The purpose of this booklet is to provide information about the prevention and screening of prostate cancer for men without symptoms. Please discuss with your doctor if you are considering prostate cancer screening, so that informed choice can be made after knowing the pros and cons of such screening in detail.

1 What is the prostate?

The prostate is a sex gland in men. It produces a thick fluid that mixes with sperms to form semen. It is located below the bladder and in front of the rectum. The urethra runs through the centre of the prostate.

2 What is prostate cancer?

Prostate cancer results from an abnormal growth of the cells in the prostate. The rate of growth of prostate cancer cells differs widely in different persons. Some prostate cancers grow slowly and may not affect the health of the person while some grow rapidly and spread to other parts of the body leading to death.

3 Is prostate cancer common in Hong Kong?

In Hong Kong, prostate cancer was the third commonest cancer among men in 2016. There were more than 1,900 newly registered cases of prostate cancer and over half of these cases occurred in men aged 70 or above. In 2017, prostate cancer was the fourth leading cause of death among men, with more than 440 men dying from it. After adjusting for population ageing, the age-standardised incidence rate increased significantly whereas the age-standardised death rate had no significant trend in the past two decades. Despite this, both rates are well below those reported by a number of Western countries.
4 Who is at risk of prostate cancer?

The causes for prostate cancer are not yet fully understood. However, there are several risk factors for prostate cancer including:

- Age: prostate cancer happens mostly in older men and is rarely found in men below the age of 50
- Family history of prostate cancer, especially in first-degree relatives (father, brother or son)
- Ethnicity or race: prostate cancer is more common in African American men
- Obesity (increases the risk of advanced prostate cancer)

Please note: If you have any of the above factors, it does not mean that you will get prostate cancer – it only means that your risk of developing it may be higher than average.

5 How to reduce the chance of getting prostate cancer?

In general, adopting healthy lifestyle may lower individual cancer risk:

- Have regular physical activities
- Maintain a healthy body weight and waist circumference
- Have well balanced diet
- Avoid smoking and alcohol consumption
6 What are the common symptoms of prostate cancer?

Early prostate cancer may have no symptoms, so they often go unnoticed. Common symptoms of prostate cancer include:

- Difficulty or delay in urination
- Slow or weak stream of urine
- Need to pass urine more often, especially at night
- Blood in the urine
- Pain in the lower back, pelvis and hips

However, most of these symptoms are also found in men suffering from benign prostatic hyperplasia (BPH), in which the prostate is enlarged due to tissue growth within the gland. BPH is not cancer, and can be treated to relieve the symptoms effectively.

7 What should I do if the above symptoms appear?

The earlier prostate cancer is detected, the higher the chance of cure. Therefore, all men should be aware of prostate health. If you notice any symptoms stated in Question 6, you should consult a doctor immediately. The doctor will ask you for relevant information and medical history, may perform a physical examination (digital rectal examination), and carry out some other investigations, such as blood test (prostate-specific antigen test), urine test, ultrasound or other procedures.
What is prostate cancer screening?

Screening means examining people without symptoms in order to detect disease or identify people at increased risk of disease. It is often the first step in making a definitive diagnosis.

The purpose of prostate cancer screening is to discover men who have prostate cancer before they have any symptoms, in order to offer them earlier treatment. Two common screening tests for prostate cancer are digital rectal examination and prostate-specific antigen test.

**DRE**  
Digital Rectal Examination

DRE is an examination performed by a doctor who will put a gloved finger into your back passage to feel the back portion of the prostate to determine whether the prostate is abnormal. The examination may cause you a little discomfort, but should not be painful. If the doctor detects abnormalities during the DRE, further testing will be recommended.

**PSA**  
Prostate-Specific Antigen Test

PSA is a protein produced by prostate glands and released into the blood. The PSA test is a test that measures the level of PSA in the blood. A blood sample will be drawn from you and sent to a laboratory for analysis. In general, the probability of prostate cancer increases with a man’s PSA level in the blood. However, the majority of men with raised PSA level do not have prostate cancer. This is because several abnormal prostate conditions which are not cancer, for example BPH, prostatitis (inflammation of the prostate) can also cause an increase in the blood PSA level.
What should I consider if I go for prostate cancer screening?

Screening tests may detect prostate cancer early, and hence reduce the risk of dying from cancer. However, they have their limitations and potential risks.

Neither the DRE nor the PSA test is 100% accurate, and may give false positive or false negative results.

