the penis, and, a drain in the lower abdomen to draw off any fluid from the surgical site. Over a few days, these tubes, with the exception of the bladder catheter, will be removed as your recovery progresses.

Excellent post-operative pain control can be achieved by several means. A patient-controlled analgesia (PCA) pump can be used to safely give a small dose of intravenous pain killer at the touch of a button by the patient. This may be supplemented with other medications given by injection, tablet or suppository.

It often takes several days for bowel function to return to normal after any major surgery. Your diet will be restored slowly starting with liquids and progressing to solid foods.

An early return to activity after surgery will hasten your recovery. You may be asked to sit up or stand on the day of surgery; walking is expected on the first post-operative day. Breathing and leg exercises may be taught.

You will be discharged from hospital when you are drinking, eating and able to take care of yourself independently, usually three to five days after your surgery.

After your discharge

Instructions will be given regarding hygiene and care of your incision, catheter and drainage bag. Your urologist will inform you of the timing and arrangements for bladder catheter removal.

Following your discharge from hospital, you will be encouraged to remain active with daily walks. Major surgery is emotionally and physically taxing. You may need to rest more than usual. It may take several months before your energy level returns to normal.

The tissue removed at surgery is examined carefully to determine the tumour extent and characteristics. Your urologist will discuss this information with you within a few weeks of your operation.

Risks and complications

Any major surgery, including radical prostatectomy, has associated risks. In the short term, bleeding may require blood transfusion and infection may require the use of antibiotics. The stress of surgery may lead to heart or lung problems. Blood clots forming in the legs can be life-threatening if the clots travel to the lungs. Great effort is made to prevent these and other complications.

In the longer term, many men having a radical prostatectomy will lose the ability to have natural erections, although this can improve over years. Several forms of treatment are available to restore erections if this becomes necessary. While the feeling of orgasm usually is preserved, ejaculation will be dry following removal of the prostate and semen glands and the absence of sperm will make you infertile.

Many men will have some degree of urinary leakage after a radical prostatectomy. In most cases this will improve in time with exercises. Some men, however, will have ongoing leakage for which absorbent pad protection may be necessary permanently. Rarely, additional surgery may be required to restore control.

There is always the risk of cancer recurrence after any treatment for prostate cancer. A regular follow-up schedule with PSA blood tests will be advised.

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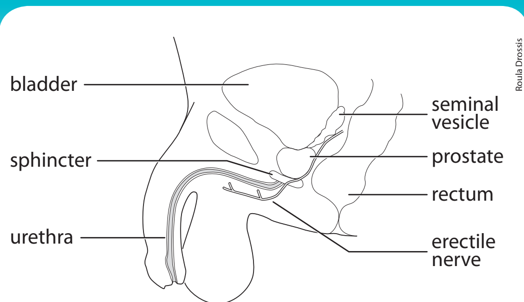
Radical prostatectomy

Localized prostate cancer may be cured by radical prostatectomy. Within a few months of surgery most men will be able to resume their usual lifestyle.

The prostate is a gland wrapped around the urethra, the urine channel, between the bladder and its control muscle, the urethral sphincter. Its main function is to produce part of the semen ejaculated at male orgasm. Each vas deferens carrying sperm from the testicles connects to the prostate. The nerves carrying signals to produce erections run on either side of the prostate.

Side view of male lower urinary anatomy



Cancer may develop in the prostate from which it can grow into surrounding tissues or spread to other parts of the body. Microscopic examination of prostate biopsies confirms the suspicion of cancer and allows some prediction of the tumour's expected behaviour. This is known as the tumour grade or Gleason score.

Additional investigations may be performed, when necessary, to determine the extent or stage of the cancer. Your prostate cancer appears to be confined to the prostate, although there is always a chance of undetectable, microscopic spread.

You have discussed several treatment options with your urologist, including:

- observation with possible delayed treatment (sometimes called watchful waiting or active surveillance),
- surgical removal of the prostate, or,
- radiation therapy (by external beam and/ or implantation of radioactive pellets, brachytherapy).

Each option has its own advantages and risks.

Radical prostatectomy involves the complete removal of the prostate. This option is appropriate for men with localized prostate cancer, good general health and a life expectancy of at least ten years.

Preoperative preparation

Preoperative laboratory tests will be obtained as necessary. A "bowel prep" may be recommended before your surgery. The prostate lies immediately next to the bowel. In the rare event of a bowel injury during surgery, a clean bowel may reduce the risk of serious complications. Your urologist will instruct you on the form of bowel prep required. This may involve drinking a cleansing solution, taking antibiotic tablets and/or enemas.

If you are taking blood thinners, you should discuss this with your urologist. You may be asked to stop taking aspirin, ibuprofen, blood thinners and any vitamin or herbal supplements before surgery to reduce the risk of bleeding and unexpected drug interactions. Other medications should be continued as usual. Please ask your urologist if you have any question regarding medications. You will be asked not to eat or drink for several hours before your operation.

At the hospital

Most men are admitted to hospital on the morning of surgery. A nurse will prepare you for the Operating Room and answer your questions. You may be fitted with tight stockings or given medications to prevent the formation of blood clot in the legs.

You will be taken to the Operating Room where the anesthesiologist, the doctor responsible for keeping you comfortable during surgery, will attach instruments to monitor your vital functions. Your anesthetic will then be given. Radical prostatectomy normally is performed under general anesthesia (you are "put to sleep").

There are several surgical approaches to remove the prostate. Either an incision is made in the lower abdomen below the navel or it is performed using small "keyhole" incisions (laparoscopically).

When the PSA blood test or biopsies suggest a higher risk of cancer spread, pelvic lymph nodes may be removed for immediate examination. In the presence of cancer in these lymph nodes, cure of prostate cancer by radical prostatectomy is not likely. In the absence of obvious tumour spread, the prostate is exposed and freed from surrounding structures. The urethra is divided below the tip of the prostate preserving as much of the sphincter control muscle as possible. The prostate and seminal vesicles are separated from the bladder and removed. An attempt to spare the erection nerves may be made, unless this could risk leaving cancer behind.

The urethra is sutured to the bladder over a catheter passed through the penis into the bladder and held in by a small balloon. This catheter must remain in place until removed as directed by your surgeon. The abdominal incision is closed with stitches or metal staples. The operation usually takes two to three hours to complete.

After the surgery

Upon completion of the surgery, you will be taken to the Recovery Room where nurses will monitor your vital functions until you are stable, usually in one to two hours. Then, you will be taken to a surgical ward where you will complete your in-hospital recovery.

Initially, you will be attached to several tubes: oxygen in the nose, an intravenous fluid line in an arm, a catheter draining the bladder through

Side view of catheter in bladder after prostate removal