University College Hospital

Hormone therapy for prostate cancer

Radiotherapy Department
Patient information series

№10
If you need a large print, audio or translated copy of the document, please contact us on:

020 3447 3711 (Direct line)
020 3456 7890 ext 73711/bleep 1458
0845 155 5000 ext 73711/bleep 1458

We will try our best to meet your needs.
Contents
Introduction 5
What are hormones? 5
What is hormone therapy? 6
How and when is hormone therapy prescribed? 7
Side effects of hormone therapy 7
Useful contact numbers 9
Introduction
This booklet has been written for male patients who have been recommended hormone therapy for prostate cancer. This booklet explains:

• What are hormones.
• What is hormone therapy.
• The side effects you may experience during hormone therapy, and how best to cope with them.

We understand that this is a daunting time for patients. You may feel that you have been given lots of information about what needs to be done in a short period of time. We hope this booklet answers some of your questions. If you still have any questions or concerns, please let your doctor or specialist nurse know. They are here for you and are in the best position to help and advise you.

What are hormones?
Hormones are substances that occur naturally in your body. They act as chemical messengers and help control the growth and activity of cells and organs. Testosterone (the male sex hormone) is made mainly in the testicles, but a small amount also comes from the adrenal glands (which sit on top of the kidneys).

As part of the male reproductive system, the prostate gland needs testosterone in order to grow. Similarly, prostate cancer is also dependent on testosterone for its growth. Therefore, if the level of testosterone is reduced, it is possible to slow the growth of the cancer and even cause it to shrink.

The PSA (Prostatic Specific Antigen) level in your blood may drop and sometimes the symptoms of prostate cancer, such as bone pain and difficulty in passing urine, may disappear. The level of testosterone can be reduced by drugs (hormone therapy) or surgery (the removal of the testicles). Hormone therapy is now more commonly used as an alternative to surgery.
What is hormone therapy?
Hormone therapy is the use of injections and/or tablets to alter the production or activity of other hormones in the body. In the case of prostate cancer, it is to reduce the level of testosterone. There are two main types of drugs used in hormone therapy for prostate cancer. These are called pituitary down-regulators and anti-androgens.

Pituitary down-regulators
The testicles make testosterone because a hormone (called luteinising hormone) released by the pituitary gland in the brain “tells them to”. These drugs block that hormone. So the testicles do not receive the message and therefore testosterone production is “switched off”. One example of such a drug is goserelin acetate or Zoladex®.

Zoladex® is given by an injection under the skin of your abdomen either once a month or once every three months. It can be given by your GP or practice nurse at the GP surgery, or a district nurse if you are unable to visit the GP. Some people find the injection a little uncomfortable, and you may notice some slight bruising around the injection site afterwards. If you request it, a tiny amount of anaesthetic cream can be used on the skin to numb the area before the injection.

Anti-androgens
These drugs block the effects of the testosterone from your testicles and adrenals, they do not reduce the amount of testosterone. On the surface of the prostate cancer cells there are proteins called receptors. These receptors act as a lock, so when testosterone comes into contact with them they unlock or activate the cancer cells to grow. The anti-androgens “attach” themselves to the receptors thus blocking the testosterone, so the cancer cell cannot grow. One example of such a drug is bicalutamide or Casodex®. Casodex® is usually taken daily in tablet form before and at the beginning of the Zoladex® injections.
How and when is hormone therapy prescribed?
Hormone therapy is often used in the following situations:

• **Localised prostate cancer**—used temporarily alongside surgery, external beam radiotherapy or brachytherapy.

• **Localised prostate cancer**—used long-term instead of the above treatments, because of the patient’s choice.

• **Recurrent prostate cancer**—because neither radical prostatectomy (the removal of the prostate gland) nor radical radiotherapy (to the prostate) can be repeated.

• **Metastatic prostate cancer**.

How you will be given the hormone therapy and for how long depends on the grade and stage of your tumour, your age and general health. It is often given for several months or several years. Your doctor will discuss the best choice of hormone therapy for you.

