oil becoming a solid due to the hydrogenation of the oil's fatty acids to form structurally different fatty acids known as trans fats.



Aim for three (3) meals per day and snack in between meals on your favourite fruit or vegetable.

When we eat, our bodies secrete insulin in response to rises in our blood sugar levels. The job of insulin is to remove the sugar from the bloodstreams and move it into the cells. As this process continues, the levels of both insulin and sugar in the blood decreases. This happens every time we eat. When eating only three large meals a day, there are long periods of time in between meals when the body is effectively fasting.

Cooking Tips

Use the following cooking tips to enhance experience in the kitchen:

Prepare food by baking or steaming

Steaming food has the following advantages:

- Retains food valuable nutrients, vitamins and minerals

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- Maintains food moisture and freshness
- Keeps food vibrant colours and natural flavours
- Softens food fibres, making food tender and easily digestible
- Discard the need for cooking oil or fat, resulting in light and healthy meals
- Cooks almost all kinds of food from vegetables to meats to seafood to fruits and pasta
- Cooks food fast and easy - cooks a complete meal in just under 30 minutes
- Cooks over a single heat source a load of different layers of food stacked one on top of the other - saves time, energy and money.

Steaming preserves the vitamins and minerals in foods. It is also healthy because one does not have to add any oils or fats. Steam can actually help melt some of the excess fats in foods, which end up in the water that was heated to make the steam. When one steams food rather than charbroil foods, one avoids the danger of consuming carcinogens that are present in blackened foods.



Stir fry vegetables

Use Canola Oil which is rich in Omega-3 and -6 and also has the ideal ratio (2:1) of Omega-6 to -3.

One of the most nutritious ways to cook food is to stir-fry. It is the way in which the food is cooked that makes a stir-fry healthier than most other forms of cooking. Because the food is cooked so quickly, nutrients like vitamin C and folic acid are preserved. If one microwave or boil vegetables, these benefits will be lost. Similarly, deep-fat frying destroys nutrients and more saturated fats remain in the food, which is bad for one's long-term health.

[Picture credit: Stirfry]

Do not re-use cooking oil. New study suggests that the number of times one reuses cooking oils can affect one's health. Spanish researchers found that people whose kitchens contained any type of oil that had been reused many times over were more likely to have high blood pressure than people whose cooking oils were changed more frequently.

Cut down on frying and braaiing

If one does braai, limit this to not more than twice a week, cut off all excess fat and keep the grill at least 12cm above the coals to avoid blackening of the meat as this is linked to colon cancer. Avoid eating burnt meat as this is also linked to colon cancer.

Store all food with care

Use clingwrap that is free from harmful plasticisers.

Leftover food should be placed in the refrigerator within two hours to ensure that the possible growth of bacteria and other harmful substances is prevented.



[Picture credit: Salt]

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Restrict salt intake

Rather substitute salt with fresh herbs and spices. Do not add salt at the table. The South African Department of Health recommends that the total intake of salt per day should be less than one teaspoon – a maximum of 2 400mg of sodium.

Drinking Tips

There are a variety of reasons to drink enough water each day. Adequate water intake prevents dehydration, cleans out the body, and promotes healing processes. Follow the steps below to make sure you're getting enough of this most basic necessity.

Drink 30ml of liquid per kilogram body weight per day, sixty percent (60%) of which should be water.

Alcohol Consumption

Alcohol has been classified as a Group 1 Carcinogen by the International Agency for Research on Cancer (IARC) in 1988. Alcohol consumption should be avoided as there is sufficient evidence of its link to various cancers – no level of alcohol consumption is safe.



[Picture Credit: Alcohol – Think Twice]

Alcohol consumption has already been shown to cause cancers of the oral cavity, pharynx, larynx, oesophagus, colorectum, liver and female breast; there is now also some evidence for cancer of the pancreas. The relative risk of breast cancer increases with increasing alcohol intake by about 10% per 10g/day.

