



Prostate Cancer

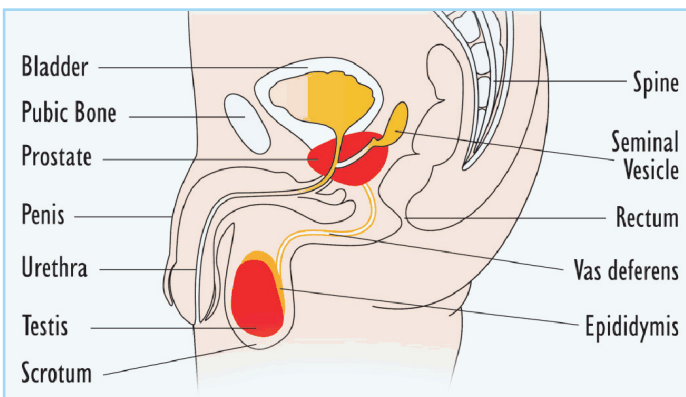
Factsheet No.7

Hereditary Prostate Cancer

Every year over 35,000 men in the UK will be diagnosed with prostate cancer. It is the most common cancer in men over the age of 55 years, and an estimated 1 in 14 men will develop the condition. A certain type of prostate cancer, known as hereditary prostate cancer, runs in families and can affect men at a much younger age. If you or someone you know has been diagnosed recently with prostate cancer, you may find this Factsheet helpful. It examines the role of the prostate gland, what is known about the causes of prostate cancer, its early symptoms and effects, the treatment options and emotional issues. Further information and sources of support can be found in the resources section at the end of this Factsheet, or by visiting the Orchid website www.orchid-cancer.org.uk

What is the prostate gland?

The prostate gland is located just below the bladder. It is only found in men and is responsible for helping to produce the fluid in semen. The gland is tiny at birth, but grows in size after puberty due to rising levels of the male hormone, testosterone.



What causes prostate cancer?

Prostate cancer occurs when normal, healthy cells, which are carefully regulated in the body, begin to reproduce uncontrollably in the prostate gland. In most cases, the growth is slow and the cancer can go undetected for many years because it causes very few symptoms. In some cases, however, prostate cancer grows quickly and may spread to other parts of the body, such as the lymph nodes or bones.

Who is at risk?

There are a number of risk factors for prostate cancer:

- **Age**

Prostate cancer mainly affects men over the age of 65. It is rare in men under the age of 40 years, but more than 1,000 men under the age of 55 years are diagnosed with prostate cancer each year in the UK. Up to 43% of these “early-onset” cases of prostate cancer are thought to be caused by inherited forms of the condition.

- **Ethnicity**

Afro-Caribbean men have relatively high rates of prostate cancer. The lowest rates are found in Asian men.

- **Family history of prostate cancer**

Having a brother or father with prostate cancer increases your risk, compared to men with no family history of the disease. If a close member of your family was diagnosed with prostate cancer under the age of 40, you are at a higher risk of developing the condition.

- **Family history of breast cancer**

The risk of prostate cancer increases slightly in men who have a strong family history of female breast cancer and vice versa (National Cancer Institute). This is thought to be because two genes carried by both men and women (called BRCA1 and BRCA2) increase the risk of breast cancer in women and prostate cancer in men (Cancer Research UK).

- **Diet**

A diet high in saturated fats and red meat may lead to an increased risk of developing cancer, including prostate cancer.

- **Vitamin D**

There is growing evidence that Vitamin D deficiency is associated with a number of diseases, including prostate cancer.



What are the symptoms?

There is no single symptom to indicate the presence of prostate cancer. Problems with the prostate are common; they may not necessarily be caused by cancer, and may result in slowly developing symptoms that can easily be confused with “getting older”.

Because the prostate gland surrounds the tube known as the urethra, which passes urine from the bladder to the outside of the body, any prostate disease or growth (benign or malignant) is likely to cause problems with urination.

Common symptoms include the following:

- **Slow or weak flow of urine**
- **Urinating more frequently or urgently than usual**
- **Difficulty starting to urinate**
- **Pain or burning sensation when urinating**
- **Difficulty getting or maintaining an erection, or pain during ejaculation**
- **Constipation, altered bowel habit, or not feeling the bladder is completely empty.**

Less common symptoms include the following:

- **Unexplained urinary infection or pain in the groin, back or hips**
- **Blood in the urine or semen**
- **Impotence**

The symptoms of hereditary prostate cancer can appear many years earlier than those of non-inherited forms of the condition, but the symptoms themselves are essentially the same.

