

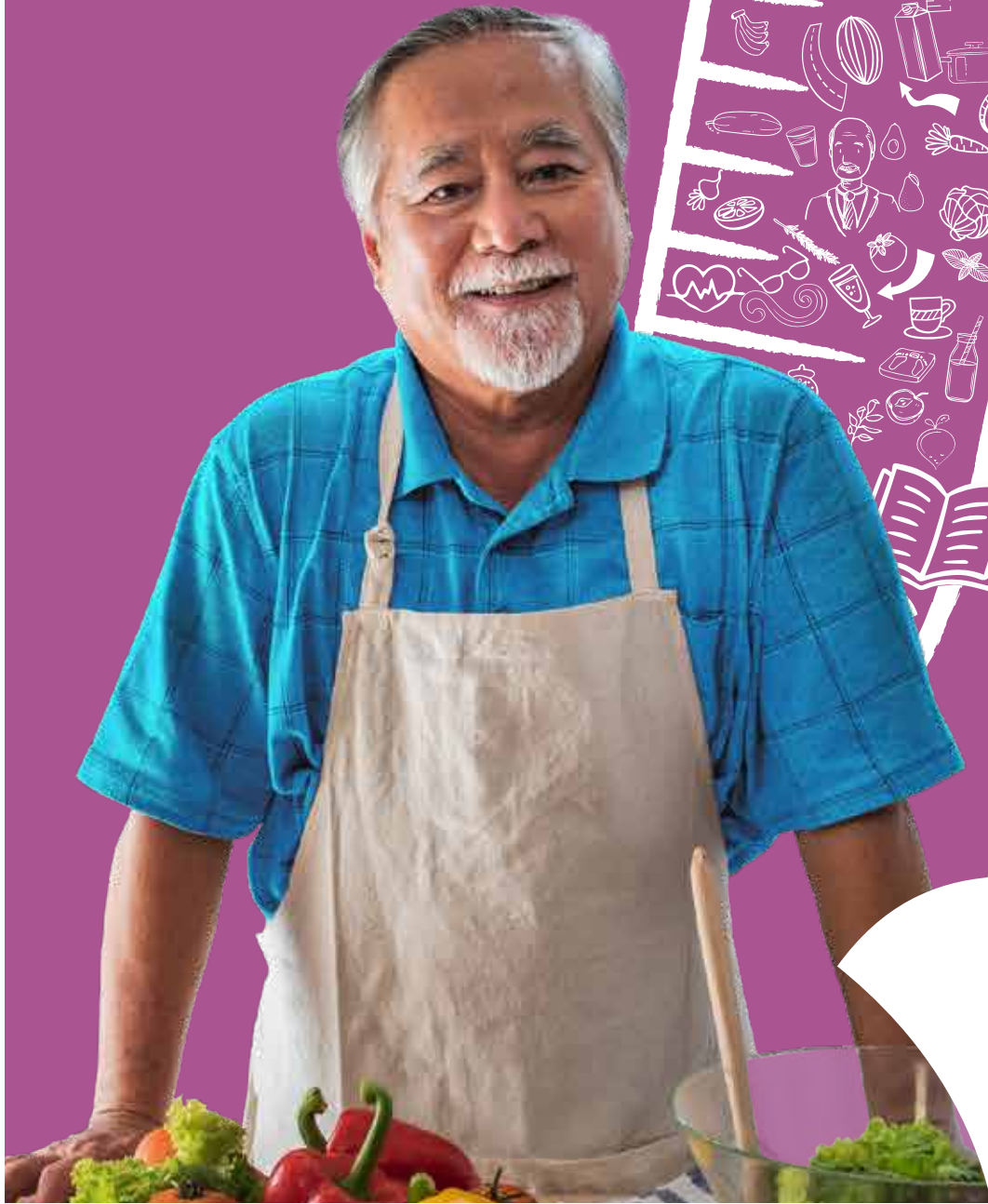
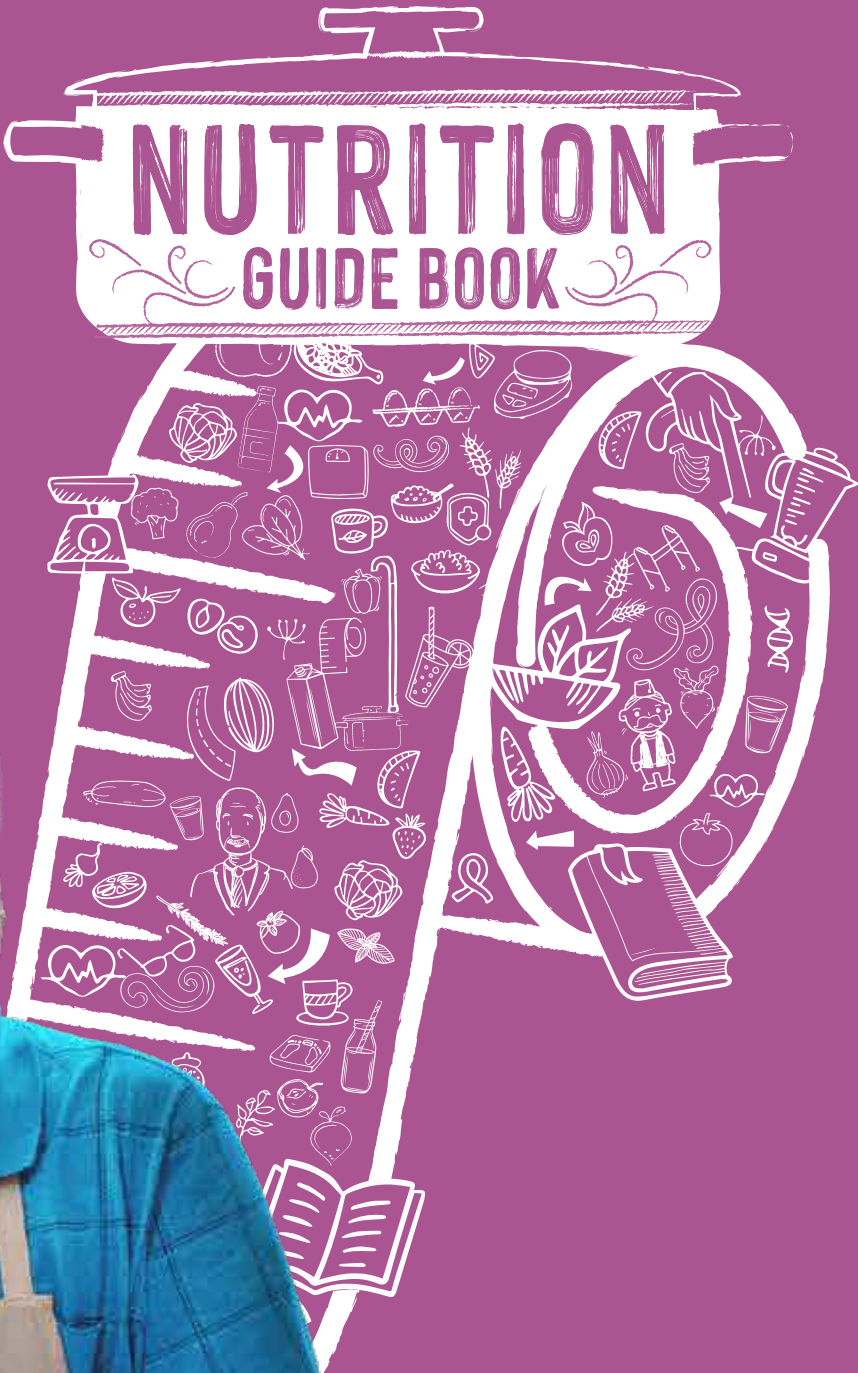
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Disclaimer:
This nutrition guide book is intended for patient education purposes only. Please consult with your treating physician/diet consultant for comprehensive diet plans
This patient educational program and material is organized and funded by AstraZeneca
If you have any further questions or you would like to make an amendment to your diet and lifestyle please speak to your doctor, pharmacist or nurse
Local approval required for distribution

