

Prostate cancer is the most common type of cancer in men after skin cancer and is the second leading cancer-related cause of death in men. Prostate cancer is cancer in the prostate gland, which forms a part of the male reproductive system and functions to create seminal fluid (semen). It is a slow-growing cancer and affects one-third of all males by the age of 50.

Prostate cancer has the potential to metastasise (spread to other organs), most often to bone in the surrounding pelvic area, for example into the hip or lower back (lumbar spine). Cancer within the bone can result in pain and impaired mobility.

Relatively few patients with prostate cancer die of the disease. On the one hand, it can be so slow-growing in some men that it never causes health issues nor any signs or symptoms. Without regular check-ups it may even go undetected in these individuals. On the other hand, the cancer may remain undiagnosed, as many men choose not to speak up about problems in their pelvic region nor do they wish to have a pelvic exam as part of a regular medical check-up based on concerns of shame, embarrassment or fear.

The prevalence of prostate cancer seems to have increased in recent years, which may be due to poor lifestyle choices or due to an increased number of men having routine screening. Approximately 1 in 7 men will be diagnosed with prostate cancer globally. This does not have to be dreaded as more men are living longer with the disease because of advancements in treatment.

SIGNS AND SYMPTOMS

These signs may be present with prostate cancer but also with other prostate-related conditions, such as benign prostatic hyperplasia (BPH) or prostatitis (chronic pelvic pain syndrome). These symptoms include:

- urinary retention or other urinary complaints;
- low back pain, inner thigh or perineal (the area between your anus and scrotum) pain or stiffness;
- haematuria (blood in the urine);
- blood in semen;
- suprapubic (lower abdominal/pubic hair area and base of the penis) pain or discomfort;
- pelvic pain which includes

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CANCER

- the genital area and spreading out towards your hips; and
- sexual dysfunction.

Early prostate cancer may be asymptomatic. Routine screenings of prostate cancer are commonly being done on asymptomatic men, the benefit being with any cancer the earlier the diagnosis the better the outcome.

If it has spread (metastasised) then other symptoms may include:

- sciatica (nerve pain referring from lower back down your legs);
- bone pain and lower leg pain;
- lymphedema (swelling) of the groin and leg;
- nerve changes producing tingling, or numbness around the pelvis, perineum and legs;
- anaemia (being pale, lacking energy, shortness of breath);
- weight loss or loss of appetite;
- melena (dark or blackened stools); and
- changes in bladder or bowel function.

DIAGNOSIS

Screening or testing may include a variety of examinations such as a blood test for PSA (prostate-specific antigen); rectal examination to assess enlargement of the prostate gland. Final diagnosis of prostate cancer is established via a biopsy of the prostate gland and may be indicated for people who have elevated PSA levels.

A small piece of the prostate gland is removed and examined under a microscope for cancer cells.

STAGES OF PROSTATE CANCER

Stage 1

Cancer cannot be felt during a digital rectal examination (DRE), but

it may be found during surgery being done for another reason. Cancer has not yet spread to other areas.

Stage 2

Cancer can be felt during a DRE or discovered during a biopsy. Cancer has not yet spread.

Stage 3

Cancer has spread to nearby tissue.

Stage 4

Cancer has spread to lymph nodes or to other parts of the body.

The cause of prostate cancer is not yet known; however, there are several known risk factors that have been shown to indicate an increase in the risk of developing this type of cancer.

Risk factors you can't control are:

- age (it very rarely develops before the age of 45);
- ethnicity (it is more common in African American than white or Hispanic men);
- geography (it occurs more frequently in North America, north-western Europe, Australia and on the Caribbean islands, and is less common in Asia, Africa, Central and South America);
- family history;
- viruses; and
- hormones.

Risk factors you can try to manage and change include:

- diet (a diet high in animal fat, red meat, and high-fat dairy products may be attributed to an increased risk in developing prostate cancer);
- obesity;
- occupational exposures, such as chemicals (herbicides, pesticides, and toxic combustible products), cadmium,

- and other metals;
- multiple sexual partners; and
- low levels of vitamins and selenium.

Overall health status, not just age, is important when screening for cancers. Prostate cancer mortality (death) is associated with co-morbidities, which are other pre-existing medical conditions, including chronic airways disease, diabetes, being over-weight or obese.

MANAGEMENT

The first decision in managing prostate cancer is determining whether any treatment at all is needed. Prostate cancer, especially low-grade tumours, often grow so slowly. Active surveillance may be an option where patients are usually required to have regular, periodic PSA testing and at least one additional biopsy 12 to 18 months after the original diagnosis. Treatment can have significant side effects such as erectile dysfunction and urinary or faecal incontinence, discussions often focus on balancing the goals of treatment (possible cancer cure, the potential for increased survival, psychologically 'getting rid' of the cancer) with the risks of lifestyle alterations (treatment side effects, complications, cost, possible lack of ultimate survival benefit).

Prostate cancer treatment may include radiation therapy by an external beam directed at the cancer cells. Or brachytherapy a form of radiation where radioactive pellets are implanted and kill the cancer cells. Radical prostatectomy includes surgical removal of the prostate gland with or without some surrounding tissue and cryotherapy (usually reserved for radiation therapy failures). Radiation therapy tends to have much fewer side effects (about 50% less) than radical prostatectomy surgery with very similar overall survival. Chemotherapy is the use of drugs (orally or intravenous) to kill or reduce the size of the cancer cells. Hormone therapy is also used to reduce the uptake of testosterone by the cancer cells and so reduce their

growth. A cancer vaccine may be made specifically for each man, that works to boost the body's immune system to kill prostate cancer cells. This is mainly used for advanced cancers that are not responding to hormone therapy.