Side effects of hormone therapy
There are some side effects common to all hormone therapies used for prostate cancer, and some that vary from drug to drug. You may experience only a few side effects, while others experience more. All patients are unique. These side effects are temporary and generally reversible once the hormone therapy is stopped. Possible side effects may include:

**Hot flushes**
They are caused by your testosterone levels dropping. They may get better as you get used to treatment. However, in some men the flushes keep on as long as the drug is taken. If they are troublesome, please speak to your doctor, specialist nurse, the radiographers or nurses. There are treatments available to reduce these side effects.
Tumour flare
After the first Zoladex® injection there may be a temporary increase in the production of testosterone. Because of this, some men may find that they experience an increase in symptoms such as bone pain or urinary obstruction. An anti-androgen tablet will be given for a few weeks before the first injection to prevent this from occurring.

Loss of sex drive and impotence (inability to get an erection)
This is a major side effect of hormone therapy. You will lose your sex drive and be impotent as long as you are taking drugs such as Zoladex®. This is because you are not producing any testosterone. You may regain your potency if the treatment stops. This can take several months, however, from when treatment stops, depending on the drug you are having and how long you have been taking it. Some men keep their sex drive and ability to maintain an erection when taking Casodex® alone, but there is a risk of becoming impotent with long-term treatment. About one in five men keep their ability to get an erection, even with long-term treatment. Your doctor can discuss this more fully with you, and also discuss treatments available for impotence.

Fatigue
Long-term hormone therapy can cause you to have a low level of iron in your blood. This can make you tired and breathless. You may have blood tests from time to time to check the iron levels in your blood.

Weight gain and some loss of muscle bulk
you should be able to control both by eating a healthy diet and taking gentle exercise. Advice about dieting can be had from your GP or ask to see a dietician. Before starting any exercise regime please seek medical advice.

Swelling and tenderness of the breast tissue (gynaecomastia)
This is a common side effect of hormone therapy. The breasts can become tender and slightly enlarged.

Other side effects include sore joints and possible mood changes.
Useful contact numbers

Local

Macmillan Information and Support Radiographer
Mark Williams
Direct telephone: 020 3447 3711
Main switchboard: 0845 155 5000
  ext 73711
  bleep 1458
Alternative switchboard: 020 3456 7890
  ext 73711
  bleep 1458

Email: mark.williams@uclh.nhs.uk

Dr Payne’s Secretary:
Direct telephone: 020 3447 9105

Dr Mitra’s Secretary:
Direct telephone: 020 3447 9090
National
Prostate Cancer Support Association
Helpline: 0845 601 0766
Email: helpline@prostatecancersupport.info
Website: www.prostatecancersupport.co.uk

The Prostate Cancer Charity
Freephone Helpline: 0800 074 8383
Email: info@prostate-cancer.org.uk
Website: www.prostate-cancer.org.uk

Prostate Action
Telephone: 020 8788 7720
Email: info@prostateaction.org.uk
Website: www.prostateaction.org.uk

Prostate Cancer Research Centre
Telephone: 020 7679 9366
Email: info@prostate-cancer-research.org.uk
Website: www.prostate-cancer-research.org.uk

Prostate Cancer Federation
National Helpline: 0845 601 0766
Email: info@prostatecancerfederation.org.uk
Website: www.prostatecancerfederation.org.uk

Continence Foundation
Telephone: 0845 345 0165
Monday to Friday, 09:30 to 12:30
E-mail: continence-help@dial.pipex.com
Website: www.continence-foundation.org.uk

The Impotence Association
Telephone: 020 8767 7791
Email: info@impotence.org.uk
Website: www.impotence.org.uk
Macmillan Cancer Support
Cancer Line freephone: 0808 808 0000
  Monday to Friday, 09:00 to 21:00
Textphone: 0808 808 0121
  Monday to Friday, 09:00 to 18:00
Email: cancerline@macmillan.org.uk
Website: www.macmillan.org.uk

CancerHelp UK
Freephone Helpline: 0808 800 4040
  Monday to Friday, 9:00 to 17:00
Website: www.cancerhelp.org.uk

Cancer Research UK
Website: www.cancerresearchuk.org

Carers UK
Freephone: 0808 808 7777
  Wednesday to Thursday
Email: adviceline@carersuk.org
Website: www.carersuk.org

Health Talk Online
Website: www.healthtalkonline.org

National Library for Health
Covers all aspects of health, illness and treatments
Website: www.library.nhs.uk

NHS Direct
Telephone: 0845 4647
  Available 24 hours
Website: www.nhsdirect.nhs.uk

Patient UK
Comprehensive, free, up-to-date health information
Website: www.patient.co.uk