For the **DRE**, its accuracy is dependent on the skill and experience of the doctor who performs the test. Based on overseas experience,

- About 5 out of 6 men with abnormal DRE results do not have prostate cancer, and
- About 1 out of 2 men with prostate cancer may not be detected by DRE
The PSA test alone may not diagnose prostate cancer, since an increase in PSA level can be caused by conditions other than prostate cancer. Overseas evidence showed that

- About 3 out of 4 men with a raised PSA level do not have prostate cancer, and

- About 1 out of 4 men with prostate cancer may not have a raised PSA level

This means that some men with abnormal DRE or PSA test result indeed do not have prostate cancer (false positive result). It may cause anxiety to them, and lead to further investigations which may have risk. The proportion of false positives among those with abnormal DRE or PSA test results is even higher in younger men.

On the other hand, some men with normal test result may indeed have prostate cancer (false negative result). They will be falsely reassured and may delay seeking medical care even if symptoms arise.

In addition, PSA test cannot distinguish fast-growing and invasive cancers from slow-growing cancers that may never cause any symptom or threaten a man’s life (over-diagnosis). Treating those cancers which are not life-threatening may also result in unnecessary treatments and end up in complications (over-treatment).
**POTENTIAL BENEFITS** of having prostate cancer screening

- Earlier cancer detection may lead to higher chance of successful treatment
- Successful treatment may prevent progression of cancer
- Treatment for early stage cancer may be simpler with fewer side effects

**POTENTIAL RISKS** of having prostate cancer screening

- It may cause false alarm, unnecessary anxiety and potentially risky investigations when there is actually no prostate cancer (false positive result)
- It may miss cancer even when there is and cause false reassurance (false negative result)
- It may find cancers which are slow-growing, not causing symptoms or shorten life even if left undetected (over-diagnosis)
- Subsequent investigations and treatment following screening test may have side effects such as infection, erectile dysfunction, bowel and bladder problems
10 Should I screen for prostate cancer if I do not have symptom?

For men in general

At present, there is no clear evidence to show that a population-based prostate cancer screening programme will bring more benefit than harm to general male population. The Hong Kong SAR Government’s Cancer Expert Working Group on Cancer Prevention and Screening (CEWG), based on a systematic review of scientific evidence, concludes that:

There is so far insufficient scientific evidence to recommend for or against population based prostate cancer screening for local men without any symptoms.

If you do not have any symptoms and would consider prostate cancer screening, you should discuss with doctor about your situation and needs as well as its pros and cons before making informed and shared decisions on screening.

For men at high risk

The CEWG recommends men at higher risk, including:

- Those with one or more first-degree relatives (father, brother or son) diagnosed with prostate cancer before age 65; or

- African American men

should consider seeking advice from your doctor regarding the needs for and approach of screening.

For all men

If you have developed symptoms (as described in Question 6), please consult your doctor immediately and follow your doctor’s advice on further investigations and treatment.

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1 Population-based prostate cancer screening refers to prostate cancer screening which is offered systematically to all individuals without symptoms in a defined target group (e.g. certain age groups).
11 What further tests will be done to confirm a diagnosis of prostate cancer?

If the results of DRE and/or PSA test, which are not definitive diagnostic test, are abnormal, your doctor may refer you to a specialist for further investigations including doing more PSA tests, prostate ultrasound or biopsy (removal of tissue samples from the prostate) to determine whether cancer is present. Prostate biopsy is an invasive procedure and may lead to complications such as infection and bleeding.

12 What are the treatments for prostate cancer?

If prostate cancer is diagnosed, the doctor will recommend the most appropriate treatment for the patient, depending on his individual circumstances including the size of the tumour, whether the cancer has spread and the presence of any other medical conditions. Types of treatment include:

- **Watchful waiting** – involves observation for those patients whose risk or complication related to treatment may be higher than watchful waiting due to their age or co-morbidities. These patients will be managed accordingly when symptoms develop.
• **Active surveillance** – Patients with earlier stages of prostate cancer may not require definitive treatment, or the cancer is slow-growing and does not threaten life. Doctor will monitor the condition closely with PSA test, DRE and other tests regularly. Treatment will be given when prostate cancer shows signs of progression.

• **Surgery** – involves operation(s) aiming at cure through removal of the prostate gland

• **Radiotherapy** – involves high-energy radiation to kill cancer cells and prevent spread of the cancer

• **Hormone therapy** – involves drug treatments that reduce levels of male hormones in the body to keep prostate cancer cells from growing

It is possible that treatments are accompanied by side effects, which ranges from infection, erectile dysfunction, to bowel and bladder problems. Patients should discuss with their doctors about the benefits and risks of each option prior to treatment.
Related information

You can get more information on related health topics from:

Change for Health Website  [Website]  www.change4health.gov.hk

Men’s Health Programme, Department of Health  [Website]  www.chp.gov.hk/hkmenshealth_en

Health Education Hotline of the Department of Health:  2833 0111

The booklet is available for download at  www.chp.gov.hk/en/resources/465/31932.html
For additional copies, please complete the request form downloadable from  www.chp.gov.hk/en/static/90123.html

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