It is rare that metastasised prostate cancer can be cured. Disease management for these patients includes treatments to continue reducing the size and spread of the cancer with drugs and medication to relieve symptoms (for example analgesia for bone pain).

PHYSICAL THERAPY MANAGEMENT

The most common impairments found with genito-urinary cancer (cancer involving the genitals, or bladder and surrounding areas or the pelvis) include:

- loss of strength;
- incontinence (one of the most common side effects of prostate cancer treatment);
- genito-urinary dysfunction (eg. erectile dysfunction);
- pain;
- fatigue;
- peripheral neuropathy (altered nerve signals including pins and needles and numbness); and
- lymphedema (chronic swelling in the groin and legs).

Physical therapy treatment may include:

- 1 Pelvic floor muscle training.** Increasing the strength, endurance, and coordination of the pelvic floor muscles can improve urinary control and prevent leakage. Kegels and other pelvic floor exercises are commonly prescribed for women following childbirth, hysterectomy or other pelvic

surgeries and after menopause.

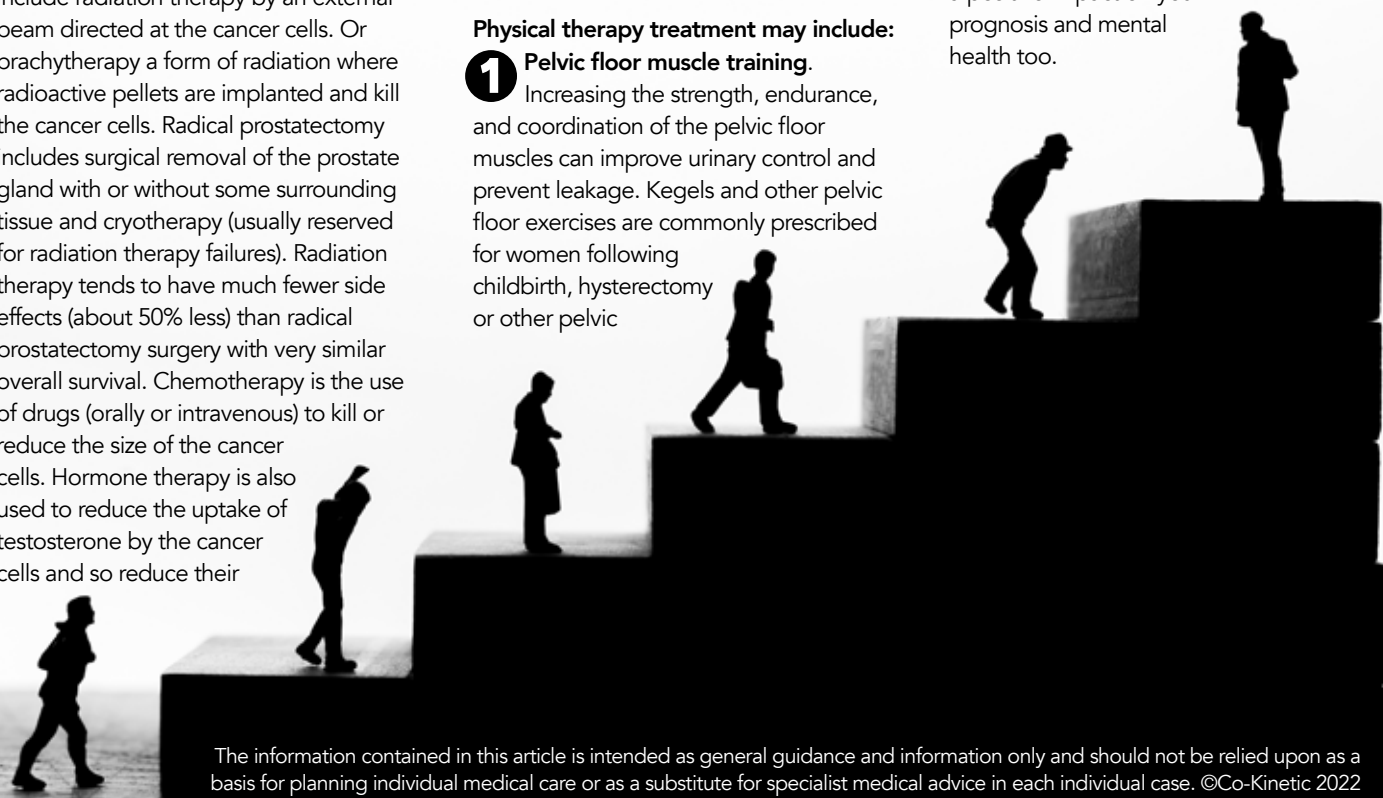
Anatomically, men's pelvic floor muscles are similar to women so similar exercises should be performed.

Pelvic pain may also present from spasm or tightness of the pelvic floor muscles, overly tight muscles with trigger points can create and refer pain around the pelvis. Learning to 'relax' these muscles may help reduce pain.

- 2 Biofeedback training.** This involves the use of small electrodes to help stimulate the pelvic floor muscles to contract optimally and in the correct sequence. Again, this is commonly used in women and should not be shied away from as it is proven to be successful at improving incontinence and recovery of erectile dysfunction.

- 3 Trigger point therapy.** This involves the manual release of sensitive, congested areas within the pelvic floor muscles which can generate pain and affect proper muscle function.

Physical therapists are trained to address multiple general health needs. They can advise about a physical activity programme including targeted aerobic (fitness) training and strength exercises for the prevention and management of cancer-related fatigue. They can also help you to manage your weight and general health, which will have a positive impact on your prognosis and mental health too.



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