Avoid fizzy sweetened drinks



[Picture credit: Fizzy Drink]

An average 325 ml can of soda has 10 teaspoons of sugar, 150 calories, 30 to 55 mg of caffeine, artificial food colours and sulphites. Soft drinks harm teeth. Soft drink consumption is a significant risk factor for the development of metabolic syndrome, a combination of the symptoms such as high blood pressure, obesity, high cholesterol, and insulin resistance. Sugar-sweetened soft drinks contain large amounts of hidden sugars and contribute to increased risk of diabetes.

Lifestyle Choices

Some important lifestyle choices are discussed below:

Tobacco is a killer

Smokers and other tobacco product users are more likely to develop disease and die earlier than are

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people who do not use tobacco. If you smoke, you should worry about what it is doing to your health. You probably worry too about how hard it might be to quit smoking. Nicotine is highly addictive, and to quit smoking — especially without help — can be difficult (Mayo Clinic). If you use tobacco products consider to quit this habit – it is one of the most important health decisions you can make. It is also an important part of lowering the risk for cancer. Contact your nearest CANSA office for support to quit and join the CANSA e-KickButt programme by phoning the toll free number 0800 22 66 22 or visit the CANSA website www.cansa.org.za



[Picture credit: Tobacco Plants]

The use of tobacco products is linked to preventable health problems such as:

- heart attacks
- diseases of blood vessels
- bronchitis
- impotence
- various cancers (lung, throat, mouth, tongue, pancreas, bladder, cervix, kidney and stomach)
- emphysema
- stroke
- peptic ulcers
- upper airway diseases.

Start a fitness programme

This may be one of the best things you can do for your health. Physical activity can reduce your risk of chronic disease, improve your balance and coordination, help you lose weight — even boost your self-esteem. And the benefits are yours for the taking, regardless of age, sex or physical ability. Everyone needs to exercise. Movement of all parts of the body is essential – when something is not used, it deteriorates. Movement is also essential for optimum circulation.

Engage in at least 30 minutes of moderate to vigorous physical activity, over and above usual activities, on five or more days of the week.



[Picture Credit: Fitness]

Evidence is accumulating that 45 to 60 minutes of physical activity on five or more days of the week may be optimal to assist in reducing the risk for cancers of the colon and breast.

Children and adolescents should engage in at least 60 minutes of moderate to vigorous physical activity per day, at least five days per week.

Maintaining a healthy weight

Maintaining a healthy weight may assist in lowering the risk of various types of cancer, including cancer of the breast, prostate, lung, colon and kidney. Physical activity counts, too. In addition to helping you control your weight, physical activity on its own may assist in lowering the risk for breast cancer and colon cancer. Be as lean as possible within the normal range of your body weight. CANSA recommends maintaining or achieving a healthy weight, which is considered at a Body Mass Index (BMI) of 18.5 to 24.9. A BMI of 25 to 29.9 is considered overweight and a BMI of 30 or greater is considered obese. BMI is calculated as body weight in kilograms divided by height in metres².

[Picture credit: Body Weight]



Protection from the sun

Skin cancer is one of the most common kinds of cancer — and one of the most preventable.

Try these tips:

- Avoid midday sun. Stay out of the sun between 10:00 and 15:00, when the sun's rays are strongest
- Stay in the shade. When you are outdoors, stay in the shade as much as possible. Sunglasses and a broad-rimmed hat help, too
- Cover exposed areas. Wear tightly woven, loose fitting clothing that covers as much of your skin as possible. Opt for bright or dark colours, which reflect more ultraviolet radiation than pastels or bleached cotton



[Picture credit: Kids on Beach]

- Do not skimp on sunscreen. Use generous amounts of sunscreen when you're outdoors, and reapply often. Broad-spectrum products which absorb both UVA and UVB radiation are recommended. Always apply sunscreen with a Sun Protection Factor (SPF) of a minimum of 20 and not higher than 50, to all exposed skin areas, preferably one bearing the CANSA Seal of Recognition (CSOR). Re-apply regularly (at least every two hours), after towel-drying, perspiring or swimming. Apply it liberally to all exposed skin; including the back of the neck,

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tips of ears, arms, feet and hands. The use of sunscreen lotion is not a license to 'bare all' in the sun.

