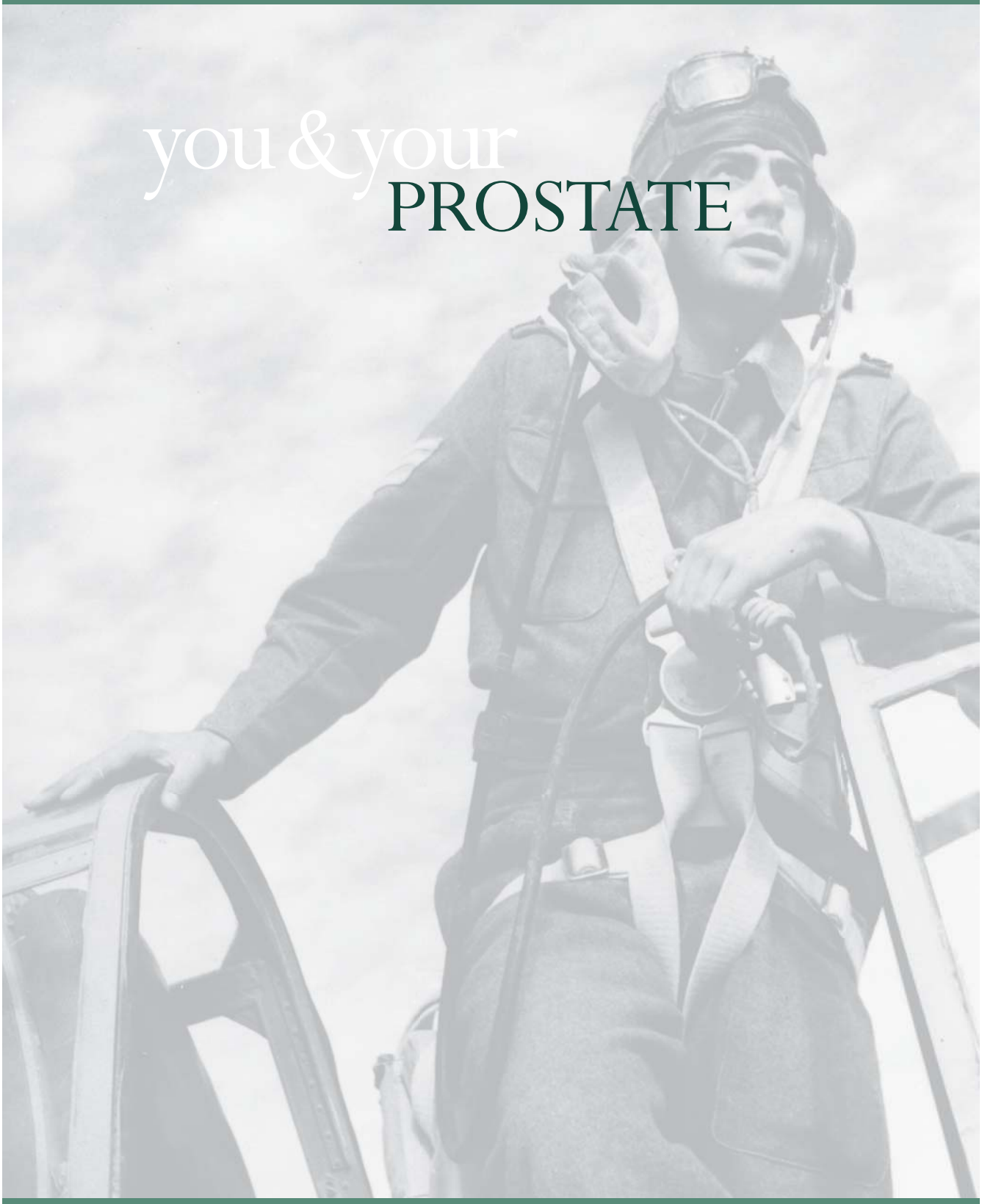
you & your PROSTATE



Publication Number: P00445
ISBN 0-642-70526-7
You and Your Prostate
Fourth Edition, revised May 2006

Disclaimer

Although care has been taken in the production of this book, the Australian Government assumes no responsibility for the accuracy of information contained in the book and will not be liable for any damage arising out of errors or omissions.

Information contained in the book may be superseded in light of scientific research and improved treatment options. Information in the book should not be relied upon. Any issues which you feel are raised in this book which are applicable to you or another person should be discussed with a doctor and/or urologist, as the information presented here may not be the latest, or the most appropriate for the circumstances of the person for whom the information is sought.

Contents

> One of the most difficult things for men to do is talk about this kind of problem. If you break your leg, or have an operation and have a scar from neck to knee, you've got something to boast about. But if its got to do with your dangly bits then you don't talk about it…

BARRY OAKLEY

chapter 1

A Men's Health Issue

You and Your Prostate has been produced by the Department of Veterans' Affairs (DVA) to assist members of the veteran community to gain a better understanding of the complex issues and management options relating to prostate disease.

Often men will ignore urinary symptoms and delay seeing a doctor, even if their symptoms are having a major impact on their life. Many men may find it difficult to see their doctor about problems connected with their reproductive organs.

It is hoped this book will encourage men to seek early medical intervention for any health issue troubling them.

Issues of concern, such as a change in body function or a persistent discomfort/pain should be talked over with your doctor. It is important not to ignore these issues, but to understand as much as you can about your urological health.

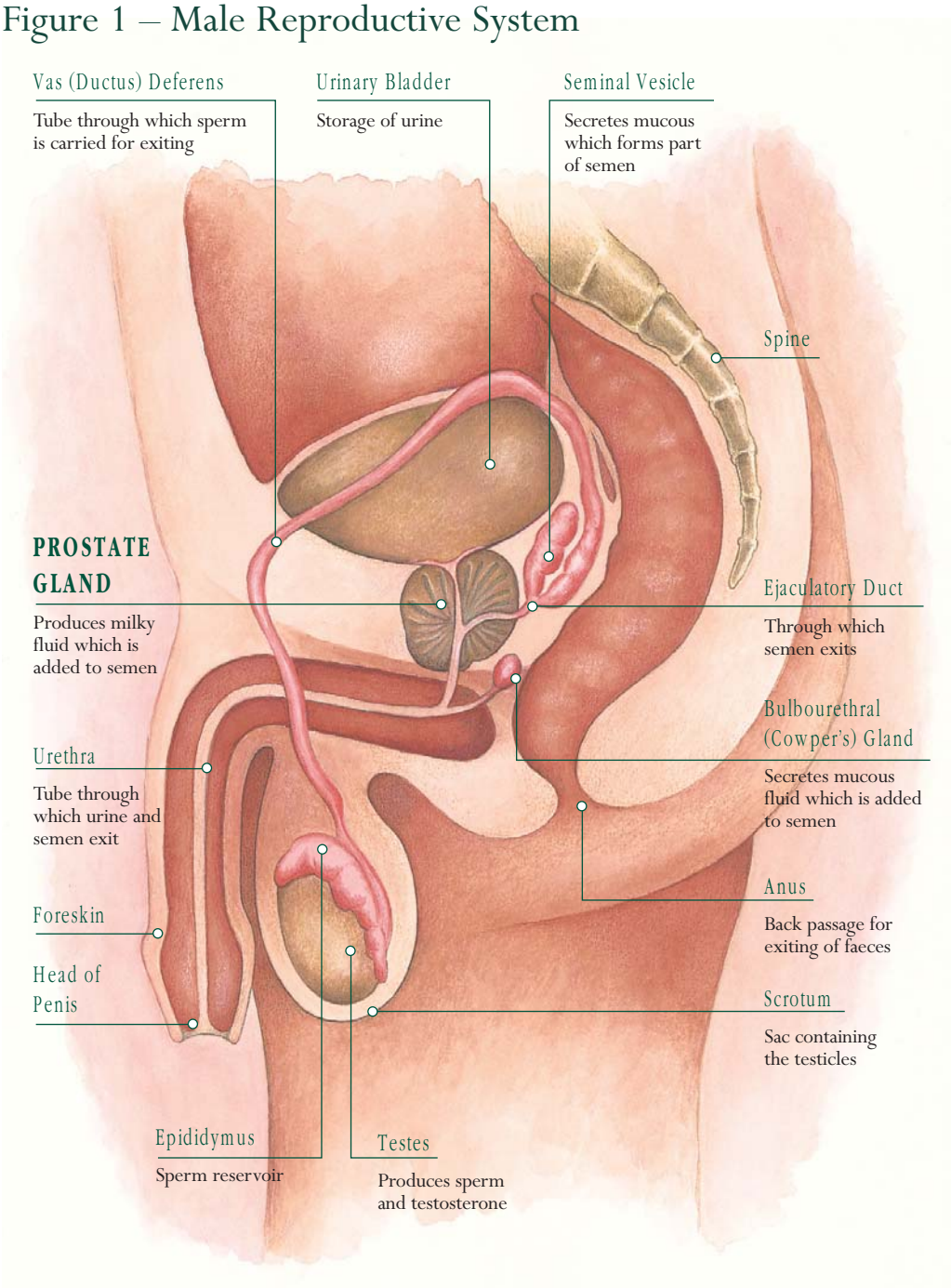
A **glossary** of terms and acronyms used in the book is provided on page 73. References to further information are provided as a number (e.g. [1]). The list of references used is provided on page 67.

The Prostate Gland

Only males have a **prostate gland** as part of their reproductive system. The prostate is a small, round gland, approximately the size of a walnut in young adult men. It weighs between 15 and 20 grams, which is approximately the same weight as a 20-cent coin. The prostate gland is very small in young boys, growing to adult size at puberty.

Only males have a **prostate gland** as part of their reproductive system.

Figure 1 – Male Reproductive System



It is located directly below the bladder and completely wraps around the **urethra**. The urethra is the tube through which urine and **semen** flow to the opening at the end of the penis (refer to **Figure 1**).

If the prostate gland becomes enlarged, it can squeeze the urethra and place pressure on the bladder, making urination difficult.

Function of the Prostate Gland

The main function of the prostate gland is to produce a milky, alkaline fluid, which forms part of the semen. Prior to ejaculation, the prostate gland squeezes this fluid into the urethra, where it mixes with the sperm stored in the **seminal vesicles**. The alkaline composition of the prostatic fluid and mucus of the seminal vesicle (refer to **Figure 1**), combine to protect the sperm inside the vagina.

> Most men don't know about it, or don't want to know about it until it's too late.

RAY ALCORN

chapter 2

Prostate Disease

Prostate disease is the term used to describe any medical problems involving the prostate gland. There are three common disorders of the prostate:

- prostatitis (inflammation or swelling of the prostate gland)
- benign prostatic enlargement (non-cancerous enlargement of the prostate gland)
- prostate cancer.

Prostatitis

Prostatitis is an inflammation of the prostate gland and occurs in up to eight per cent of men [1]. Symptoms of prostatitis may have a major impact but are not life threatening. It is not related to benign prostatic enlargement or prostate cancer. Prostatitis can be an acute or chronic disorder.

Acute Prostatitis

Acute prostatitis is a bacterial infection that causes the prostate gland to become temporarily enlarged and tender due to inflammation. Acute prostatitis is not very common and symptoms are often similar to a bladder infection.

Symptoms may include:

- pain between the back passage and scrotum (**perineum**)
- painful urination
- painful ejaculation
- chills and fever.

Acute prostatitis can occur in any age group, but often occurs in younger males aged 25-50 years. It can be treated successfully with antibiotics or antimicrobial medication.

Chronic Prostatitis

Chronic prostatitis is a persistent inflammation of the prostate gland that can be caused by a bacterial infection. It can develop following acute prostatitis, but may develop for no apparent reason.

Symptoms may include:

- pain between the back passage and scrotum (perineum)
- painful urination
- painful ejaculation
- pain in the lower abdomen
- pain along the shaft of penis
- pain radiating to the testes, inner part of the thigh and sometimes to the back.

Chronic prostatitis can occur in any age group, but is most common in middle-aged men. Treatment is often difficult and may involve antibiotics for lengthy periods, drugs to relax the muscle in the prostate and anti-inflammatory drugs.

Benign Prostatic Enlargement

Benign prostatic enlargement (BPE) is a non-cancerous enlargement of the prostate gland. It is believed that the prostate gland enlarges due to ageing and the changing balance in hormone levels in men 40-45 years of age and over. Most **lower urinary tract symptoms (LUTS)** (such as those listed in **Table 1**) in older men are due to a benign enlargement of the prostate.

A benign prostatic enlargement usually occurs on the inner part of the prostate gland where it is most likely to squeeze the urethra and cause obstruction. The obstruction to the normal flow of urine and the pressure built up in the bladder by a partially blocked urethra may give rise to LUTS (Refer to **Figure 3**).

BPE does not 'turn into' prostate cancer. Not all men will develop symptoms of prostate disease, even though enlargement of the prostate occurs naturally with the ageing process, from 40-45 years onwards.