How is prostate cancer diagnosed?

There is currently no specific genetic test for hereditary prostate cancer, although scientists are working hard to find one.

When an individual presents to their GP or healthcare professional with symptoms such as those described above, their age, general health and family history are all taken into account before further tests are undertaken.

Two tests are commonly used for the initial investigation of prostate-type symptoms:

- **A digital rectal examination (DRE)**, which is quick and simple to perform, and involves a doctor inserting a gloved, lubricated finger into the rectum (back passage) to feel if the prostate gland is enlarged.

- **A PSA (Prostate Specific Antigen) blood test**, which measures the level of a protein produced by the prostate and is usually elevated in prostate cancer. The PSA test is not a specific diagnostic test for prostate cancer, as levels can be high in people who do not have the condition.

Having a PSA test can be very reassuring if it is normal and, importantly, can help find some cancers at an early stage. Unfortunately, the PSA test does miss some prostate cancers, and it can lead to unnecessary worry and further tests in people who are found not to have cancer

If these two tests show anything abnormal, you may be referred to a hospital specialist for further investigation. Prostate cancer can only be diagnosed definitely after a small sample of tissue from the prostate gland is removed by biopsy and examined under a microscope.

People with a strong family history of prostate cancer are advised to be especially alert for symptoms of prostate problems and to seek help promptly should any arise. Some experts believe that screening for prostate cancer should start at an earlier age in those with a family history of the condition.

How is a course of treatment decided?

If you are diagnosed with prostate cancer, a specialist healthcare team will need to identify the “grade” or aggressiveness of your cancer, and the “stage” or progression of your cancer, in order to determine the best course of treatment.

The “grade” of cancer is determined through the biopsy and the system used to measure the grade is called the Gleason system. If the cancer is slow growing, only within the prostate gland and non-aggressive, it will have a low “Gleason score”. If it is fast growing, easy to spread to other parts of the body and aggressive, it will have a high “Gleason score”. Most cancers will be scored somewhere between 2 and 10.

The “stage” of your cancer determines how far, if at all, it has spread. Tests might include Computerised Tomography (CT) scanning, a bone scan or Magnetic Resonance Imaging (MRI). You may have early prostate cancer, where the cancer is only in the prostate gland; locally-advanced prostate cancer, where the cancer has spread to nearby lymph nodes in the pelvis; or metastatic disease, where the cancer has spread to distant lymph nodes or the bones.



What are the treatment options?

The specialist healthcare team will consider factors such as the grading and staging of your cancer, your general health, personal choice and medical history before deciding on the best course of action.

There are a number of treatment options currently available and these will be discussed with you. It is also important to remember that new ones are being developed all the time.

Choice of treatment will depend on a large number of factors, and every individual will be assessed carefully before any treatment decisions are made.

People with hereditary prostate cancer will have exactly the same treatment options as those with other forms of prostate cancer, but because they are often diagnosed at a younger age and may be healthier in general, “watchful waiting” or surgical removal of the cancer may be the preferred options. The key for people at risk of hereditary cancer is prevention, early screening and early investigation of any prostate symptoms.

Treatment option	When it's used	Drawbacks
Active surveillance and “watchful waiting”	Often used for men with low-risk or slow-growing cancers, other medical conditions and those at an early stage. It involves close monitoring with regular check-ups with PSA tests, DREs, scans or sometimes further biopsies	Can lead to anxiety while waiting to see if cancer will progress
Surgery	May be used when cancer has not spread too far. May involve removal of the prostate, surrounding tissues and lymph nodes	Can cause erection problems or urinary incontinence
Radiotherapy	May be used when cancer has not spread too far. Can be either external (where an external beam is directed at the cancer) or internal (where radioactive seeds are placed into or near the cancer – this is known as “brachytherapy”)	Can cause erection and urinary problems, including urinary incontinence
Hormone therapy	Used to slow tumour growth and reduce tumour size. May be used when cancer has spread beyond the prostate. It works by removing or blocking the male hormone, testosterone, which can encourage growth of prostate cancers	Can cause hot flushes, loss of sex drive and weakened bones. Eventually, cells become immune and other treatments may be needed
Chemotherapy	Most common treatment for cancer and may be beneficial in prostate cancer. Choice of treatment will depend on the grade and severity of the cancer	All chemotherapies have different side effects



Are there any new treatments?

There are many new treatments for prostate cancer under development. Your specialist healthcare team can explain these to you and advise if any may be suitable for you.

