

## **What are hormones?**

There are many hormones in the body and everybody has them. They are chemicals in the blood and each hormone has a different function and affects different organs in the body. You may have heard of insulin and adrenaline, they are both hormones.

In prostate cancer the male hormone **testosterone** is important. Testosterone is mainly produced in the testicles but a small amount is also produced by the adrenal glands (which sit on top of the kidneys). One of the functions of testosterone is to regulate the normal function, growth and development of the male reproductive organs, one of which is the prostate.

Hormone treatment for prostate cancer works by either stopping the testicles from producing the male hormone testosterone or by blocking the effect of testosterone on the body. Testosterone is like food to the cancer and by taking it away, the growth of the cancer is slowed down. Eventually however the cancer learns to grow without testosterone. Hormone therapy therefore will not work indefinitely but all being well it will keep the cancer in check for a number of years.

## **Can I have surgery or radiotherapy?**

When prostate cancer spreads, it spreads out of the prostate into surrounding tissues (**locally advanced**) and then to the bones (**metastatic**). Some men will be found to have locally advanced or metastatic prostate cancer when they are diagnosed. Treatment such as surgery or radiotherapy would not cure your cancer if it has spread because such treatments would not remove or target all the cancer.

## **What are the benefits of having hormone treatment?**

It helps slow down the growth and spread of your prostate cancer. In most cases it will initially make the cancer actually shrink. It is good at controlling your prostate cancer but it will not cure you of it.

## **Who would be suitable for hormone treatment?**

- Patients with locally advanced or metastatic prostate cancer. Hormone treatment would be given long term.
- Patients having radiotherapy are often given hormones as an additional treatment before or/and after radiotherapy. Hormones may be given for a few months or even a few years in this case.
- Patients whose surgery or radiotherapy treatment has failed to cure their cancer and the cancer comes back. Treatment will be given long term.
- Some patients may be given hormones to try to shrink the size of the prostate before other treatment is given i.e. radiotherapy / brachytherapy. Hormone treatment in these cases will only be for 3-6 months.

## **How is the treatment given?**

- Anti-androgen tablets block the effect of testosterone. You may be given these tablets before having the injection, described below, for 3 weeks only - 1 week before and 2 weeks after having the injection. Examples of this tablet are Cyprostat (Cyproterone Acetate) and Casodex (Bicalutamide). Some patients have these tablets long term
- Luteinizing Hormone Releasing Hormone-agonist (LHRH) injections stop testosterone being released by the testicles. It is given by monthly or 3 monthly injection just under the skin on your stomach or arm or into the muscle (this only applies to the monthly injection). Zoladex (Goserelin), Prostat (Leuprorelin), Suprefact (Buserelin) and De-Capeptyl (Triptorelin) are all LHRH- agonists. Your doctor will explain which one you will have. Your GP or practice nurse will be able to give you this injection at the surgery.
- An operation to remove the functioning part of the testicles – bilateral subcapsular orchidectomy. By removing these, testosterone cannot be made. This removes the requirement for the injections.

## **What are side effects of hormone treatment?**

Everyone will react differently. You may experience a few, some or a lot of the most common side effects. These are listed below:-

Loss of libido or sex drive. Due to the effect on the levels of testosterone in the body you may feel less interested in sex. Losing your libido does not mean that you lose interest in a loving, caring relationship.

- Impotence – loss of erections sufficient for sexual intercourse.
- Hot flushes which may improve over time but can sometimes be treated if you find them troublesome.
- Breast swelling and tenderness - this is more common with anti-androgen treatment.
- Weight gain, with thickening around the waist or swelling in the chest area.
- Tiredness, fatigue and low mood can occur in the first few weeks of treatment.
- Sickness and diarrhoea can occur if you are prescribed Flutamide (Drogenil) or Casodex (Bicalutamide).
- Osteoporosis (bone thinning) may happen in the long term.

### **What happens if I am bothered by these side effects?**

You should discuss any worries or concerns you have about any side effects with your doctor/nurse. He/she will be able to advise you of any treatment which can be started to help ease the symptoms you are having.

### **What follow up will I have?**

Once you have been started on hormone treatment, an appointment will be made for you to come to outpatients to review your progress. You will be asked to have your prostate blood test (PSA) checked before each appointment, this will tell us how well you are responding to treatment.

If all is well, we may ask your GP to carry out your PSA blood tests and monitor your progress after a few years. If your GP is concerned with any of your results or you develop any symptoms such as bone pain, he will write to the Urologist at the hospital and ask for an appointment to be made for you to be seen in clinic.

**If you have any questions or concerns, please find below contact numbers for the Urology wards and Urology nurses:-**

**Urology Wards:-**

D 5 West on:- 01633 – 234040 / 234041 ( 24 hours )

**Urology Day Ward:-**

Tel. No:- 01633 – 656378 / 656377

Monday – Friday office hours

**Urology Outpatients Department:-**

Tel. No:- 01633 – 234979

Monday – Friday office hours

Janet Marty, Uro-Oncology Specialist Nurse:-

Tel. No:- 01633 – 656143

Monday – Friday office hours

Julie Simpson, Uro-oncology Specialist Nurse

Tel. No:- 01633 238976 Mon–Fri office hours

Sian Lewis , Uro –Oncology Specialist Nurse

Tel No :- 01633 238976 Mon-Fri office hours.

Maureen Hunter/ Laura Reynolds Urology Nurse Practitioner:-

Tel. No:- 01633 – 234758

Monday – Friday office hours

**References:**

Tanagho E A McAninch J W (2003) Smiths General Urology

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