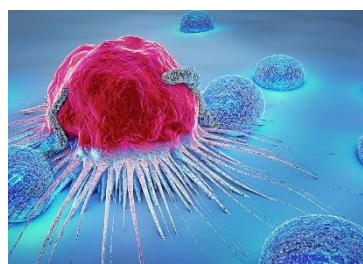




# Confronting Cancer

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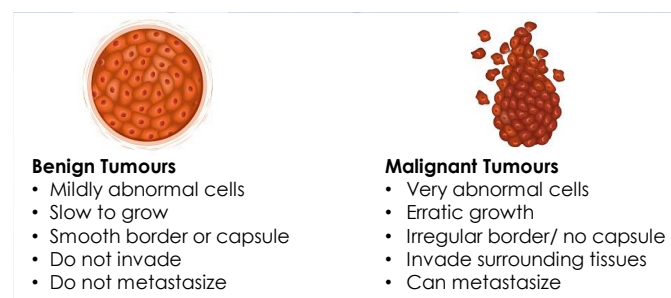
Cancer is one of the leading causes of death in Australia. An estimated 150,000 new cases of cancer will be diagnosed in Australia this year. One in two Australian men and women will be diagnosed with cancer by the age of 85. The good news is that whilst, in the 1980s, the cancer survival rate was less than 50%, today, almost 70% of Australians will survive for at least five years after a cancer diagnosis and in some cancers the survival rate is as high as 90%. The most common cancers in Australia (excluding the non-melanoma skin cancer) are prostate, breast, bowel, melanoma and lung cancer. These five cancers account for about 60% of all cancers diagnosed in Australia.



Cancer is a disease of the cells in our bodies, where abnormal cells grow in an uncontrolled manner. These cells are abnormal in size, shape and function. It can happen to virtually any cell in the entire body. These

abnormal cells form growths that can eventually invade and damage surrounding structures and even spread to other regions of the body. This is usually a slow process, that takes several years or even decades to develop. Occasionally, it is a more rapid process.

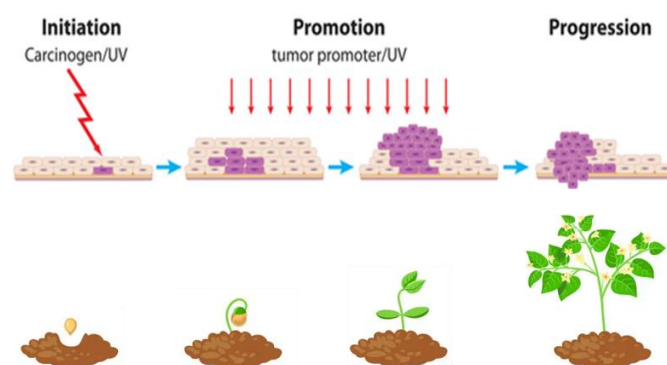
There are two kinds of tumours that can form: benign or malignant.



We do not call benign tumours cancer. It is the malignant tumours are what we usually refer to as cancer. It is possible, but very uncommon for benign tumours to turn malignant.

Cancer is formed in phases. It begins with Initiation. In this phase, the carcinogens we are exposed to (which are variety of chemicals and types of radiation) cause DNA mutations, and transforms the cell into a cancer prone cell. The damage that occurs in the DNA is a permanent alteration of the genes. This cell divides and passes on the damaged DNA to its daughter cells. The cancer is so small that it is totally invisible at this point in time. This entire stage can occur in

a very short period of time – even in minutes. This phase is also totally irreversible, except in some rare circumstances. This phase is like planting a seed in your garden. The next phase is Promotion. This is the germination and earlier growth of the seed. Those damaged cells grow and multiply into a larger and larger cluster until a visible tumour is formed. Now here's the interesting part. Just like a seed, the initial cancer prone cells will not “germinate” and grow unless all its needs are met. These requirements are the promoting factors that give this phase its name. If those promoting factors are not present, then it cannot multiply and proliferate. Furthermore, if the promoting factors are initially present but then disappear, the new cancer cell growth will go into dormancy, until more of the promoting factors appear. Alternately there are anti-promoting factors that can slow and even inhibit the growth of these abnormal cells. This is vitally important because this tells us that the promotion phase is potentially reversible, which in turn means that you can reverse the formation of cancer. Most of the promoting and anti-promoting factors are found in our diet and lifestyle. The final phase is Progression. The cancer growth has flourished and has become advanced. By now, it has started to get aggressive, invade and damage the surrounding tissues, and just like an out-of-control plant, it that can take over your garden and spread seeds to distant regions. The cancer can take over parts of your body and spread to distant sites. This process of the cancer spreading via your lymphatic or blood vessels is what we call metastasizing.



There are some risk factors that you can't do anything about. This includes age, a previous cancer diagnosis, family history and genetic factors. But there are a number of lifestyle factors that we can control that contribute to the risk of cancer. In fact, at least one in every three cancers is entirely preventable with a healthier lifestyle. The predominant risk factors in your lifestyle include poor choices in our diet, excessive sun exposure, physical inactivity, obesity, and two of the most common sources of chemical carcinogens – alcohol and smoking.