You may read about the following:

- **Cryosurgery or cryotherapy**
Cryosurgery involves freezing and destroying prostate cancer cells.
- **High-intensity focused ultrasound (HIFU)**
HIFU is a treatment that uses ultrasound (high-energy sound waves) to destroy cancer cells.
- **Gene therapy and Immunotherapy**
Immunotherapy uses the individual's own immune system to fight cancer and gene therapy tries to use the genetic pattern of cancer cells to fight cancer.

Some people with prostate cancer may be considered for a clinical trial during their course of their treatment. These trials are an important part of the cancer research process. Individuals who take part in a clinical trial may receive the standard treatment for their cancer, or be among the first to receive a new treatment. The "Resources" section at the end of this Factsheet can provide you with further information.

Why might you be recommended or refused a specific treatment?

No two cases of prostate cancer are the same. The grade and stage of the cancer will vary, as will the medical history and general health of the person being treated. Your specialist healthcare team will consider all these factors before recommending a specific course of treatment. They will also want to consider the side effects of your treatment and how this might affect your quality of life.

How might prostate cancer affect your relationship?

Being diagnosed with any form of cancer can be a life-changing and stressful experience and have a profound effect on your relationship. Despair, anger, worry and fear may all lead to you withdrawing emotionally from your partner, and cause difficulties with communication and feelings of rejection.

Being diagnosed with prostate cancer brings with it particular challenges, as it can change the way you feel about yourself and your sexuality. Prostate cancer and its treatment can cause problems with erections, ejaculation, sex drive and other physical changes, but there are many ways of reducing the impact of these changes on you and

your partner, and you should always try and talk about any problems you are experiencing with your specialist healthcare team.

Will prostate cancer affect your ability to have children?

Prostate cancer itself should not necessarily affect your ability to father children. Unfortunately, however, some prostate cancer treatments may lead to temporary or permanent infertility. If the prostate and nearby structures are removed surgically, it is unlikely that you will be able to father a child naturally after surgery. Radiation therapy and chemotherapy usually have some effect on fertility, but the effects may not be permanent. Hormone treatment can reduce fertility while it is ongoing, but fertility should return to normal once treatment is over.

For men who wish to father children, the best option is sperm banking, which should be considered before treatment begins. This offers the hope of being able to have children in the future through the process of artificial insemination.

Talking about prostate cancer to family and friends

Is there a right time to tell people you have or have had prostate cancer? The simple answer is "no". If you choose to tell people, when and how you do so is entirely up to you. There are no set rules for how to do this. You may wish to discuss this with your partner and immediate family first before telling friends or colleagues.

Telling your children you have cancer can be especially difficult but should not be avoided. Children need to understand what has happened, what will happen next, and how the cancer is being treated. Being honest is vital, but children should be left feeling hopeful and assured that they will always be loved and cared for.

After treatment: what next?

Your healthcare team will want to see you during the course of your treatment and after your treatment has finished. They are likely to run tests to see how your treatment is working and whether to continue, change or stop a specific course of treatment. These tests will also indicate whether your cancer has changed or recurred. These tests are sometimes called follow-up tests or check-ups.



Conclusion

You should always consider speaking to your GP about any healthcare concerns including worrying signs and symptoms. You may wish to take this Factsheet with you when you meet them.

As with most cancers, there are no clear cut causes for prostate cancer. Risk factors can include family history, increasing age and ethnicity. Taking a proactive approach to your healthcare is important. This includes being informed and aware of the possible signs and symptoms of prostate cancer, taking regular exercise and enjoying a balanced diet.

Resources...

For further information and support on prostate cancer, please visit the Orchid website at www.orchid-cancer.org.uk or call **020 7601 7167**.

Orchid has produced a series of Factsheets on specific issues relating to prostate cancer.

You may find the following helpful:

- **Prostate Cancer: The Familial Link**
- **Prostate Cancer: The Big Question**
- **Diet: Vitamin D and Prostate Cancer**

Low-Down, Orchid's newsletter features the latest news and developments in male cancer including research, treatments, new services and events.

Other helpful websites include:

www.cancerresearchuk.org – which offers a broad range of information and support for everyone affected by cancer, and it contains a comprehensive section on prostate cancer.

www.macmillan.org.uk – which now incorporates **Cancerbackup** and offers information about a range of different cancers, including prostate cancer.

www.prostate-cancer.org.uk – The Prostate Cancer Charity provides support and information to people affected by prostate cancer.

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