Figure 2 – Normal Urethra

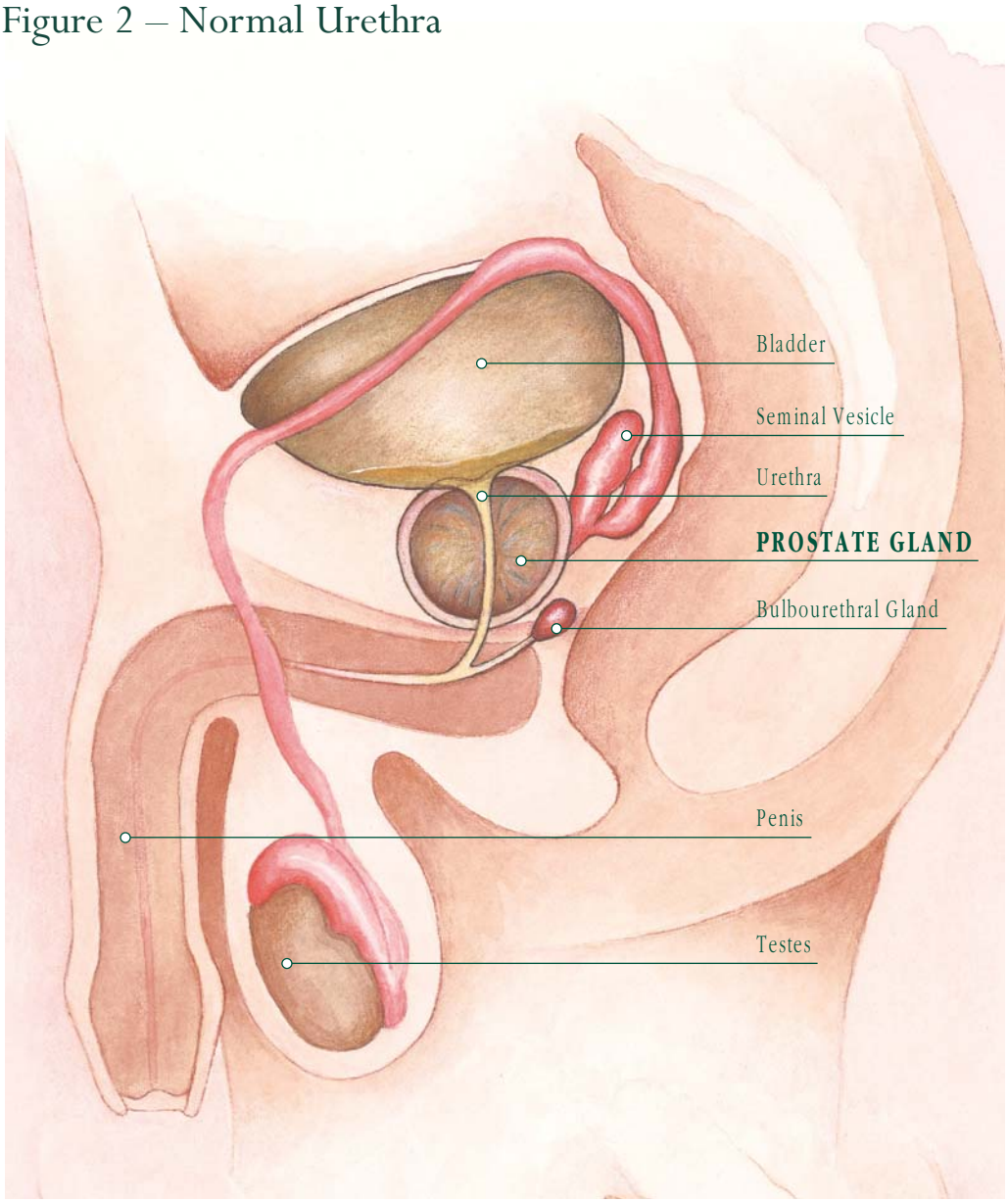


Figure 3 – Obstructed Urethra

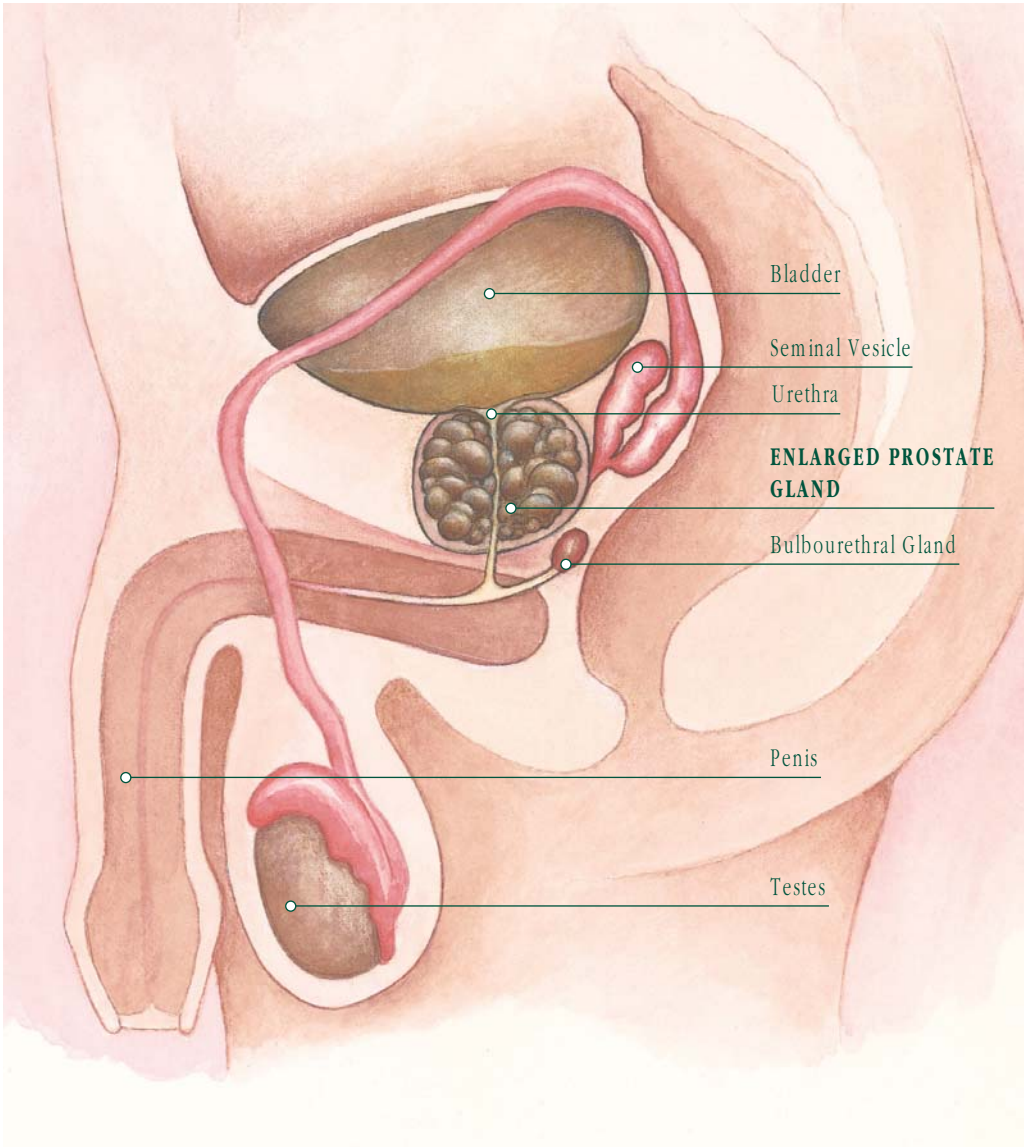


TABLE 1

Lower Urinary Tract Symptoms

Difficulty in Starting - when the flow of urine is delayed and you have to wait for your urine flow to begin.

Urgency - when you suddenly need to go to the toilet without warning. You may even wet your pants while on your way to the toilet. This is called **urge incontinence**.

Frequency - when you need to go to the toilet more frequently than every two hours.

Weaker Urine Stream - when the strength of your urine stream is noticeably reduced.

Dribbling of Urine - dribbling or a wet spot in your underpants and/or down your trouser leg after you have finished urinating. This is common in men over 70 years of age.

Incomplete Emptying - a feeling after urination that you have not emptied your bladder completely and you need to urinate again.

Disrupted Sleep - due to waking with the urge to urinate two or more times during the night.

Lower urinary tract symptoms such as those outlined in **Table 1**, occur in both men and women and can have a range of causes. These include infection, medications and other illnesses. In men over the age of 50 the most common cause of lower urinary tract symptoms is benign prostatic enlargement.

Prostate Cancer

Prostate cancer is an abnormal growth of prostate cells, which form a lump (tumour) in the prostate. Most prostate cancer occurs in older men, with the majority of deaths due to prostate cancer (92 per cent) occurring in men 65 years of age and over [(2)]. Because most prostate cancers are slow growing and occur in older men, they are often not a threat to life. However, prostate cancer diagnosed in younger men is more likely to threaten health.

Prostate cancer is not as common as benign prostatic enlargement, but it is the most common male cancer diagnosed after skin cancer [3]. In 2001, over 11 000 men in Australia were diagnosed with prostate cancer and over 2 700 men died from it.

Prostate cancer does not show symptoms in the early stages as it grows in the outer section of the gland where it is less likely to put pressure on the urethra and obstruct urine flow. Because it grows in the outer section, a finger placed in the rectum can often feel it, and this is why a **digital rectal examination (DRE)** is often done to assess the gland.

At later stages, prostate cancer can cause similar symptoms to those in **Table 1**. Benign prostatic enlargement can coexist with prostate cancer and be responsible for the symptoms.

TABLE 2

Urinary Symptoms That Require Medical Assessment Without Delay

- **Painful or burning sensation** when passing urine
- **Painful ejaculation**
- **Blood** in urine or semen
- **Discomfort** or pain in the lower back, upper thighs, buttocks area or along one side of the penis
- **Involuntary loss** of large amounts of urine (**severe incontinence**)
- **Discharge** from the urethra.

It is important to note that if you have any of the symptoms in Table 2 this may not be indicative of prostate cancer. In fact, these symptoms are often due to causes other than prostate cancer.

Causes and Risks

There are a number of theories about the causes of prostate cancer. Unfortunately, the precise causes are not known at present. However, much research has indicated there are a number of risk factors that may contribute to development of cancer of the prostate gland.

Ageing

For each decade, a man's chance of developing prostate cancer increases. The current risk of a diagnosis of prostate cancer for Australian men, up to 75 years of age, is one in eleven.

Family History

A family history of prostate cancer, particularly a father or brother, increases the risk of developing cancer of the prostate gland. This risk is higher if your father or brother were diagnosed at an early age (less than 50 years old).

If more than one relative has been diagnosed with prostate cancer, then your risk is higher again.

Diet

Asian countries, such as China and Japan, have significantly lower rates of prostate cancer than western countries such as the United States and Australia. Many scientists believe the environment, particularly the diet, contributes to the development of prostate cancer. However, no definite cause has been established.

A healthy diet is recommended. There is some evidence that a low intake of animal fat in meat and dairy products, a high intake of some plant foods such as soy protein and legumes, and a high intake of tomato-based products as part of a balanced diet, may protect against the development of prostate cancer. There are trials under way to confirm this.

Eating plenty of fruit and vegetables will increase your intake of the antioxidant vitamins A, C and E. These vitamins are reported as helpful in preventing or controlling a number of cancers, including prostate.

Australian dietary guidelines recommend five serves of vegetables and legumes (e.g. beans and lentils) and two serves of fruit daily. Combine this with a regular exercise program, and men can achieve and maintain good health and reduce their risk of a number of lifestyle illnesses like type 2 diabetes.

> PSA testing is a ‘no pain no strain’ exercise and is just a part of normal blood tests.

RICHARD STONE

chapter 3

Visiting Your Doctor

Talking With Your Doctor

Illnesses involving the prostate can cause anxiety for men and their families. Many men naturally worry that urinary symptoms or the notion that anything is wrong 'down there' may change the sense of who they are as a man and mean the end of their sex life. For the vast majority of men, this does not happen.

It is important to consult your doctor for any symptoms that are concerning you. Men over the age of 50 should discuss issues of prostate disease with their doctor. Being aware of the associated risks and symptoms can help with early detection.

If you have been diagnosed with prostate disease, it is important to understand as much as possible about your illness, so that you feel comfortable with any treatment decisions. To do this, ask your doctor about anything that you are not clear about, including your diagnosis, treatment choices and potential side effects.

Write a list of questions you would also like to ask your doctor. A list avoids relying on memory when you may already be anxious and consequently forget to ask all the questions you intended. You may also wish to write notes or use a small recording device during the appointment to have a record of answers and important information. It may be helpful to have a partner or family member come with you.

Detailed below are some examples of questions many men ask. You may have other questions related to your individual needs.

Questions to Ask Your Doctor

- What is a prostate gland?
- Where is the prostate gland located?
- What does the prostate do?
- Do I need one?
- What are the symptoms of prostate cancer?
- Can prostate cancer be cured?
- Will I feel different if I have surgery to remove my prostate?
- If I have an operation on my prostate, will it affect my sex life?
- After the operation, how long before my symptoms go away?
- Is there anyone else who has had this treatment I can talk to?
- If I go to a urologist, does it mean I have to have surgery?
- Are there any other treatments I could have?
- What happens if I do nothing?
- Are there any complementary treatments that might help me?
- What will hormone treatment do to/for me?
- What can I do to speed my recovery after treatment?

Common Myths

- If you have urinary symptoms, you must have prostate cancer.
- A fall or injury can cause prostate cancer.
- A sexually transmitted infection can cause prostate cancer.
- After an operation on the prostate for urinary symptoms, you can't get prostate cancer.
- Your doctor is too busy to answer questions.

Examination by a Doctor

If you report urinary symptoms similar to those in **Table 1** (page 12) to your doctor, he or she may conduct some tests, including examining your prostate, penis, testes, and abdomen and testing your urine for infection.