- Avoid tanning beds and sunlamps. These are more damaging than natural sunlight

[Picture credit: Tanning Bed]



Sunbeds emit predominantly UVA and some UVB, both of which can damage the DNA in cells of the skin. However, in recent years, lamps of sunbeds have been manufactured that produce higher levels of UVB to mimic the solar spectrum and speed the tanning process. While UVB has well known carcinogenic properties and whose excessive exposure is known to lead to the development of skin cancers, recent scientific studies suggest that high exposures to the longer wavelength UVA could also have an impact on skin cancer occurrence.

As with sun exposure, recent studies indicate a relationship between the use of sunbeds and malignant melanoma as well as non-melanoma skin cancers such as squamous and basal cell carcinomas. Thus, the consequences of regular sunbed use may include disfigurement from removal of skin cancers, early death if the cancer is a malignant melanoma, as well as substantial costs to national health systems for screening, treating and monitoring skin cancer patients.

Avoid risky behaviours

Avoid risky behaviours that can lead to infections that, in turn, may increase the risk of cancer.

For example:

- Practice safe sex. Limit the number of sexual partners, and use a condom when having sex. The more sexual partners, the more likely one is to contract a sexually transmitted infection — such as Human Immunodeficiency Virus (HIV) or Human Papilloma Virus (HPV). People who have HIV or Acquired Immune Deficiency Syndrome (AIDS) have a higher risk for cancer of the anus, cervix, lung and immune system. HPV is most often associated with cervical cancer, but it may also increase the risk for cancer of the anus, penis, throat, vulva and vagina.



[Picture Credit: Condom]

- Don't share needles with anyone. Sharing needles with other persons can lead to HIV, as well as hepatitis B and hepatitis C — which can increase the risk of liver cancer.



[Picture Credit: Needle Sharing]

- *Learn to be at peace with yourself* - get to know who you are, what makes you really happy, and learn to balance what you can and cannot change about yourself (Canadian Mental Health Association)
- *Volunteer* - being involved in one's community will give one a sense of purpose and satisfaction that paid work cannot. Become a CANSA Volunteer.

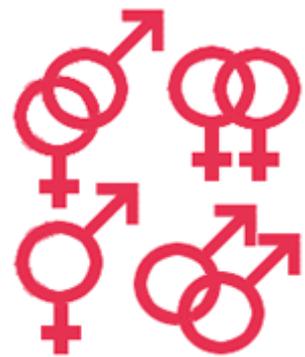
Sexual Health

Sexuality is part of being human. Love, affection and intimacy all play a role in healthy relationships from childhood through old age.

One often hears about the importance of physical health, mental health and spiritual health, but feeling confident about one's sexual health also is very important. Achieving sexual health allows for:

- healthy relationships
- planned pregnancies
- avoidance of disease

[Picture Credit: Sexual Health]



It is essential to be well-informed about all aspects of sexual health and what it takes to have a fulfilling sex life. Similarly, it is important to be aware of factors that can complicate one's sexual health. Do not let embarrassment keep you from bringing up concerns or asking questions of health professionals.

Medical Disclaimer

This Fact Sheet is intended to provide general information only and, as such, should not be considered as a substitute for advice, medically or otherwise, covering any specific situation. Users should seek appropriate advice before taking or refraining from taking any action in reliance on any information contained in this Fact Sheet. So far as permissible by law, the Cancer Association of South Africa (CANSA) does not accept any liability to any person (or his/her dependants/estate/heirs) relating to the use of any information contained in this Fact Sheet.

Whilst the Cancer Association of South Africa (CANSA) has taken every precaution in compiling this Fact Sheet, neither it, nor any contributor(s) to this Fact Sheet can be held responsible for any action (or the lack thereof) taken by any person or organisation wherever they shall be based, as a result, direct or otherwise, of information contained in, or accessed through, this Fact Sheet.



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Prayer

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