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INTRODUCTION

Prostate Cancer is a cancer

that occurs in the Prostate - a small walnut-shaped gland in men that produces the seminal fluid that nourishes and transports sperm.¹ Survival rates for men with prostate cancer have increased over the years, thanks to better screening and treatment options.

You can reduce the risk of prostate cancer by living a healthy life by changing some of your lifestyle factors.

By having a nutritious and healthy diet full of vegetables and fruits such as cherries, pears, guava, oranges, apricots, choosing healthy food over supplements, exercising more and maintaining a healthy weight, one can reduce their chance of getting prostate cancer.²



AFTER DIAGNOSIS

After Diagnosis of prostate cancer there are many questions in the patient's mind.

Questions such as, will I survive from prostate cancer which tests are needed, how serious is my cancer, what kind of treatment is needed, what would be my diet, the side effects of the treatment etc exist in the mind of the patients. To answer their diet related questions, this book is customised with dietary recommendations.

The dietary recommendations within this book are based on scientific evidence and will help men in their fight against prostate cancer.

If you have any further questions or you would like to make an amendment to your diet and lifestyle please speak to your doctor, pharmacist or nurse.



MAINTAINING GOOD NUTRITION DURING AND AFTER TREATMENT³



Maintaining a healthy diet can help you prepare for and recover faster after cancer treatment.

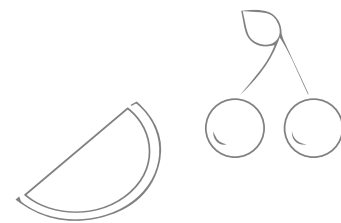
Prostate cancer treatment may affect your appetite, eating habits and weight, but it is important for you to maintain a healthy weight. Get essential nutrients and remain as physically active as possible.

Working with a registered dietician/nutritionist (RDN) can help make sure you are getting the nutrition you need.³



Tips for Nutrition during Cancer Treatment³

- Maintain a healthy weight. For men who are overweight and are obese, this may mean losing some weight. If you are trying to lose weight, it should be moderate, meaning only about 0.45kg a week.
- Get essential nutrients the body needs, such as proteins, carbohydrates, fiber, vitamins, minerals, phytonutrients such as carotenoids, and water.



Side Effects and Nutrition³

Cancer treatment often causes side effects such as nausea, mouth sores, and taste changes that may make it difficult to eat or drink. Follow these tips to help you get the nutrition you need:

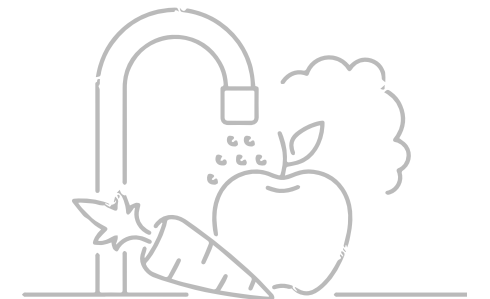
- If water tastes unpleasant to you, take in more liquid items such as soup, tea, milk or milk substitutes such as almond milk or a sports drink or flavour your water by adding fresh cut fruit
- Enhance your protein intake with protein from foods such as fish, egg whites, cheese, beans or high protein smoothies
- Suck on mints, chew on gum or try fresh citrus fruits if you have a metallic taste in your mouth
- If you have mouth sores or a gum infection, use a blender to make vegetables and meats smooth. Try juicing or making smoothies.



Food Safety³

People receiving cancer treatment need to be aware of food safety because some treatments may weaken the immune system and lead to an infection. Here are some basic food safety tips to reduce the risk of infection.

- Wash your hands before and during the handling & preparing of food
- Wash vegetables and fruit thoroughly before eating them
- Handle and store food appropriately. For example, keep raw meat away from other foods when cooking
- Eat thoroughly cooked foods. For example, do not eat eggs that are not cooked solid and do not eat raw fish, oysters or shellfish
- Avoid drinking unpasteurized beverages, such as unpasteurized cider, raw milk and fruit juices
- Make sure food you purchase is not past its “sell-by” or expiration date



Nutrition after Cancer³

Choosing to eat a diet containing fresh fruits and vegetables and other unprocessed, low-fat foods will help you regain strength after prostate cancer treatment. Nutritious eating can also reduce the risk of heart disease, high blood pressure, obesity and diabetes.