Digital Rectal Examination (DRE)

Examination of the prostate gland is a simple procedure where the doctor feels your prostate gland by inserting a lubricated, gloved finger in your back passage (rectum). The size, shape and texture of the prostate gland are assessed. A DRE may be a slightly uncomfortable procedure, but it helps if you relax your body, particularly by not tightening your buttocks, as this may cause you more discomfort.

Prostate Specific Antigen (PSA) test

The prostate specific antigen (PSA) is a protein found in the blood that is made mainly by the prostate gland, and therefore specific to the prostate. The PSA test is a simple blood test to measure your levels of PSA.

Table 3 indicates the upper limit of PSA levels for different age groups. These levels are used as a guide only, to decide if your test results are abnormal. A raised PSA level may suggest benign enlargement, inflammation, infection or cancer of the prostate gland. If your PSA level is above your age threshold, your doctor will undertake further investigation. A raised PSA level does not necessarily mean prostate cancer.

TABLE 3

Age (years)	PSA levels in blood (ng/mL)
40-49	2.5
50-59	3.5
60-69	4.5
70-79	6.5

A **free to total ratio** test can be done to improve the accuracy of the PSA test. In both healthy men and those with prostate cancer, the PSA in the bloodstream 'latches' onto protein. In men with benign prostatic enlargement (BPE), there tends to be more 'free' or 'unbound' PSA. This

test compares the ratio of free PSA to total PSA in the bloodstream.

The PSA test is available to veterans in accordance with the rules set out in the Medicare Benefits Schedule (MBS). The MBS currently allows for one 'screening' PSA test within a 12-month period. Further tests may also be allowed within this period in the follow up of positive results or to monitor a diagnosed prostatic disease.

Referral to a Urologist

If your urinary symptoms are causing you a lot of bother, or if any medical tests are abnormal, your doctor may refer you to a specialist doctor called a **urologist**.

Urologists specialise in the diagnosis and treatment of a range of problems connected with the kidneys, bladder and reproductive organs in men and women. Your urologist will review your medical conditions and symptoms, and carry out a physical examination.

Biopsy

If you have abnormal results from your rectal examination or PSA blood test, your urologist may assess your prostate for cancer by performing a **biopsy**. A biopsy is the removal of some of your prostate tissue and is currently the only definite way to diagnose prostate cancer.

This biopsy can be done as a **day-procedure**, meaning you will not have to stay overnight in hospital. You will need to stop any medications that affect your blood clotting, for example, aspirin, Warfarin and anti-inflammatory drugs, and your doctor will advise you of this.

During a biopsy, an ultrasound probe is placed in your back passage (rectum) to enable the urologist to see your prostate gland. Eight to twelve 'cores' of tissue are removed from your prostate with a needle and examined by a pathologist. An injection of local anaesthetic around the prostate can help to ease the slight discomfort a biopsy may cause. This procedure may also be done under general anaesthetic or sedation.

You may be given antibiotics to reduce the risk of infection before and after your biopsy. You may experience some bleeding from your back passage and penis and find blood in your semen following a biopsy. Any prolonged bleeding, chills and fever should be reported to your doctor without delay.

IMPORTANT

Report any continued bleeding from your back passage and/or chills and fever following a biopsy of your prostate gland to your urologist or doctor.

Other Types of Investigations

If there is blood in your urine you may have a procedure called a **cystoscopy**. An instrument similar to a small plastic tube, called a **cystoscope**, is inserted into your urethra under local anaesthetic. Your urologist will view the inside of your bladder, the sides of your prostate gland and your urethra through the cystoscope. A cystoscopy can be done as a day-procedure.

If you have prostate cancer you may undergo a whole body **bone scan** to determine if the prostate cancer has spread to your bones. This test involves an injection of a low-dose radioactive chemical into your arm. After approximately two hours the chemical substance settles in parts of the bones that are abnormal, such as cancerous cells, and this can be seen during the bone scan X-rays that follow. The scans are not painful, but it is natural to feel some anxiety.

Sometimes **Computer Assisted Tomogram (CAT)** and **Magnetic Resonance Imaging (MRI)** scans will be performed. CAT and MRI scanners use X-ray and magnetic energy respectively. The energy is fed to computers that provide specialised pictures of the inside of your body. This helps doctors determine the extent of a cancer.

Should Men Undergo Regular Screening to Detect Prostate Cancer?

Screening is regular testing for a disease when there are no symptoms present. There are conflicting views about whether males over 50 years of age should be offered PSA screening in an attempt to detect prostate cancer at an early stage. Currently in Australia, medical authorities do not recommend PSA blood tests for males who have no symptoms or family history of prostate cancer.

Men who do not have cancer can record raised PSA levels. Inflammation, infection and benign enlargement can cause a high reading and a normal PSA level can occur in men who do have cancer. Only one third of men with a raised PSA level will have prostate cancer, and so screening may cause unnecessary investigative biopsies and anxiety.

Population screening by PSA and DRE may help detect prostate cancers earlier, however, it is not yet clear whether this will translate into reduced death rates from prostate cancer.

Routine screening for cancer of the prostate may be recommended for men 45 years of age and over, who due to a family history are at a higher risk of developing prostate cancer.

The PSA test offers the best chance of detecting prostate cancer at an early and potentially curable stage. It is important for men to be aware of this. If you are over the age of 50 and concerned about prostate cancer, you should see your family doctor and discuss in more detail the benefits and risks of the test.

> Ignorance is stupid and definitely not manly.
>
> RAY ALCORN

chapter 4

Treating Benign Prostatic Enlargement

When a doctor looks at treatment options for benign prostatic enlargement, important consideration is given to the extent of your symptoms and how much they are affecting your quality of life.

As lower urinary tract symptoms (LUTS) are usually not a medical concern or a symptom of prostate cancer, it may not be necessary to treat them if they do not bother you. However, if you find your symptoms troublesome, there are some options available to you:

- Lifestyle changes
- Medication
- Surgery.

Lifestyle changes

Lifestyle changes may include:

- changing how much you drink
- cutting down on tea, coffee or alcohol which may be causing you to urinate more often
- modifying clothing or physical factors around the home that may be a barrier to using the toilet.

Keeping a record of how much you drink, what time you drink, how often you go to the toilet and how much urine you pass each time will help your doctor know whether changing the type and volume of fluid you drink may be beneficial.

If you notice you are dribbling urine after you believe you have finished (**post-micturition dribbling**), you can use a technique called **urethral milking** or **emptying**. Urethral milking involves placing your fingers several centimetres behind your scrotum and bringing them forward and upward in a "milking" action towards the base of your penis. This will help expel any remaining urine.

Medication

Two types of prescribed drugs can help alleviate urinary symptoms caused by an enlarged prostate. **Alpha-blockers** work by relaxing the muscles of the opening to the bladder and of the prostate gland to help overcome any resistance to passing urine. Examples of these drugs are Prazosin, Tamsulosin and Terazosin.

Consult your doctor immediately if you experience any of the following side effects while taking this medication:

- dizziness or faintness
- headaches
- lack of energy
- nasal congestion.

Often side effects will occur with the first dose of an alpha-blocker, and then disappear as the body adjusts to the medication. If they persist the medication may need to be discontinued.

The second type of medication works by shrinking the enlarged prostate gland to relieve the narrowing of the urethra. For example, Finasteride reduces the availability of the male hormone testosterone to the prostate cells, which need this hormone to grow. When the size of the prostate gland is reduced, the pressure it places on the urethra is relieved. This type of drug works better on larger prostates and takes a longer period of time to achieve an effect (3-6 months).

Potential side effects include:

- reduction of the volume of the ejaculate
- reduced **libido** (sex drive)
- breast tenderness and enlargement
- skin rash.

If you experience any of these symptoms, report them to your doctor.

Herbal medications, including **saw palmetto**, may be used to help ease symptoms (refer to **Chapter 6** – Complementary Therapies). It is important to inform your doctor of what you are taking, to ensure they don't interact with prescribed medications. As with most medications used to treat benign prostatic enlargement, if you do not see a significant improvement in your symptoms within three months you are unlikely to get any benefit from continuing it.

Surgery for Benign Prostatic Enlargement

Transurethral Resection of the Prostate (TURP)

If lifestyle changes and medication are not improving your symptoms, your urologist may recommend surgery to remove the prostate tissue that is obstructing your urinary stream. This common type of surgery is called **Transurethral Resection of the Prostate (TURP)**. TURP is successful in improving symptoms in about 80 per cent of cases.

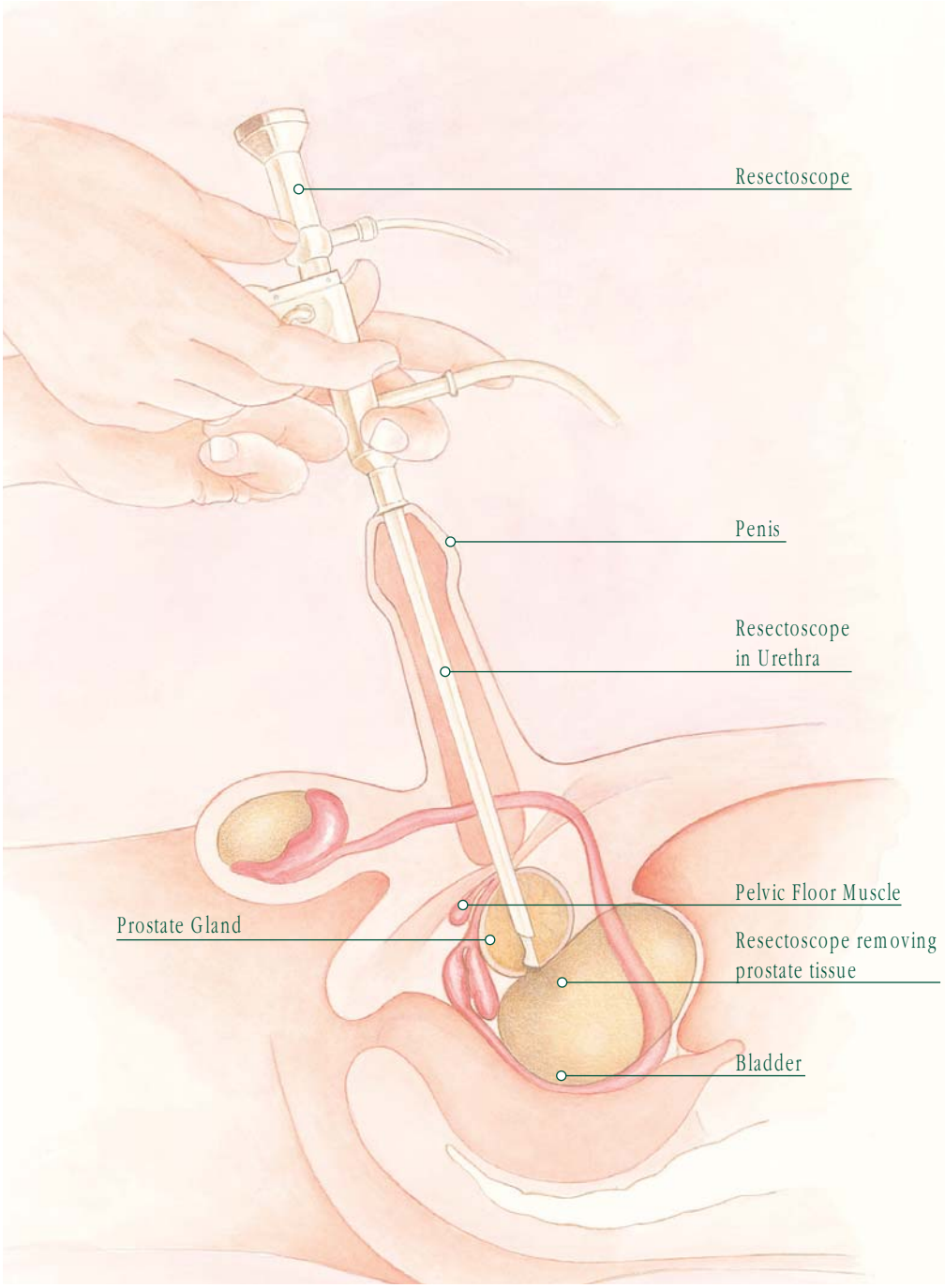
During this procedure, you are injected with a **spinal anaesthetic** and an instrument called a **resectoscope** is inserted into your urethra. Heated wires cut away the prostate tissue causing the blockage (Refer to **Figure 4**). No external incisions are required for this procedure.

You will need to stay in hospital for up to two nights. You will have a **catheter** inserted in your urethra for the first day after the operation, to drain the urine and blood in the bladder. A catheter is a thin tube held in place by a small balloon in the bladder. The catheter runs from inside the bladder, through the penis to the outside of the body where it joins to a bag. You may develop a urinary tract infection due to having the catheter inserted; however, this can be treated with a course of antibiotics.

Do not worry if you see blood in your urine immediately following a TURP procedure. This is normal and will disappear in a few days. If the scabs from the areas where the cuts were made are disrupted, you may experience some bleeding 10-14 days after the operation. To avoid this, do not do heavy work or lifting for two weeks and try to avoid becoming constipated. If bleeding does occur, rest and increase your fluid intake, and if you have trouble passing urine, contact your doctor or urologist.

A TURP for an enlarged prostate does not guarantee you will not develop prostate cancer at a later time, as only part of the gland is removed. This removed section (the inner part of the gland) is not where prostate cancer usually develops.