There are two basic factors that will make you far less susceptible to cancer. The first is a really healthy immune

system. Having plenty of natural killer cells - our tumour fighting cells from our immune system - is vitally important. The second factor is lowering the inflammation in your body.

How can you alter your lifestyle to boost the immune system and reduce the inflammation naturally? First and foremost, include God in your health journey. This is evidence-based medicine. Having an active spiritual life leads to improved immunity, lower risk of developing cancer, and better outcomes from treatment if you develop cancer. We are all wonderfully and fearfully created by God – each of us individually. He knows all the workings of the mind and the body, therefore it makes sense to go to the greatest Physician of all. Jeremiah 30: 17 **For I will restore health to you** and heal you of your wounds,' says the LORD... God tells us that He is the restorer of our health. Therefore, the first prescription is: Read and meditate on the Word of God – the Bible every day. And pray throughout your day. It will keep you connected to your source of life and restoration.



The next important measure, is to manage the mindset. Chronic stress can damage the immune system, and cause chronic inflammation. This puts you at greater risk of all the three phases of cancer development: initiation, promotion and progression. Some basic principles of stress management include:

- Think positive thoughts,
- Develop an attitude of gratitude to help build resilience to the stressful situations we find ourselves in,
- Maintain a spirit of forgiveness in your life: confess your sins to God, and also forgive others,
- Share your load with God and with those whom you can trust, so that you don't bare the burdens alone, and
- Plan your life with God's leading to minimize the stress,
- Take time out to rest – in God – from your physical, mental and spiritual labors.

The diet plays an essential role in both preventing and managing cancer. Pro-inflammatory foods that need to be avoided include processed and red meats, saturated fats from animal products, processed sugars, and all the highly processed foods from any sources – white flours, white rice and pasta, and heavily processed cereals for example. There are strong links between these types of foods and an increase in the risk of a variety of cancers. On the other hand, there are the



anti-inflammatory foods that boost your immune system and prevent cancer. These are from a whole- food plant-based diet, full of life-giving nutrients, antioxidants and fiber. This includes unprocessed, or minimally processed, fruits and vegetables, nuts and seeds, legumes, wholegrains and herbs.

Research has found a whole host of protective compounds for cancer which you can get from a healthy diet and lifestyle. Generally speaking, supplements do not seem to reduce the

cancer risks, however the whole food source of these natural compounds is effective. These include:

- Bioflavonoids which are found in a whole range of colourful fruits and vegetables,
- Omega 3 fats that can be found in ground flax or linseed, walnuts or soy beans,
- Vitamins C found in citrus and berries, Vitamin E found in almonds and green leafy vegetables, and beta-carotene from carrots,
- Lycopene found in tomatoes and watermelon,
- Curcumin found in the turmeric root,
- Minerals such as selenium found in brazil nuts and sunflower seeds, and
- Fibre from whole grains, fruits and vegetables (40-45 g per day).

The anti-cancer power-house foods include:

- Legumes (chickpeas, soybeans and lupini beans): amongst an amazing array of anti-inflammatory compounds, they also contain special anti-metastatic compounds that can help halt cancer spread; cooking or sprouting your beans increases the anti-cancer potential.
- Green vegetables (broccoli, cabbage, kale): immensely anti-inflammatory, help to protect against DNA damage, and reduce the overall risk of cancer.
- Berries: of all the fruits, berries top the list in the anti-inflammatory antioxidant benefits, they also have anti-proliferative effects on the cancer, and significantly slow the growth of cancer down making them fantastic anti-promoters.

One way to get a larger dose of fruits and vegetables, with all the fantastic disease fighting vitamins, minerals and antioxidants, is to make a plant smoothie. This method uses the whole fruit or vegetable, so you don't lose some of the nutrients that can happen with a juice extraction.



The recipe:

- Blend the thoroughly washed vegetables and fruit of your choice with some purified / filtered water.
- Vegetables to use – broccoli, cauliflower, kale, Brussel sprouts, Chinese cabbage, purple cabbage, celery, parsley, beetroot, tomatoes, and carrots.
- A word of warning – don't use the brassica family of vegetables (broccoli, cauliflower, cabbage and kale) every day, because these vegetables can cause issues with thyroid function if they are consumed too much in their raw form.
- Fruits – blackberries, blueberries, cranberries, raspberries, strawberries, oranges, grapefruit, lemon kiwi fruit and apples.
- Add any favourite powders, such as barley greens or acai berry, to add to its antioxidant power if you choose.
- Add a few nuts and seeds to it and turn it in to a meal if you chose.

Whilst on the subject of drinking fluids, don't forget to drink adequate water. It has been shown to reduce the risk of a variety of cancers including bladder, bowel and breast cancer. It makes sense to detoxify your body and reduce inflammation with plenty of fluids. The amount needed is



about 30 ml per kg of body weight per day (up to 10 glasses for women and 12 for men). In the hot weather, or with a lot of activity, you can increase that to 40ml per kg.