AS PER THE EVIDENCE THE FOODS SUGGESTED:

As per research there are some foods that can help prevent prostate cancer

Tomatoes and lycopene

Tomatoes contain a chemical called lycopene. Lycopene has been linked with Prostate Cancer Prevention. Cooked and processed tomatoes, such as tomato sauces, soups, purees and pastes, are a better source of lycopene than fresh tomatoes.⁴

Lycopene is also found in watermelons, pink grapefruits. Daily intakes of 9-21 mg per day appeared most beneficial.⁵



Soy⁶

Soy-based foods are a popular and healthy foods involved in slowing the rate of PSA levels rising at various stages of prostate cancer. Soy based recipes are healthy alternative for the meat based food.

Flaxseed⁷

Flaxseed consumption may reduce the risk of prostate cancer. Researchers in a study published in 2014 found that flaxseed might help maintain overall prostate health and reduce the risk of an enlarged prostate. Flaxseed consumption may be an effective complementary treatment for those already diagnosed with prostate cancer. Researchers concluded that the lignans in flaxseed might prevent cancerous cells from spreading in men with localized prostate cancer.

You can add flaxseed to your diet in several ways. You may consider adding about a tablespoon of ground flaxseed to:

- **Breakfast cereal**
- **Yogurt**
- **Smoothies**

Raw or unripe flaxseeds contain toxins. Although flaxseed is usually safe when you eat it in small amounts, consuming more than 5 tablespoons, or 50 grams of whole flaxseed per day may cause mild side effects.

If you want to eat a large amount, toast it, cook or bake the flax seeds.



Pomegranate⁸

Men who drank eight ounces of pomegranate juice a day nearly quadrupled the amount of time that their PSA levels remained stable following prostate cancer treatment, reported a UCLA study.



Selenium⁹

Food sources of selenium include meat, vegetables and nuts. The amount of selenium found in the food depends on the amount of selenium in the soil where the food grows. Selenium is stored in the thyroid gland, liver, pancreas, pituitary gland and kidneys.

One study tracking men for up to 10 years found that those who had high levels of selenium in their blood had a lower risk of prostate cancer.



NUTRITION ADVICE FOR MANAGING TREATMENT SIDE EFFECTS

Bone Loss and Osteoporosis¹⁵

If prostate cancer spreads to the bone, which majorly occur in advanced prostate cancer. It can damage or weaken the bone and may cause pain. It most commonly spreads to the spine, hips and ribs. Exercise is also important in preventing bone loss which is caused by treatment of prostate cancer with hormone therapy.

Sources of Calcium and Vitamin D¹⁶

- Calcium is found in many foods, including dark green vegetables, soy products, fish, nuts and beans (legumes). While dairy products are a good source of calcium, research indicates dairy intake should be limited for prostate cancer survival and prevention. It is recommended to eat mostly plant-based sources of calcium to limit intake of dairy to one to two servings daily.
- Vitamin D helps the body utilize calcium and phosphorus to build bones and teeth. Since prostate cancer treatment may result in loss of bone density, it is important to get enough vitamin D to keep your bones strong. Food sources of vitamin D are limited and generally include fortified sources such as milk, soy milk, yogurt, orange juice, and cereal






Low or Reduced Sexual Desire¹⁰

Low or reduced sexual desire after or during the treatment can be one of the problems. The diet that can help to overcome this problem is:

Pumpkin seeds are often recommended by many. It consists of zinc and omega-3 fatty acids and it helps to increase the sex hormone.

Spinach, cabbage and any other green leafy veggies also can be consumed. It contains a lot of Vitamins and minerals.

Watermelon is one of the best fruits, as it contains citrulline which produces arginine and creates Nitric Oxide which plays a vital role in your sexual life.



Strawberries are rich in Vitamin C and improve sperm quality. Dark Chocolate increases your sensuality and also enhances your feelings, mood and reduces stress.

Serotonin and phenethylamine are found in dark chocolate which enhances your libido. Avocados can be the key for strong sex drive.