Figure 4 – Prostate Tissue Being Removed with Resectoscope



Side Effects of a TURP

You may experience temporary incontinence after a TURP. If this happens, ensure you have a supply of incontinence pads before you leave the hospital. It may take up to three months for this temporary incontinence to clear. Long term incontinence after a TURP occurs in only one per cent of cases.

Permanent **retrograde (reverse) ejaculation**, also called a **dry ejaculation**, occurs in roughly 80 per cent of men. In retrograde ejaculation, the semen is passed backward into the bladder instead of into the urethra and exiting during a normal ejaculation. Retrograde ejaculation can cause infertility and may affect your ability to father children naturally. A 'dry orgasm' usually does not affect sexual performance or pleasure.

Erectile dysfunction (impotence) following a TURP can occur in 5-8 per cent of cases. Men without erection problems generally do not experience difficulties following the procedure.

If you have any concerns prior to and following TURP surgery, discuss these with your urologist or doctor. They are there to help you to make informed decisions about your health and wellbeing, and to assist with any discomfort you may experience after the procedure.

A small number of men develop scar tissue (stricture) in their urethra. This narrows the urethra and impedes the flow of urine. This can be treated by surgical dilation (expanding the opening) or making a small cut in the urethra to open up the narrowed area.

Transurethral Incision of Prostate (TUIP) or Bladder Neck Incision (BNI)

A **TUIP** or **BNI** can relieve symptoms of urinary obstruction when the prostate gland is not too large. Under general anaesthetic, the urologist passes a resectoscope through your urethra and makes two or three small cuts in the neck of the bladder and partly through the prostate. This will open up the

neck of the bladder and relieve any obstruction.

A TUIP procedure carries less risk of side effects, such as retrograde (reverse) ejaculation of semen and erectile dysfunction, and is therefore the preferred option for younger men. The long-term results are similar to a TURP. Hospitalisation is short, usually an overnight stay and most men return to normal activities after two weeks.

Open Prostatectomy

An **open prostatectomy** involves an incision in the lower abdomen to remove all or part of the prostate gland. Open prostatectomies are not performed very often for benign prostatic enlargement, but are used for removing very large prostates. As with a TURP, an open prostatectomy can cause retrograde ejaculation and erectile dysfunction. Permanent injury to the nerves that affect erection and damage to the opening of the bladder is usually avoided. Your stay in hospital is between four and six days.

It is important not to assume that once surgery on the prostate via a TURP or TUIP has been undertaken that further operations and treatments are not required. The prostate gland can continue to enlarge despite previous treatments and therefore further surgery or treatments may be required.

Other Treatment Options

Generally speaking, TURP, TUIP and open prostatectomies are the most effective surgical treatments for reducing lower urinary tract symptoms associated with prostate disease.

There are also some new techniques for reducing the size of the prostate. These techniques are less invasive, may require less time in hospital and have shorter recovery times. With all treatments, in a small proportion of men, the prostate tissue will grow back.

Transurethral Electrovaporisation (TVP)

Transurethral electrovaporisation (TVP) is performed in the same way as a TURP with the obstruction of the urethra cleared using an electrical device. However, this instrument uses heat energy to vaporise rather than cut away the tissue.

Laser Therapy

Small laser fibres are passed through the urethra into the prostate gland and heat is used to destroy excess prostate tissue. This treatment relieves pressure on the urethra and restores a freer flow of urine. Laser therapy causes less bleeding than standard therapies, and is recommended for men who have potential bleeding problems due to anti-coagulant medications (Warfarin and aspirin), and for men with significant heart disease. Lower urinary tract symptoms (LUTS) improve by approximately 50 per cent with urine flow rate improving by 60 per cent after one year [4].

Transurethral Radiofrequency Needle Ablation (TUNA)

During a **transurethral radiofrequency needle ablation (TUNA)**, a cystoscope is inserted into the urethra and small needles that emit radiowaves are inserted into the prostate. Radiofrequency energy heats and destroys the tissue to reduce the size of the prostate. This is a quick procedure, and does not require an anaesthetic or admission to hospital. LUTS are reduced by about 50 per cent after one year [4] and there are very few side effects from this procedure.

Transurethral Microwave Therapy (TUMT)

Transurethral microwave therapy (TUMT) involves a thin device inserted into the rectum or urethra under local anaesthetic and your prostate gland heated by microwaves. This causes the prostate to shrink and reduces the pressure on the urethra. Microwave energy is a frequently used form of heating energy and has been safely tailored for this treatment to only destroy the prostatic tissue.

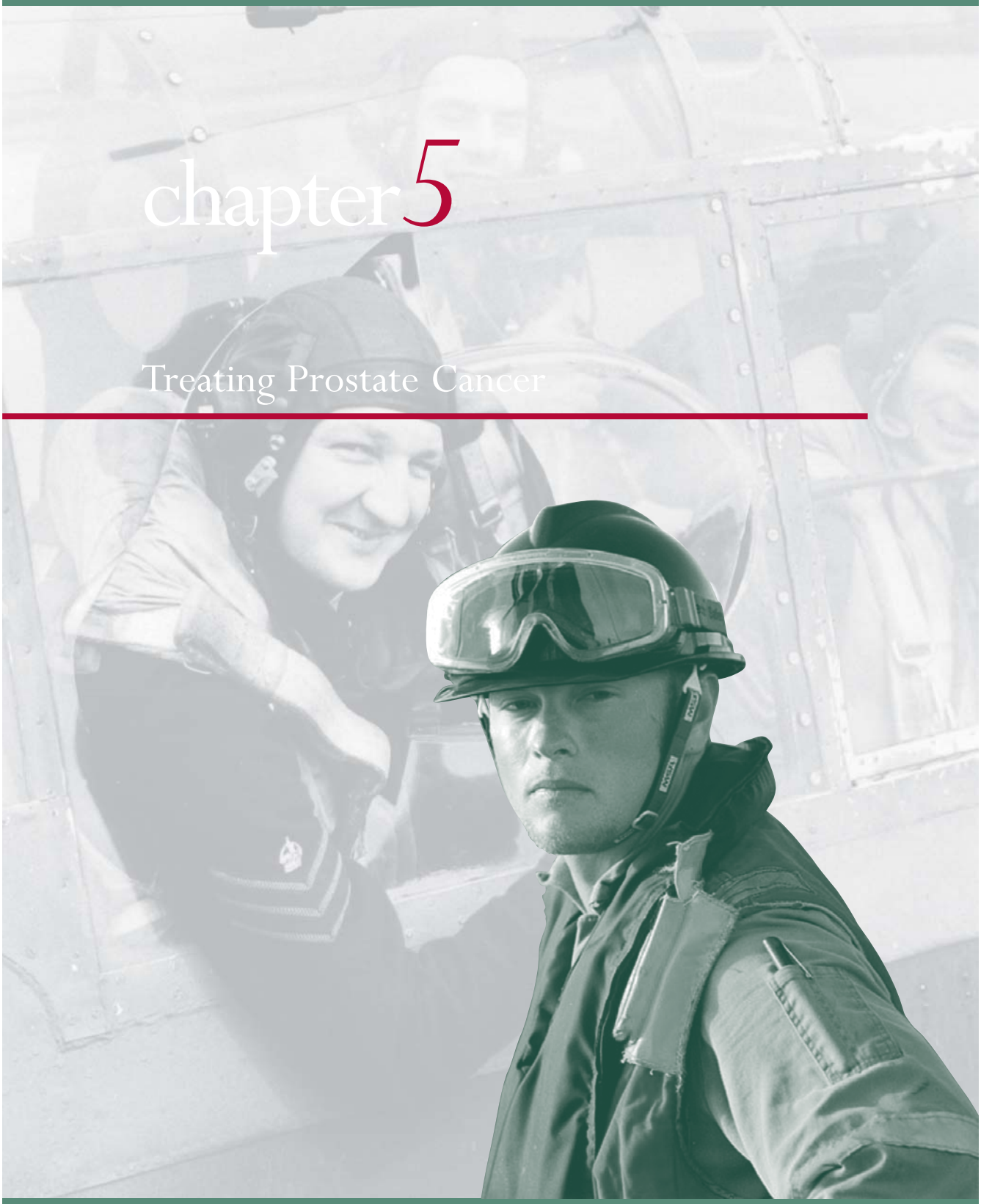
After three years, about 50 per cent of men who have received microwave therapy have an improvement in their lower urinary tract symptoms and urine flow rate [4]. However, these results are not as successful as TURPs or TUIPs. Microwave therapy is not a common treatment for benign prostatic enlargement.

“Good soldiers always make sure their equipment is in good order.”

ANONYMOUS

chapter 5

Treating Prostate Cancer



If your doctor or urologist has diagnosed prostate cancer, he or she will discuss with you your best treatment options. It is important to understand that there is often more than one treatment option, and that you have a role, together with your doctor, in making a treatment choice.

A decision about treatment is usually based on:

- the cancer stage
- the cancer grade
- your PSA blood test results
- your age
- your general medical health
- the potential side effects of the treatment
- your personal preferences.

The **grade** and **stage** of your prostate cancer are important factors for choosing and managing your treatment.

Prostate Cancer Stage

Prostate cancer stage indicates how far the cancer has spread. The **Tumour-Node-Metastasis (TNM)** system is used to record cancer stage. The stage that the cancer is at determines which treatments are most likely to be effective.

Tumour-Node-Metastasis (TNM) System

T1 the tumour is too small to be felt or detected by radiology. It may be detected as a result of a raised PSA blood test.

T2 the tumour is large enough for a doctor to feel but is confined to the prostate gland.

T3 the tumour has extended beyond the prostate and may have invaded the seminal vesicles (storage structures for sperm that lie in contact with the prostate).

T4 the tumour has invaded other tissues beyond the prostate, in the pelvic region.

N1-3 the tumour has invaded lymph nodes in the pelvis.

M1 tumour cells are present in bone or other organs of the body.

Prostate Cancer Grade

The **prostate cancer grade** refers to how abnormal the tumour tissue looks and this is determined by examining tissue collected in a biopsy. Grade can indicate a tumour's aggressiveness and how fast it may grow.

The most widely used code system for cancer grade is the **Gleason score**. A pathologist grades the appearance of the two most common cell types from the biopsy out of five, and adds the scores together to achieve the Gleason score. This total score ranges from two to ten.

The lower the Gleason score, the less aggressive the cancer is. High-grade cancers (those with a score of 8-10) are more likely to affect your health and longevity because they are growing more rapidly. High-grade cancers tend to spread earlier than those with a lower score and therefore radical treatment, either surgery or radiotherapy, directed only at the prostate region, may have less likelihood of a cure.

Treatment Options for Localised Prostate Cancer

Prostate cancer that is within the prostate gland only, with no evidence of spreading to lymph nodes or elsewhere in the body is known as **localised prostate cancer**. Within Australia around 7 000 men are diagnosed with localised prostate cancer each year. About 4 000 of these men undergo some form of treatment. Treatment for localised prostate cancer has a very good outcome and this cancer may not become advanced.

Treatment options include:

- **surveillance** (observation to see if symptoms arise before deciding on an appropriate treatment)
- **radical prostatectomy** (removal of prostate gland)
- **external beam radiation therapy** (treatment with X-rays)
- **brachytherapy** (insertion of radioactive seeds or wires into the prostate).

Treatment sometimes involves a combination of approaches. It is not yet known if one form of clinical management for early prostate cancer is better than another [5]. Early evidence suggests that in the long term, surgery has benefits over surveillance only. This is particularly true for men under the age of 65.

Surveillance (Deferred Treatment or Watchful Waiting)

Surveillance involves no active treatment initially. A PSA blood test, examinations of the prostate and biopsies are performed regularly to monitor the cancer for any changes. Surveillance is often recommended by a doctor when the cancer is small (early stage) and is slow growing (low grade).

If the prostate cancer is slow growing and occurs in men over the age of 75, it may not affect wellbeing or present a threat to life. Surveillance may be suitable for men in this age group because the possible side effects of treatment may have more impact on life than the prostate cancer.

Surveillance may also be an option for younger men, depending on the stage of the cancer, how rapidly it is likely to grow, their level of health, biopsy results and personal preferences for treatment.

Radical Prostatectomy

Radical prostatectomy is surgery to remove the prostate gland and the tissue around it. This surgery is usually carried out in men whose cancer does not appear to have spread beyond the region of the prostate, whose life expectancy, considering other health issues, would be expected to be at least a further 10 years and who have not yet had any radiotherapy.

The aim of a radical prostatectomy is to remove all cancer-affected tissue. This normally includes the prostate gland, the capsule covering it and the seminal vesicles (glands which contribute fluid to the semen). The lymph nodes close to the prostate are sometimes removed to be examined by a pathologist during the surgery. If they are found to contain cancer cells, the operation is likely to be

stopped as this indicates the cancer has spread from the prostate and a cure by removal of all of the cancer is not possible.

A radical prostatectomy can be performed by an open method (surgery with an incision made into the abdomen), laparoscopically (keyhole surgery) or by a robot assisted laparoscopic approach. With laparoscopic approaches, some men may experience less blood loss, and have a shorter hospital stay and a more rapid return to normal activity.

A surgical technique called **nerve sparing** can avoid damaging the nerves that assist with erections. This technique reduces the risk of impotence and incontinence; however, it is only used if sparing the nerves will not compromise the complete removal of the cancer.