The other important aspect of diet is how you prepare your food. It is important to avoid pro-inflammatory cooking methods, and in particular using dry and high heat methods. This includes grilling, roasting, frying, BBQing, and baking. With these methods, harmful compounds, called advanced glycation end (AGE) products, are formed and up to 100 times the amount that would be found in the uncooked form. This, in turn, causes increased oxidative stress and inflammation in your body. Foods that are more susceptible to forming the AGE's when cooking are meat, cheese, eggs, butter, cream, margarine and oils. Anti-inflammatory food preparation includes eating your fruits, vegetables, nuts and seeds in their whole, raw, uncooked form where possible, or in a simple salad. Prepare food with moist heat at lower temperatures, such as boiling and steaming, poaching, and soups and stews.

Alcohol and cigarette smoking are another aspect of lifestyle that are essential to address. There are dozens of carcinogens, co-carcinogens, tumour promoters and tumour accelerators in the many chemicals found in cigarettes. Cigarettes cause the formation of, and then the growth of multiple cancers. With alcohol, there is no known safe level. Its role is quite complex in both the initiation and promotion of cancer growth. It is an initiating carcinogen in its own right, and then continues to promote the cancer growth. Any amount of alcohol increases your cancer risk and the more you drink the greater the risk.

Physical activity has an important role to play in cancer protection. Research has shown that it cancer of the colon, breast, bladder, endometrium, oesophagus, kidney and stomach. Some of the mechanisms for reduced cancer risk are known:

- It reduces inflammation in the body,
- It enhances immune system function,
- It prevents high levels of blood insulin which has been linked to the promotion and progression of cancer,
- It changes the metabolism of bile acids, and reduces the time it takes for food to travel through your system, which both in turn decrease the exposure of your gastrointestinal tract to suspected carcinogens.



Exercise is also important during and after cancer treatments, as it improves the symptoms and quality of life throughout the treatment, and improves your chances of survival. To receive these benefits, you need three to four hours per week of moderate exercise, such as a brisk walk.

Disruptions in our body clock, that controls our sleep, increases the risk of cancer of the colon, liver, lung, pancreas, breast, ovaries and prostate. This is particularly the case in shift workers, individuals who have prolonged exposure to artificial light in the evening, and those who have short sleeping hours. Unhealthy sleep patterns trigger

inflammation that promotes tumour growth and progression. Therefore, aim to get at least seven to eight hours of sleep each night. The hours before midnight are much more restorative for your health. The restorative sleep:

- Helps with the repair the DNA of each cell,
- Enhances production of the anti-cancer chemicals, and
- Improves overall immune function.



Even sunlight, and the immune enhancing properties of the Vitamin D, has been shown to reduce the risk of a number of cancers including colon, breast, prostate, and lung cancer. The amount of sunlight that you need is dependent on your skin colour and the time of the day. The formula: in the direct sun for  $\frac{1}{4}$  of the time it would take you to get sunburnt, with your face, arms and legs exposed. Of course, too much UV exposure can have the opposite effect, especially when it comes to melanoma and other skin cancers. Therefore, avoid the 10am to 2pm or 11am to 3pm (daylight saving) sunlight time periods, during the hotter months.

There are some wonderful herbs that can help in the battle with cancer. Garlic reduces inflammation, and boosts your immune system. A diet rich in garlic also reduces your risk of getting cancer; it suppresses cancer cell growth, and has even been shown the boost anti-cancer gene expression. Garlic tends to lose most of its medicinal benefits if crushed or heated for too long, so use it dried (which is either freeze dried or below 65 degrees C) at a dose of 2-4g daily, or 1-4 fresh cloves of garlic daily if having socially free periods of time. Astragalus is a deep immune stimulator. In various cancer models, it has shown that it can stabilise and even shrink tumours, with anti-proliferation or anti-promoting factors, and promoting tumour killing function of some immune system cells. It can also improve cancer survival time. The dose is 2-6 grams of the dried root daily. Siberian and Panax ginseng contain active compounds that can also restrict cancer cell growth and proliferation, invasion and migration. They also promote the death of cancer cells. The dose is 3g of the dried root daily. There have been some direct anti-cancer activities found for St Mary's Thistle in the research, but evidence is not as strong for this herb compared to the others. The dose is 1-4g of the dried seeds daily.

An infographic titled "Preventing &amp; Assisting Cancer Treatment Prescription". It features a list of ten items: "Put Your Health in God's Hands", "Manage your Mindset", "Whole-Food-Plant Based Diet", "Include Plant Smoothies", "Drink Plenty of Water", "Anti-inflammatory Cooking", "Avoid Smoking &amp; Alcohol", "Exercise", "Adequate Sleep", and "Appropriate Sunlight". To the right of the list is an illustration of a woman sitting at a desk with a large green checkmark, surrounded by books and papers. A heart icon is in the top right corner of the infographic.