Muscle Loss and Weight Gain

Men with prostate cancer treated with hormone therapy can experience a loss of muscle and strength. Weight gain, particularly excess fat around the waistline, is also common. The side effects of hormone therapy and their severity may vary between men and likely depend on the length of time the hormones are used. Men on long-term hormone therapy (greater than one year) are most likely to notice muscle loss and weight gain. Physical activity is an important part of a healthy lifestyle and has many advantages for men with prostate cancer.





Diarrhoea¹¹

Radiation therapy will affect the healthy cells in the bowel and bladder (which are located near the prostate gland). As a result, most men who are treated with radiation therapy will experience a change in bowel habits and an increase in urinary symptoms during pelvic radiation therapy. Mild symptoms such as an increase in the number of bowel movements per day or size or consistency such as a softer than normal stool may not need to be treated. However, moderate or severe symptoms such as abdominal cramping, frequent, loose or watery stools or an increase in urgency may be controlled by decreasing certain foods in the diet and with the use of medications.

Suggestions for managing diarrhoea and cramps:

- Eat more often. Try eating 4-6 small meals per day
- Drink plenty of fluids. Diarrhoea can cause dehydration so it is important to drink often. Choose clear fruit juices, water and weak tea or clear non-caffeinated carbonated beverages
- Avoid high fiber foods. Limit use of whole grain breads and high fiber cereals. Remove skins and seeds from fruit and vegetables. Try to limit nuts, bran, corn, broccoli, beans, peas, berries and dried fruit as they are high in fibre
- Avoid fried, greasy foods
- Avoid strong spices (e.g. chili peppers, cayenne pepper, curry)
- Avoid extremely hot or cold foods and fluids as they may make your diarrhoea worse



IMMUNITY BOOSTING FOODS^{12,13}

Foods rich in PROBIOTICS (Naturally fermented foods like soybeans, black beans and green beans, etc.)

Foods that are high in PREBIOTICS & ANTIOXIDANTS (colorful fruits & veggies, garlic, turmeric, pecans, green tea, dark chocolate).

Foods high in POSTBIOTICS: slow-metabolizing starches that feed the healthy bacteria in our little intestine-beans & legumes, whole grains, sweet potatoes.

Foods high in VITAMIN C (All citrus fruits, broccoli, red bell pepper, papaya, strawberries).



ARE THERE ANY FOODS I SHOULD EAT LESS OF?¹⁴

There is some evidence that eating a lot of certain foods may be harmful for men with prostate cancer. There's no need to cut any of these foods out of your diet completely.



Dairy foods and calcium

Dairy foods are high in calcium. Calcium is important for strong bones and your overall health, so you need some calcium in your diet – around 700mg a day (if not on hormone therapy), or 1200-1500mg a day if you're on hormone therapy.

Normal amounts of calcium and dairy foods won't increase your risk of advanced prostate cancer. But some studies suggest that eating a lot of calcium might increase the risk of your prostate cancer growing and spreading.



Meat

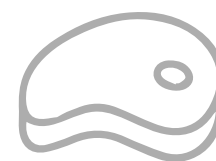


The effect of red and processed meat on men with Prostate cancer isn't clear. Some research suggests that eating too much may raise your risk of aggressive and advanced prostate cancer, while other research hasn't found any effect.



Red meat includes beef, pork and lamb. Try to eat no more than 500g of cooked red meat (700 to 750g before cooking) a week. Processed meat is meat that has been preserved by smoking, curing or salting or with preservatives. It includes ham, bacon and some sausages, such as salami. It's best to avoid processed meat.

Large amounts of meat that have been cooked at very high temperatures or are very well done, such as barbecued, grilled or fried meat, may also increase your risk of advanced cancer.



Fat

You need to eat some fat for your body to work properly. But eating too much fat can make you put on weight, which raises your risk of being diagnosed with aggressive or advanced prostate cancer.

There are different types of fat. Replacing animal fats with vegetable oils may help men with prostate cancer to live for longer. There is also some research that suggests eating lots of saturated fat might be linked with an increased risk of prostate cancer coming back after surgery and of developing advanced prostate cancer.