During the surgery, the urethra is re-joined to the bladder. A temporary catheter is inserted along the urethra and into the bladder to allow the surgical cuts to heal. The catheter is removed after 1-2 weeks. It is important during this time that you don't undertake strenuous activity. Most men can return to normal activities 2-6 weeks following surgery.

Complications that may follow a prostatectomy include urinary incontinence and erectile dysfunction (problems with erections). Age and the extent of the cancer will affect the degree of erectile dysfunction, and it is important to discuss this with your urologist prior to making a treatment decision.

There is also a small risk of other complications, common to any operation and anaesthetic, such as deep venous thrombosis (blood clots in the legs). Using compression stockings and injections of heparin, or similar blood thinning agent reduces the risk of this complication.

IMPORTANT

Following surgery, avoid strenuous exercise, long motor vehicle rides and excessive alcohol intake. DO NOT avoid fluid intake due to incontinence. Instead increase non-alcoholic fluid intake following surgery to flush the surgical area, and to help regain bladder muscle strength and continence more quickly.

Radiotherapy

The aim of **radiotherapy** is to kill all prostate cancer cells using X-rays. Radiotherapy is a widely offered treatment and, like radical surgery, has the potential to destroy all cancer cells that are within the region of the prostate. Its initial impact on the body is milder than surgery and so it is frequently offered to older men or those who have other illnesses.

Prior to any form of radiation treatment, careful planning is required to ensure the correct dose is delivered to the right location. Ink marks are placed on your skin to guide the X-ray beam to deliver the radiation to the same area for each treatment. CAT scans may be used as part of this planning process. You will not feel the radiation used.

Radiation therapy usually involves attending a **radiotherapy unit** attached to a hospital, with specialised staff and machines.

There are two different forms of radiotherapy, external beam radiotherapy and brachytherapy.

External Beam Radiotherapy (EBR)

External beam radiotherapy (EBR) aims the radiation from outside the body. This is done a number of times, usually 5 times a week for 6-7 weeks. The X-rays are targeted at the prostate only, but do cause some damage to the organs around it. For this reason, short term side effects such as diarrhoea, bladder irritation and skin reactions are likely. 'Conformal therapy' is EBR that involves higher doses of radiation and more precise targeting of the prostate, with a reduced dose of radiation to surrounding healthy tissue.

Longer-term complications of EBR can include urethral stricture

(narrowing of the urethra that makes urination difficult), incontinence, and radiation injury to the bladder, rectum and small bowel. The risk of incontinence is very low (1-5 per cent). Erectile dysfunction can occur in about 30-60 per cent of men and this appears over time after the treatment has been completed [6] [7].

Brachytherapy

'Brachy' means 'short', and in this form of radiotherapy, the source of the radiation is placed inside the prostate itself, at a short distance from the cancer.

Brachytherapy is done as a one-off, day-patient procedure under general anaesthetic. Careful planning is undertaken up to two weeks prior to the procedure to ensure the right dose is delivered to the right area. A series of hollow needles containing low dose radioactive iodine seeds are inserted into the prostate.

There are two different forms of brachytherapy, low and high dose. In the low dose form, radioactive seeds are placed in the prostate and left there permanently. In the high dose form, radioactive wires, which give off a high dose of radiation, are placed in the prostate for a limited period of time and then removed.

In both forms, an ultrasound is used to guide the placement of seeds or wires so that the entire prostate gland receives the radiation. As the prostate is specifically targeted there is a reduced risk of damage to the bladder and bowel, and side effects such as impotence, incontinence and bowel symptoms may be reduced. The most common early side effect is lower urinary tract symptoms, particularly an increased frequency of urination. Side effects that may occur later include urethral stricture, injury to the rectum and erectile dysfunction [6].

Research indicates outcomes from seed brachytherapy are as good as those from surgery after 10 years, however longer term followup is needed. A combination of brachytherapy, external beam therapy and hormonal therapy is used in some treatment plans.

Brachytherapy is available to veterans in accordance with the rules set out in the Medicare Benefits Schedule (MBS). High dose brachytherapy is not currently listed in the MBS, however, low dose brachytherapy is listed for certain clinical indications. Eligible veterans who meet these indications may therefore be eligible for low dose brachytherapy under the Gold or White Card.

Under some circumstances, the Department of Veterans' Affairs may still fund low dose brachytherapy treatment for eligible veterans who do not meet the clinical indications set out in the MBS. Your doctor may contact DVA for treatment approval if you do not meet the MBS requirements, but it is nevertheless believed that low dose brachytherapy would be the best course of treatment for you. Similarly, DVA will consider requests for high dose brachytherapy where there are sound clinical reasons for its use over conventional treatment.

Other Uses of Radiotherapy

Radiotherapy is highly effective in relieving bone pain associated with prostate cancer that has spread **(metastasised)** to the bones. Some people may worry unnecessarily that radiation treatment makes them radioactive and therefore a danger to others. This is NOT the case except when seeds are used. Relevant advice is given at this time and the risks are low. There is no need to avoid socialising with family and friends. At this time support from family and friends is very important. Ask your doctor if you are concerned.

Managing Side Effects of Treatment

The side effects of cancer treatment vary and will depend on the type and extent of the treatment. Your doctor will plan your therapy to try and keep side effects to a minimum.

With any treatment the possible benefits need to be weighed against potential side effects and complications. These issues should be discussed with your doctor/s before commencing treatment.

Temporary side effects of radiation treatment can occur when healthy tissue is affected. As the location of the prostate is close to the bowel, bladder and nerves controlling erections, these areas may receive some damage. Side effects can include feeling sick, tired, experiencing dry and tender skin around the target area and diarrhoea. Medications are available to ease these symptoms, so it is important that you report them to your doctor and radiation therapy staff.

IMPORTANT

External beam radiation therapy may cause your skin to become red around the radiation target site. You should not use any creams or lotions on this area without your doctor's advice as these can make the redness worse, resulting in skin breakdown.

It is important that you continue to eat nutritious meals and have adequate fluids while undergoing radiation treatment, even though you may not feel like eating or drinking. Your diet is important during treatments as it can help you to tolerate the treatment, aid in the repair of tissues and boost your immune system.

Incontinence

Following treatment for prostate cancer, you may develop urinary incontinence (unexpected loss of urine). This can vary from a slight problem, creating a need to wear an incontinence pad occasionally, to more severe incontinence, where you need to change these pads several times a day. About 5-10 per cent of men will have a troublesome level of incontinence in the longer term following a radical prostatectomy and about 7 per cent following external beam radiotherapy (EBR) [5].

Men who require surgery after radiotherapy experience higher rates of incontinence. If you have any concerns it is important to discuss these with your doctor/s. There are a number of treatments available, including simple muscle-strengthening exercises that you can do to help you regain **sphincter** strength and continence. These techniques can be learned from your doctor, nurse continence adviser,

specialist physiotherapist or the Continence Foundation of Australia in your State.

Erectile Dysfunction

After a radical prostatectomy, the loss of ability to have an erection firm enough for intercourse is common and can occur in 30-80 per cent of men. The nerves responsible for erections run very close to the prostate. If the cancer invades these nerve bundles, the surgeon must remove the cancer and the nerves together. If not, a nerve-sparing technique can be used to preserve these nerves with a success rate as high as 80 per cent. Erections may gradually improve up to 3 years after surgery.

Loss of erections can occur in 40-70 per cent of men following radiotherapy [6], with the lowest rate for brachytherapy.

Sexual function and erections may not concern all men and their partners. If problems occur following treatment, discuss this with your partner and if you both decide that the matter is important enough to take the issue further, you can obtain help from your urologist or general practitioner (GP). It is important to remember that the heightened sensual feelings, sexual desire and orgasm associated with sexual activity are not dependent on an erection.

There are treatments available to assist you to have erections. Tablets taken prior to having intercourse can improve your ability to achieve an erection. Other treatment options that trigger erections include an injection into the penis, vacuum devices and surgically placing a device inside the penis. Surgical treatment is irreversible and needs to be very carefully considered. If you wish to explore these options further, you should discuss them with your urologist and/or GP.

It is recommended that you discuss with your urologist any issues or concerns about sexual activity, such as erection difficulties and retrograde ejaculation, **prior to making a treatment decision**.

Erectile dysfunction, as a result of treatment for prostate disease, is TREATABLE with new medication and surgical techniques. Discuss treatment options for erection difficulties and dysfunction with your urologist.

Treatment Options for Advanced Prostate Cancer

Hormone Therapy

Hormone therapy is given to patients whose cancer has spread beyond the prostate gland. The aim of hormone therapy is to shrink the tumour, but not completely remove it.

The growth of prostate cancer is accelerated by the male hormone testosterone. Hormone therapy severely reduces the levels of testosterone in the body, making the survival and growth of the prostate cancer cells difficult. Reducing male hormone levels can be achieved by medication that blocks the production or effects of testosterone on the prostate, or by removing the testes **(orchidectomy)**.

Hormone therapy is sometimes given in combination with radiotherapy when the cancer is still contained within the prostate region.

Medication to Reduce Male Hormone Level

A hormone released from the pituitary gland in the brain called **Luteinising Hormone (LH)** controls the production of testosterone by the testes.

The medication given during hormone treatment prevents the release of LH in the brain, blocking the signalling mechanism that tells the testes to produce testosterone. This causes testosterone levels in the body to fall and deprives the prostate cancer cells of their primary source of growth. LH is itself controlled by a hormone called **Luteinising-Hormone Releasing Hormone (LHRH)**.

Medications are available which block the action of LHRH. This medication is typically given as an injection every 1-3 months. The side effects of LHRH blocking medication include:

- reduced sexual desire
- loss of erections
- hot flushes
- thinning of the bones
- loss of some cognitive (thinking) function.

Your urologist may prescribe a second kind of medication, called **anti-androgens**, which stop the effects of male hormones within the body. The side effects of anti-androgens include:

- hot flushes
- psychological impact on body image and masculinity
- gastrointestinal disturbances.

An intermittent type of hormone therapy is also available to help minimise some of the side effects. The therapy is stopped when the cancer appears well controlled and only started again when there are signs of cancer growth (usually indicated by PSA level in the blood). This type of treatment requires careful monitoring.

Surgery to Reduce Male Hormone Level

The **testes** are the main source of male hormones in the body and are located in the **scrotal** sac. An **orchidectomy** involves the removal of both testicles, keeping the scrotal sac in place. The operation is a quick procedure performed under local or general anaesthetic. It is a treatment option when cancer of the prostate gland has spread (metastasised) to other parts of the body.

The side effects of orchidectomy include:

- loss of potency
- hot flushes
- psychological impact on body image and masculinity.

Side effects, such as hot flushes, can be reduced by anti-androgen medications. Discuss any concerns you have with your urologist or GP when considering treatment.

Chemotherapy

Until recently it was thought that chemotherapy was not suitable in advanced stage prostate cancer, particularly if the cancer was not responding to hormone therapy. However, recent studies with a group of drugs called taxanes have helped patients to live a little longer. This is an area requiring further research, but it is worth discussing with your doctor.

Irrespective of what stage your prostate cancer is at, it is important to discuss any concerns with your urologist, your partner and if you wish, other family members. Keeping your stress and anxiety levels down will help you with treatments and add to your quality of life.

> Ignoring health problems rarely fixes them.
>
> ANONYMOUS

chapter 6

Complementary Therapies

Many people use **complementary therapies** in addition to more conventional forms of medical treatment. Complementary therapies are interventions used to complement medical treatments. Complementary therapies can help with anxiety, pain and other symptoms of distress. They can improve physical and emotional wellbeing when used in conjunction with medical care. This combination of complementary and medical therapies has been called **integrative medicine**.

The importance of complementary therapies having a place in care is recognised. It is always important to let your doctor know what treatments you are considering. It is not recommended that you put off medical treatment for prostate cancer because you are trying a complementary therapy.

Why Do People Use Complementary Therapies?

Complementary therapies are often gentler and less invasive than medical treatments. They tend to focus on strengthening health and wellbeing rather than attacking illness. Users of complementary therapies feel they have more control over their illness and are taking an active part in the healing process [8]. In many cases, users are not looking for prevention or control of the cancer, but rather to alleviate symptoms.

Natural Products

Traditional healers have used natural products such as medicinal plants and mixtures of herbs for thousands of years. However, many have not been tested for effectiveness and safety using conventional western scientific methods, and so often their effectiveness is unknown.

An example of a medicinal product used for benign prostate disease is **saw palmetto**, from the palm tree *Serenoa repens*. Indians in southern America used an extract from the berry of the tree to treat testicle

and prostate problems as early as the 1700s. Saw palmetto contains substances that are active against male hormones. Men experiencing urinary symptoms due to an enlarged prostate report an improvement in both their symptoms and urine flow [9]. Side effects of this product are mild, and symptoms improve by about 25 per cent.

Always discuss the use of natural products with your doctor.

Relaxation and Meditation

Looking after your emotional wellbeing is as important as looking after your body. Techniques including meditation, relaxation and visualisation can reduce stress, anxiety and improve quality of life. Regular exercise and other enjoyable pastimes can also be effective. Addressing issues that concern or worry you can be an important part of reducing your stress.

Massage Therapy

Massage can have positive effects on your stress, anxiety and pain levels by enabling you to relax. Massage has been reported to improve mood, energy levels and immune function in cancer patients [10]. There are many kinds of massage therapies such as Reiki and therapeutic touch. Massage is unavailable through current DVA health care arrangements.

Making a Choice

We have discussed some forms of complementary therapies, but there are many others. How do you make a choice? The Cancer Council South Australia's leaflet *Alternative and Complementary Therapies: making an informed choice* provides useful information.

Consider the following questions before making a choice:

- What are the benefits of this therapy?
- What are the risks of this therapy?

- What is the evidence of the usefulness of this therapy?
- Have many other people with the same type of cancer as mine used this therapy? Can I speak with them?
- How will this therapy affect my medical treatment?
- How much will it cost?
- What are the qualifications of the practitioner?
- Has the therapy been approved by the Australian Therapeutic Goods Administration for this purpose?

ALTERNATIVE AND COMPLEMENTARY HEALTH THERAPIES

Under the provisions of the *Veterans' Entitlements Act 1986*, the Repatriation Commission is responsible for providing eligible members of the veteran community with health care services that are proven to be safe and effective. The Repatriation Commission also needs to be satisfied that services are provided by suitably qualified practitioners, whose professions are regulated under state or territory law, or by professional associations that have nationally consistent guidelines.

While Repatriation Gold and White cardholders can access a wide range of health services, all treatment is based on clinical need. Further, the Repatriation Commission does not accept financial responsibility for health services provided by alternative and complementary therapists, such as acupuncturists, naturopaths, herbal medicine practitioners, massage therapists, and exercise physiologists.

Please note that the Commission will accept financial responsibility for Gold and White cardholders accessing acupuncture when provided by medical practitioners in accordance with arrangements in the Medicare Benefits Schedule. Additionally, remedial massage therapy is currently available to eligible members of the veteran community at Repatriation Commission expense when performed by DVA-approved allied health professionals, such as chiropractors or physiotherapists, as part of treatment regimes for assessed clinical need.

> Put yourself in a position of advantage, look after your diet, exercise, laugh a lot and learn to relax.

BARRY OAKLEY

chapter 7

The Experience of Prostate Cancer

BY BARRY OAKLEY

Retired Uniting Church Minister Barry Oakley was diagnosed and treated for prostate cancer in 1994. Barry now has a good life, often travelling interstate with his wife to visit family, and enjoying the Australian countryside and his retirement. We asked Barry what he considered to be the most important ways to improve quality of life after a diagnosis of prostate cancer. His words are as follows:

For most men the experience of being told they have cancer is a devastating pronouncement. Many feel, as I did, that it is an imminent death sentence, even though this is almost always not the case. Unfortunately some men bear this experience entirely alone. I would like to suggest that there are four positive and important things that all men who have the disease, or who have had radical treatment, can do.

1) **Acknowledge your diagnosis and accept it**. Acknowledge also your feelings, your experiences of doom and accept them as being your own authentic experience, and that it is all right to feel that way. But it is not a time to prepare to die, it is a time to prepare to live — there are some good years left yet.

2) **Keep a positive approach**. It can be substantiated that people with a positive approach out-live those who don't and that their quality of life is greatly enhanced.
   - Create for yourself short term and long term goals and work on them.
   - Give yourself opportunity to be loved — there are many who want to, then pass that love on.
   - Do something that makes you feel useful and that gives your life significance.
   - Laugh a lot. It may not seem easy at first, but learn to laugh, especially at yourself and your predicament.
   - Keep hope in your heart — believe that you can beat this cancer, or if it turns out

that you can't, you can handle that too.

3) **Put your body in a position of advantage**.
   - Eat a lot of fresh food, full of vitamins and minerals and avoid over-processed and take away foods. Your body will thank you by being healthier and more able to fight your disease with a stronger immune system.
   - You may also supplement your diet by taking good antioxidants to boost your immune system. You may wish to consult a dietitian.
   - Exercise regularly — enough to make you puff a bit and raise your heartbeat a little. Walking is ideal.

4) **Avoid stress**. Stress is known to suppress your immune system. You can reduce stress by body relaxation, meditation and visualisation. The key is to experience a peace that quiets your over-active mind, relaxes your tensed body, and brings a deep calm to your inner being.

These four aspects were all practical things that I found I could do, and which enhanced my life. Most importantly, they gave me a sense that there was something active and helpful, which I could do for myself - which could make a difference, and, I am happy to say, the outcome has been good!

IMPORTANT

- Acknowledge your diagnosis, accept it and build a plan to deal with it.
- Have a strong positive attitude and plan for the future: some long and short term goals.
- Allow yourself to be loved and pass that love on.
- Laugh a lot, and keep hope in your heart.
- Put your body in a position of advantage, look after your diet, exercise and learn to relax.
- Surround yourself with love and the support of others and you will live longer, happier and be more fulfilled. You have some good years left yet!

> My message is clear. It is vital that all men over 50 speak to their doctors about regular checks.

JOHN SMARSZ

chapter 8

Further Information and Support

Support Groups

Talking about your fears and feelings with your doctors, family and other men through support organisations like the **Vietnam Veterans Counselling Service** (VVCS - available to ALL veterans) and prostate cancer support groups can be very helpful. Support groups offer information for men with cancer, and often also to their family and carers. These groups offer a chance to share experiences, practical suggestions and ways of dealing with non-medical problems.

Who can help?

This publication provides information on prostate disease to start you on your way. Included in this section are organisations that can also provide a range of services and information, including written and audio information.

Always check the information you obtain from the Internet with your doctor.

Department of Veterans' Affairs

DVA can:

- answer questions and provide information about DVA pensions and allowances, and about health care entitlements
- provide up-to-date information about health and support services available through DVA and in the community
- work with local service providers to ensure that veterans, war widows and widowers have access to appropriate services
- work with community agencies to develop programs to meet the needs of veterans, war widows and widowers and their dependants.

To phone the Department of Veterans' Affairs:

133 254 (metropolitan)

1800 555 254 (non-metropolitan)

Or visit the DVA web site at:

www.dva.gov.au

New South Wales Tower B, Centennial Plaza 280 Elizabeth Street SURRY HILLS NSW 2010 **Postal Address:** GPO Box 3994 SYDNEY NSW 2001	**South Australia** Blackburn House 199 Grenfell Street ADELAIDE SA 5000 **Postal Address:** GPO Box 1652 ADELAIDE SA 5001
Tasmania Montpelier Building 21 Kirksway Place BATTERY POINT TAS 7004 **Postal Address:** GPO Box 481E HOBART TAS 7001	**Western Australia** AMP Building 140 St Georges Terrace (Cnr. William Street) PERTH WA 6000 **Postal Address:** GPO Box F352 PERTH WA 6001
Victoria 300 Latrobe Street MELBOURNE VIC 3000 **Postal Address:** GPO Box 87A MELBOURNE VIC 3001	**Queensland** 259 Queen Street BRISBANE QLD 4000 **Postal Address:** GPO Box 651 BRISBANE QLD 4001

Andrology Australia

Andrology Australia provides information to consumers and health professionals to improve understanding of male reproductive and sexual health.

Phone 1300 308 878 or visit www.andrologyaustralia.org

Cancer Councils

The Cancer Council Australia is Australia's peak national cancer organisation. The state and territory cancer organisations provide information and support for people affected by cancer via a national Cancer Helpline. The Cancer Helpline is a non-medical service that offers information and counselling for people with or concerned about cancer and their families, friends and carers.

Phone the Cancer Helpline on 13 11 20 (toll free).

The Cancer Council Australia

GPO Box 4708, Sydney NSW 2001

Telephone: (02) 9036 3100

Facsimile: (02) 9036 3101

www.cancer.org.au

info@cancer.org.au

State and Territory Cancer Councils

The Cancer Council ACT

Building 44, Richmond Avenue
Fairbairn ACT 2609

Telephone: (02) 6257 9999

Facsimile: (02) 6262 2223

www.actcancer.org

reception@actcancer.org

The Cancer Council New South Wales

153 Dowling Street,
Woolloomooloo NSW 2011

Telephone: (02) 9334 1900

Facsimile: (02) 9358 1452

www.cancercouncil.com.au

feedback@nswcc.org.au

The Cancer Council Northern Territory

Units 2 & 3, Casi House,
Vanderlin Drive
Wanguri NT 0810
Telephone: (08) 8927 4888
Facsimile: (08) 8927 4990
www.cancercouncilnt.com.au
admin@cancernt.org.au

The Cancer Council Tasmania

180-184 Collins St,
Hobart TAS 7000
Telephone: (03) 6233 2030
Facsimile: (03) 6233 2123
www.cancertas.org.au
infotas@cancertas.org.au

The Cancer Council Victoria

1 Rathdowne Street,
Carlton VIC 3053
Telephone: (03) 9635 5000
Facsimile: (03) 9635 5270
www.cancervic.org.au
enquiries@cancervic.org.au

The Cancer Council South Australia

202 Greenhill Road,
Eastwood SA 5063
Telephone: (08) 8291 4111
Facsimile: (08) 8291 4122
www.cancersa.org.au
tcc@cancersa.org.au

The Cancer Council Western Australia

46 Ventnor Avenue,
West Perth WA 6005
Telephone: (08) 9212 4333
Facsimile: (08) 9212 4334
www.cancerwa.asn.au
inquiries@cancerwa.asn.au

Queensland Cancer Fund

553 Gregory Terrace,
Fortitude Valley QLD 4006
Telephone: (07) 3258 2200
Facsimile: (07) 3257 1306
www.qldcancer.com.au
qldcf@qldcancer.com.au

Continence Foundation of Australia

The Continence Foundation of Australia (CFA) offers free and confidential advice about bowel and bladder problems. The CFA provides fact sheets on different types of continence issues. It also operates a National Continence Helpline with nurse advisers you can speak with. Phone 1800 33 00 66 (free call) or visit www.contfound.org.au

The National Public Toilet Map shows the location of more than 14 000 public and private toilet facilities across Australia. It can be used to help plan both short and long trips. Visit www.toiletmap.gov.au

Impotence Australia

Impotence Australia is a not-for-profit organisation established to decrease the suffering of men with impotence and their partners by providing quality telephone counselling. In addition to telephone counselling, Impotence Australia provides information fact sheets on many sexual issues.

Phone 1800 800 614 or visit www.impotenceaustralia.com.au

Lions Australian Prostate Cancer Website

The Lions Australian Prostate Cancer Website provides a range of information resources for consumers and patients, including location of Prostate Cancer Foundation of Australia (PCFA) support groups and online question facilities. Visit www.prostatehealth.org.au

Prostate Cancer Foundation of Australia

The Prostate Cancer Foundation of Australia (PCFA) is the peak body for prostate cancer in Australia. The PCFA provides prostate cancer information and support and runs a national network of support groups. Phone 1800 220 099 or visit www.prostate.org.au

Prostate Health Improvement Program (Mr PHIP)

Mr PHIP is a prostate health education program for men and their families.

The Mr PHIP information sheets include:

- Prostate Cancer: Should I Be Tested?
- Prostate Cancer: Interpreting the PSA Test
- Prostate Cancer: After the Diagnosis
- Prostate Cancer: Monitoring After Treatment
- Prostate Cancer: Hormonal Therapy
- Prostate Cancer: Sexual Function After Treatment
- Prostate Cancer: Useful Resources

Visit www.prostatehealth.org.au/PHIP

Urological Society of Australasia

The Urological Society of Australasia is a professional society for urological surgeons in Australia and New Zealand. The society aims to inform the community about urology and has patient information sheets on common prostate diseases and can help in finding a urologist.
Phone 02 9362 8644 or visit www.urosoc.org.au

Us TOO International

Us TOO International is a prostate cancer and education support network that strives to enhance the quality of life for all those affected by prostate cancer. Visit www.ustoo.org

Vietnam Veterans Counselling Service (VVCS)

The Vietnam Veterans Counselling Service (VVCS) provides free and confidential counselling and group program services for veterans and their families. Veterans of all conflicts and peacekeeping missions and their immediate families, including war widows, are eligible. VVCS centres are located in each State and Territory capital and several regional centres. After hours telephone crisis counselling is available through the Veterans' Line on 1800 011 046.

YANA: You Are Not Alone Now

YANA is a prostate cancer support website designed by men for men with prostate cancer. YANA provides comfort and support to any man diagnosed with prostate cancer. It helps him and his family to decide how best to deal with the diagnosis by providing guidance on suitable information. Visit www.yananow.net

Books

***Choose Health: Be Active* - Department of Veterans' Affairs,** 2005. Available from DVA – phone 133 254 (metropolitan) or 1800 555 254 (non-metropolitan).

***Conquering Incontinence* - Peter Dornan.** Allen & Unwin, 2003. Available from book stores.

***Localised Prostate Cancer - a guide for men and their families* - Australian Prostate Cancer Collaboration,** 2003. Available from the national Cancer Helpline - phone 13 11 20 or online at www.prostatehealth.org.au/articles/Consumer_Guide.pdf

***Men's Health Matters – Consumer Guide* - Andrology Australia.** Titles available '*Erectile Dysfunction*' and '*Prostate Enlargement in the Older Male*'. Available from Andrology Australia – phone 1300 308 878.

***There's Some Good Years Left Yet - the experience of a prostate cancer survivor* - Barry L Oakley** - Prostate Health Improvement Program, South Australia. Available from Repatriation Hospital, Daw Park - phone 08 8275 1169.

***Your Guide to Prostate Cancer - the disease, treatment options and outcomes* - Dr Prem Rashid** (Urologist), 2003. Available from Port Macquarie Urology - phone 02 6581 3456.

***Your Prostate, Your Choice* - Geoffrey Hirst and Sally Wilde.** Bantam Books, 1999. This book is written by an Australian Urologist and covers both urinary symptoms and prostate cancer. Available in book stores.

References

(1) Nickel, J.C. 1998. *Prostatitis: myths and realities*. Urology. 51(3): p. 362-6.

(2) Quinn, M. & Babb, P. 2002. *Patterns and trends in prostate cancer incidence, survival, prevalence and mortality. Part II: individual countries*. British Journal of Urology International. 90(2): p. 174-84.

(3) Australian Institute of Health and Welfare, and Australasian Association of Cancer Registries. 2004. *Cancer in Australia 2001*.

(4) Jepsen, J. & Bruskewitz, R. 1998. *Recent developments in the surgical management of benign prostatic hyperplasia*. Urology. 51(Suppl. 14A)): p. 23-31.

(5) National Health and Medical Research Council. 2003. Clinical Practice Guidelines: *Evidence-based information and recommendations for the management of localised prostate cancer. A report of the Australian Cancer Network Working Party on Management of Localised Prostate Cancer*.

(6) Report of the Medical Services Advisory Committee, Commonwealth of Australia. 2001. *Brachytherapy for the Treatment of Prostate Cancer*.

(7) Potosky, A.L., et al. 2004. *Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study*. Journal of the National Cancer Institute. 96(18): p. 1358-67.

(8) Wyatt, G.K., et al. 1999. *Complementary therapy use among older cancer patients*. Cancer Practice. 7(3): p. 136-44.

(9) Wilt, T., A. Ishani, A., & Mac Donald, R. 2002. *Serenoa repens for benign prostatic hyperplasia*. Cochrane Database of Systematic Reviews. (3): p. CD001423.

(10) Hernandez-Reif, M., Field, T., et al. 2005. *Natural killer cells and lymphocytes increase in women with breast cancer following massage therapy*. International Journal of Neuroscience. 115 (4): 495-510.

Acknowledgments

4th edition compiled by

Department of Veterans' Affairs

PO Box 21

Woden ACT 2606

The department would like to thank:

- Dr Carole Pinnock, Principal Research Scientist, Repatriation General Hospital, Daw Park, South Australia.
- Professor Villis Marshall, Clinical Director, Surgical Specialties Services, Royal Adelaide Hospital.
- Dr Graeme Killer, Principal Medical Adviser - Department of Veterans' Affairs.
- Mr Barry Oakley, Mr Ray Alcorn, Mr Richard Stone, Mr John Smarsz.
- Associate Professor Mark Frydenberg and the Urological Society of Australasia.
- The veterans who have provided comments and feedback.

Photographs supplied courtesy of:

- Geoff Pearson photographs
- Australian Defence force - Digital Media Unit
- Department of Veterans' Affairs
- Australian War Memorial Images 1- 11.

(1) MSUS, Libya, 1942-01-08. Sergeant Ron Simes of No. 3 Squadron, RAAF, who had shot down three enemy planes. AWM negative number 023118, pictured on cover.

(2) Leconfield, England. 1944-01-17. The crew of a Halifax of No.466 Squadron, RAAF, standing beside their aircraft as they prepare to leave for a bombing raid somewhere over occupied Europe. F.Sgt W.D Flett, FO C.W Reynolds, Sgt N.M. Page, FO H.R. Hoare and Sgt E.G. Beldin. AWM negative number UK00959, pictured on inside covers.

(3) Sergeant Vance Drummond standing next to his Meteor F.8 at Kimpo, 1951. Drummond was shot down while flying this aircraft on 1 December 1951 and taken prisoner. Picture appears on page 1.

(4) New Guinea. 1943-08-10. Mount Tambu fighting. Pte. Walter White, of Williamstown, Victoria, who cut off by the Japanese for seven days, made his way back to the Australian lines. White lived on a few native figs picked up from an abandoned garden, and water from a creek. This photo was taken on his return. Donor G. Short, AWM negative number 015482, pictured on page 7.

(5) Singapore. 1950. Squadron Leader (Doctor) William Lockhart Rait RAAF checking blood pressure of an Airmen and watched by three aircrew members. Donor W. Rait, pictured on page 17.

(6) Lincolnshire, England. 1943-09-09. 419018 Flight Sergeant R. C. Dunstan, Frankston, VIC, leaning against the rear turret of "D2" for Donald, a Lancaster aircraft of No. 460 squadron RAAF of bomber command based at RAF Station Binbrook. In this turret, as tail gunner, he has made twenty two trips over enemy territory. He is the only one-legged air gunner in the RAAF, having lost his leg while serving with the AIF in the Middle East. After being invalided out of the army 1942-02, he was back in uniform 1942-06. AWM negative number UK0489, pictured on page 25.

(7) Australian airmen of 460 squadron, RAAF, returning from a raid over Germany, 18 August 1943. AWM negative number UK000402, pictured on page 35.

(8) Gona, Papua, 1942-12-16. The three Chapman brothers of South Australia, who all joined the 2/27th Infantry Battalion, pause for a break just after the fall of Gona. Left to right: Private Desmond Chapman; Private Maxwell Maurice Chapman and Private Raymond Chapman. AWM negative number 013844, pictured on page 49.

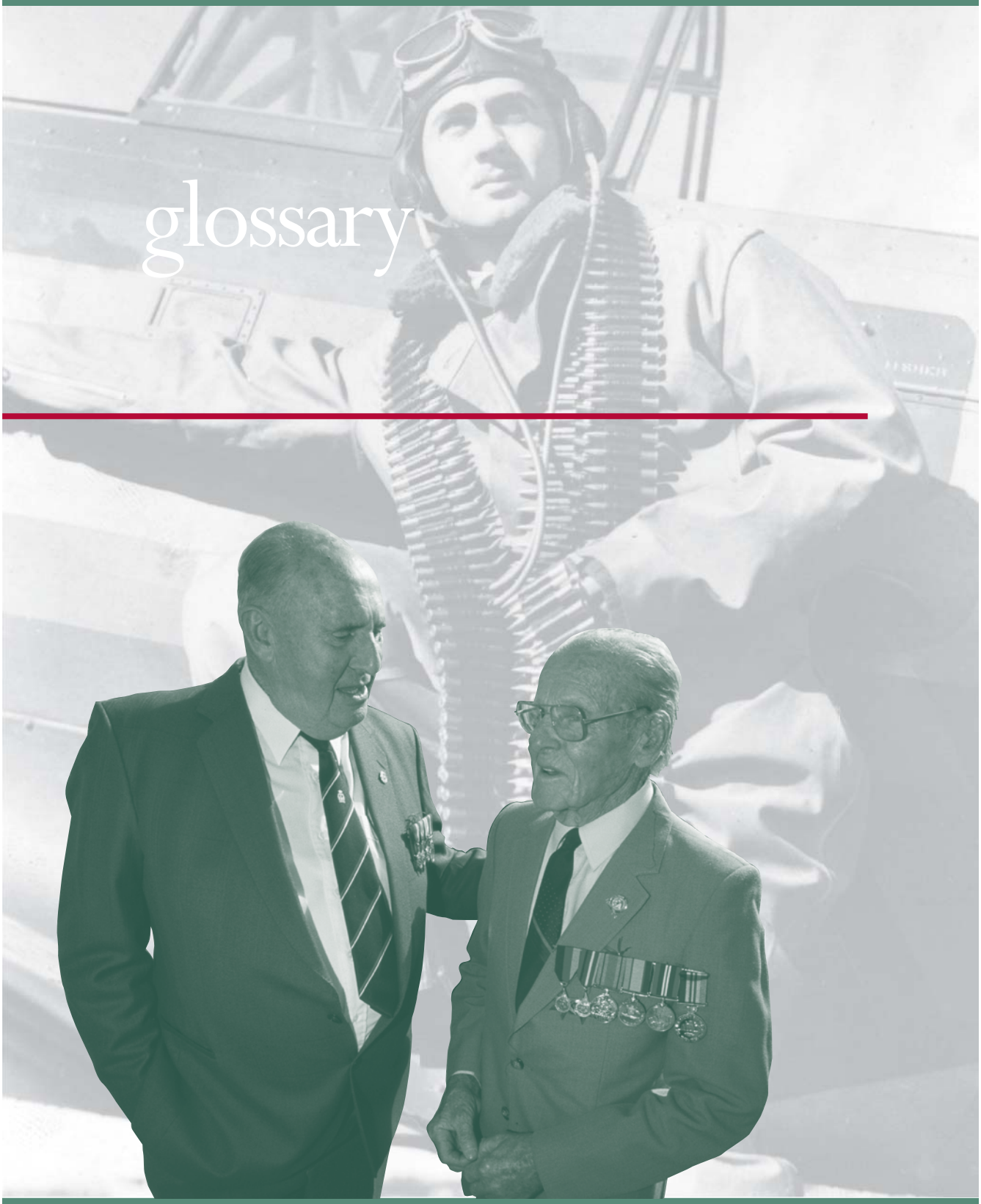
(9) Owen Stanley Ranges, New Guinea. C. 1942-09-01. Corporal H.G Evans and Sgt. L.R Martorana of the A.M.F at a native village shortly after their unit has clashed with the Japanese in the Kokoda area. Photographer D. Parer, AWM negative number 013265, pictured on page 55.

(10) Signalmen of the light cruiser HMAS Melbourne mend clothing on duty in the North Sea. Royal Australian Navy warships joined the Grand Fleet in Great Britain, blockading Germany. Melbourne was in the 2nd Light Cruiser Squadron, hunting for German raiders, submarines and mine layers. Signalman Ernesto Campagnolo, at left, was lost at sea during a storm on 21 December 1916, aged 19. AWM negative number EN0160, pictured on page 59.

(11) Flight Lieutenant William Ellis Newton VC of No. 22 Squadron RAAF beside his aircraft, with ammunition belt draped around his neck. He was awarded the Victoria Cross posthumously following his execution by being beheaded at Salamaua by the Japanese on 1943-03-29, after being shot down over Salamaua Isthmus, New Guinea. AWM negative number 100644, pictured on page 73.

> “Having no symptoms doesn’t necessarily mean nothing is happening in the nether region! Regularly consulting a doctor could ultimately save your life.”
>
> JOHN SMARSZ

glossary



Acute prostatitis – inflammation of the prostate gland that comes on suddenly and is usually caused by bacteria. Symptoms similar to a bladder infection and can be treated with antibiotic medication.

Alpha-blockers – drugs that relax muscle in the arteries and urinary tract. Alpha-blockers relax the muscles of the bladder and prostate in treatment for benign prostatic enlargement to improve urine flow, and are often also used to lower blood pressure.

Anaesthetic – certain type of medication used to relieve pain and reduce feeling during surgery. An anaesthetic can be:

- **Local** – when you lose feeling to the part of your body where the medication is injected, but you remain awake. E.g. a needle prior to having dental work;
- **Spinal** – anaesthetic medication is injected into the spinal canal and you lose all feeling from your waist down; or
- **General** – administered for more major procedures where you lose consciousness and wake up when the procedure is over.

Androgens – male sex hormones. The most active male hormone, **testosterone** is produced by the testicles.

Anti-androgens – drugs which slow the growth of prostate cancer by blocking the action of the male hormone, testosterone.

Benign – non-cancerous/ non-malignant.

Benign Prostatic Enlargement (BPE) – non-cancerous enlargement or growth of the prostate gland. This increase in the number and/or size of cells is also known as benign prostatic hyperplasia or benign prostatic hypertrophy, and known collectively as BPH.

Biopsy – removal of tiny pieces of tissue. Performed when cancer is suspected, with the cells from the tissue analysed under a microscope to determine if they are cancerous.

Bladder Neck Incision (BNI) – See Transurethral Incision of the Prostate.

Bone scan – a type of X-ray used to locate cancerous activity in bones. A low-dose radioactive chemical is injected into a vein and the X-rays trace its path through the body. This chemical settles in parts of the bones that are abnormal, such as areas of cancer and the X-ray images identify these as 'hot spots'.

Brachytherapy – a form of prostate **radiotherapy** that involves the direct insertion of radioactive seeds or rods into the prostate.

Bulbourethral glands (or Cowper's glands) – two pea-sized glands on each side of the prostate gland, forming part of the male reproductive system. These glands secrete a mucous fluid that is added to **semen**.

Cancer – abnormal cells which multiply without control. Cancer cells can spread through the blood stream and lymphatic circulation to other parts of the body.

CAT (CT) Scan – computer assisted tomogram. A series of detailed pictures taken in a circle around the body produced by a computer linked to an X-ray machine. Also called computerised axial tomography.

Catheter – a hollow, flexible tube through which fluids can be passed into or drained from the body. During and following some prostate disease treatments, a catheter is used that runs from your bladder, along the inside of your penis to the outside of your body where it joins to a bag.

Chemotherapy – the treatment of any disease by chemical medication. Commonly it is loosely used as an expression when anti-cancer **(cytotoxic)** medications are used.

Chronic prostatitis – inflammation of the prostate gland that is usually caused by bacteria. Continuously recurs; symptoms can be treated with antibiotic medication.

Clinical staging – staging or rating of prostate cancer determined by a **digital rectal examination (DRE)**.

Complementary therapies – non-traditional interventions used to treat or cure chronic and acute illness and manage pain. Often used alongside traditional treatments.

Cystitis – infection or inflammation of the bladder.

Cystoscope – a thin tube with a light and an eyepiece attached to it that is inserted into the urethra and used to look inside the bladder.

Cystoscopy – a procedure in which an instrument **(cystoscope)** is inserted into the urethra under local anaesthetic, to view the bladder and prostate.

Cytotoxic – special medications used to kill cancerous cells in the body. Cytotoxic means 'toxic to cells'.

Day procedure – a surgical procedure performed without the need for the patient to remain in hospital overnight.

Digital Rectal Examination (DRE) – a simple test where a doctor inserts a gloved, lubricated finger into the rectum to examine the back passage and feel the prostate gland.

Doubling time – the time taken for the **PSA (Prostate Specific Antigen)** to double, for example from 4 to 8 ng/mL. This is a measure of how fast a cancer is growing and can also be used to predict cancer recurrence after treatment.

Dry ejaculation – after some treatments for prostate disease a man may achieve orgasm, but produce no fluid. This is because the fluid flows back into the bladder instead of out through the penis. Also known as **retrograde (reverse) ejaculation**.

Ejaculate – see Semen.

Ejaculatory duct – tube that semen passes through at time of **ejaculation**.

Epididymis – a long tube that lies on top of each testicle and functions as a reservoir for sperm produced by the testes.

Erectile dysfunction – inability to achieve and maintain an erection firm enough for penetration. Also called **impotence**.

External Beam Radiotherapy (EBR) – a form of radiotherapy where the prostate is targeted with high-energy X-rays from outside the body.

Free to total PSA ratio – In both healthy men and those with prostate cancer, the **prostate specific antigen (PSA)** in the bloodstream 'latches' onto protein. In men with benign prostatic enlargement (BPE), there tends to be more 'free' or 'unbound' PSA. This test compares the ratio of unbound PSA to total PSA in the bloodstream.

Gleason score – a way of grading cancer cells. Low grade cancers (Gleason score 2, 3, 4) are slower growing than high grade (Gleason scores 8, 9, 10) cancers. The pathologist identifies the two most common tissue patterns and grades them from 1 (least aggressive) to 5 (most aggressive). The Gleason score is given as two numbers added together to give a score out of ten. (For example, 3 + 4 = 7). The first number is the most common pattern seen under the microscope and the second number is the next most common.

Grade – a score that describes how abnormal the cancer cells look, and consequently how aggressive or fast-growing the cancer is likely to be. The most commonly used grading system is the **Gleason score**, which ranges from 2–10.

Hormone – a natural chemical substance that is formed in one part of the body, travels through the blood, and affects the function of cells elsewhere in the body.

Hormone therapy – in prostate cancer, treatment with drugs that prevent the effect of **testosterone** in the body in order to slow or stop the growth of prostate cancer.

Hot flush – a sudden rush of heat to the face and neck, and sometimes the chest and back. Hot flushes can occur in men receiving hormone therapy for prostate cancer.

Immune system – the system that protects the body against an attack of any infective or allergic disease.

Impotence – inability to achieve and maintain an erection of the penis, sufficient to engage in sexual intercourse. Also called **erectile dysfunction**.

Incontinence – inability to control urine or faeces passing. Incontinence may be due to a wide range of medical conditions and may occur after some treatments for prostate disease.

Inflammation – a protective response of the body's tissues to injury or irritation, characterises by redness heat, swelling and pain.

Intermittent therapy – a non-continuous form of hormone therapy for prostate cancer, where treatment starts and stops repeatedly.

Laparoscopic surgery – surgery performed using only small cuts ("keyhole surgery") and telescopic instruments.

Laser therapy – laser fibres are passed through the urethra into the prostate gland to vaporise obstructing prostate tissue. Relieves pressure on the urethra and restores a freer flow of urine.

Libido – sex drive.

Localised prostate cancer – cancer at an early stage and which has not spread beyond the prostate gland.

Lower Urinary Tract Symptoms (LUTS) – symptoms related to the flow or passing of urine, such as poor stream, frequent urination, needing to get up at night two or more times to urinate, incontinence and incomplete emptying of the bladder.

Luteinising Hormone (LH) – produced by the pituitary gland in the brain and acts on the testes to produce the principle male hormone, testosterone.

Luteinising Hormone Releasing Hormone (LHRH) – stimulates the pituitary gland in the brain, which sends a message (luteinising hormone) to the testes to produce testosterone.

Luteinising Hormone Releasing Hormone (LHRH) Agonist – a substance that resembles LHRH, which controls the production of sex hormones. The LHRH agonists keep the testicles from producing hormone (testosterone).

Lymph nodes (glands) – small oval shaped nodes situated along the blood vessels. Lymph nodes prevent entrance of infections and other harmful material entering the bloodstream.

Male reproductive organs – collective term for the scrotum, testes, penis, spermatic cord, seminal vesicles, prostate and bulbourethral glands.

Malignant – cancerous.

Margin positive – after surgery to remove the prostate, if cancer cells are present at the cut edge (margin) of the removed prostate, it is termed 'margin positive'.

Medical oncologist – a specialist in the treatment of cancer using chemotherapy.

Medicare Benefits Schedule (MBS) – a book that lists the professional services rendered by medical professionals that have been approved for Australian Government Funding, and are therefore paid by the Department of Veterans' Affairs.

Metastasis – the spread of cancer away from the part of the body where it began.

Milking (urethral) – an action performed to empty the reservoir of urine not passed after passing urine. The small amount of urine is expressed or "milked" by placing fingers of one hand several centimetres behind the scrotum and bringing them upward and forward towards the base of the penis.

MRI – Magnetic Resonance Imaging. A magnet is linked to a computer used to create pictures of areas inside the body.

Nodules – small lumps.

Nerve-sparing operation – a specialised technique for prostate cancer surgery that aims to preserve the nerves needed for erections.

Oncologist – a doctor specialising in the diagnosis, treatment and management of cancers.

Orchidectomy – surgical removal of the testicle(s).

Osteoporosis – thinning of the bones making them weaker and more likely to break.

Palliative care – treating the symptoms so the patient feels better, without an effect on the underlying cause of the problem. Palliative care is centred on achieving the best possible quality of life for the person and their family.

Pelvic – area of the body located below the waist and surrounded by the hip and pubic bones.

Penis – male reproductive organ that consists of a body, or shaft that starts deep inside the body and extends externally to the end of the penis at the glans.

Perineal (perineum) – area of body between the anus and the scrotum.

Pituitary – part of the brain that produces hormones that stimulate the testicles to produce **testosterone** (male hormone).

Post micturition dribbling – dribbling after urination.

Potency – the ability to have and maintain erections firm enough for penetration.

Prognosis – the course and likely outcome of a disease.

Prostate disease – the term used to describe any medical problems involving the prostate gland.

Prostate gland – part of the male reproductive organs; lies under the bladder and surrounds the urethra. The prostate gland secretes a milky fluid that is added to **semen** during ejaculation.

Prostate Specific Antigen (PSA) blood test – a test which examines a protein in the blood, specific to the prostate. The level of PSA usually rises in men who have benign enlargement of the prostate gland, an infection of the prostate gland or cancer of the prostate.

Prostatectomy – removal of all or part of the prostate gland. There are two main types:

- Transurethral prostatectomy (TURP) - removal of part of the tissue surrounding the urethra which may be blocking the flow of urine.
- Radical prostatectomy - removal of all of the prostate and the seminal vesicles.

Prostatitis – infection/inflammation of the prostate gland, usually caused by bacteria.

Radical prostatectomy – surgical removal of the entire prostate gland including the capsule, and the seminal vesicles.

Radical surgery – surgery aimed at removing all of the cancer.

Radiation therapy – treatment with energy rays or waves from X-rays or other sources to injure or destroy cancer cells. Also called **radiotherapy**.

Radiotherapist – a specialist doctor who uses X-rays and radioactive substances to diagnose and treat diseases.

Rectum – the last part of the large intestine leading to the outside of the body (anus).

Remission – term used when, after treatment, there is no sign of any cancer.

Resectoscope – an instrument that is inserted via the urethra to cut and remove tissue **(biopsy)** from the prostate gland or bladder.

Retrograde ejaculation – semen is passed back into the bladder. Also called **reverse ejaculation**.

Saw palmetto – a medicinal plant used to treat testicle and prostate problems.

Screening – regular testing for a disease when there are no symptoms present.

Scrotum – a pouch of skin forming part of the male reproductive organ that contains the testes, spermatic cords and epididymis. The scrotum hangs outside the body and behind the penis.

Semen – fluid produced by the male reproductive system and consists of sperm, fluid from the seminal vesicle, prostate and bulbourethral glands. Also called **ejaculate**.

Seminal vesicles – two highly coiled glands attached to the bladder and prostate gland forming part of the male reproductive organs. The seminal vesicles secrete a mucous fluid that is added to the semen during ejaculation.

Sphincter – a circular band of muscle that can relax and contract to open and close like a tap.

Staging – tests or examinations to determine the extent of a cancer, especially the spread from its original site to other parts of the body. The most common staging system is the **TNM system**.

Stress incontinence – uncontrolled loss of a small amount of urine as a result of any strenuous activity, laughing, coughing, sneezing or lifting heavy objects.

Stricture – a blockage of a tube such as the urethra that may be caused by the contraction of scar tissue following surgery.

Testicles – part of the male reproductive organs consisting of two oval shaped glands in the scrotum which produce sperm and the male hormone testosterone. Prior to ejaculation sperm is released from the epididymis which acts as a reservoir of sperm and is added to it to form part of the semen. Plural – testes.

Testosterone – male hormone produced by the testes.

TNM system – a system for grading cancer, depending on the size and invasiveness of the tumour, whether lymph nodes are affected and whether there is **metastasis**.

Transrectal ultrasound – a means of imaging the prostate in order to locate cancer. A small ultrasound instrument is inserted into the back passage (rectum) and images of the prostate gland are produced on a screen.

Transurethral Electrovaporisation (TVP) – treatment where a specialised device is inserted into the urethra and heat energy is used to vaporise the prostate tissue causing the obstruction.

Transurethral Incision of the Prostate (TUIP) – a surgical procedure where a special instrument **(resectoscope)** is inserted through the urethra and two or three small cuts are made in the neck of the bladder and partly through the prostate to relieve any obstruction.

Transurethral Microwave Therapy (TUMT) – treatment where a device is inserted into the urethra and microwaves heat and destroy excess prostate tissue, shrinking the gland and relieving urinary symptoms.

Transurethral Radiofrequency Needle Ablation (TUNA) – treatment using low-level radiofrequency energy to burn away part of the enlarged prostate.

Transurethral Resection of the Prostate (TURP) – a surgical procedure that uses a special instrument **(resectoscope)** inserted into the urethra to remove part or all of the prostate gland to relieve symptoms of urinary obstruction.

Tumour – an abnormal mass of tissue.

Ultrasound – an examination where sound waves are transmitted into the body and the echoes received are used to produce images on screen and film.

Urethra – tube running along the length of the penis from the bladder through which urine and semen exit.

Urethral milking – refer to **milking (urethral)**.

Urethritis – inflammation of the **urethra**.

Urethroplasty – dilation of the prostatic urethra using a catheter with an in-built balloon. This specialised balloon is inflated to re-establish a more open urethra.

Urge incontinence – when you suddenly need to go to the toilet without warning; you may even wet your pants while on your way to the toilet.

Urodynamics – tests to measure the pressures in the bladder and urethra during filling and emptying. Urodynamic tests are used to work out the cause of urinary symptoms.

Urologist – a specialist medical doctor, who diagnoses, manages and treats diseases of the urinary tract in men and women.

Vas (ductus) deferens – ducts (tubes) that take sperm to the urethra on ejaculation.

Watchful waiting – now called surveillance or deferred treatment - a decision to wait and monitor progress of mild symptoms of prostate disease.

Acronyms

BNI Bladder Neck Incision (also known as TUIP)

BPE Benign Prostatic Enlargement

EBRT External Beam Radiotherapy

GP General Practitioner (Doctor)

LHRH Luteinising Hormone Releasing Hormone

LUTS Lower Urinary Tract Symptoms

PSA Prostate Specific Antigen

TNM Tumour Node Metastasis

TUIP Transurethral Incision of Prostate (also known as BNI)

TUMT Transurethral Microwave Therapy

TUNA Transurethral Radiofrequency Needle Ablation

TURP Transurethral Resection of the Prostate

TVP Transurethral Electrovaporisation

you & your PROSTATE
Feedback

CONTENT

How useful did you find the information in this book?

- ☐ Very useful
- ☐ Fairly useful
- ☐ Useful
- ☐ No use at all

PRESENTATION

What do you think about the layout of the information?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

READING

How easy is it to read the text?

- ☐ Very easy
- ☐ Easy
- ☐ Difficult
- ☐ Very difficult

IMPACT

Did you learn anything from reading this book?

- ☐ Yes – lots
- ☐ Yes – quite a lot
- ☐ Only a little
- ☐ No – nothing at all

Will you consult your doctor about your prostate health?

- ☐ I already consult my doctor
- ☐ Yes I definitely will
- ☐ I will think about it
- ☐ No I definitely will not

Are you a veteran?

- ☐ Yes
- ☐ No

What is your age?

- ☐ Under 60
- ☐ 60-69
- ☐ 70-79
- ☐ 80-89
- ☐ 90 or over

Comments:

Fold along this line first

Delivery Address:
PO Box 21
WODEN ACT 2606

No stamp required
if posted in Australia

You & Your Prostate
Book Evaluation Form
Reply Paid 21
WODEN ACT 2606

Fold along this line last — so your comments are covered, then seal with sticky tape

you & your PROSTATE
Feedback