Understanding radiotherapy

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Radiotherapy

Radiotherapy uses radiation, such as x-rays, gamma rays, electron beams or protons, to kill or damage cancer cells and stop them from growing and multiplying.

Radiotherapy damages cancer cells in the area being treated. Although the radiation can also damage normal cells they can usually repair themselves.

Why have radiotherapy?

Many people diagnosed with cancer will have radiotherapy as part of their cancer treatment. Research shows that at least one in two people recently diagnosed with cancer would benefit from radiotherapy. It can be used for several reasons:

- Cure—radiotherapy is given with the aim of curing the cancer on its own or combined with other treatments such as surgery or chemotherapy.
- Control—radiotherapy may be used to control the cancer by making it smaller or stopping it from spreading.
- Help other treatments—radiotherapy is used before (neoadjuvant) or after (adjuvant) other treatments such as surgery or chemotherapy. The aim is to make the main treatment more effective.
- Symptom relief—radiotherapy is often able to relieve cancer symptoms such as pain or bleeding, to help you to feel as well as possible.
Where will I have treatment?

Radiotherapy needs specially trained staff and specific equipment. For these reasons it is usually given in a large hospital or at a treatment clinic.

While treatment schedules can vary for individuals most people have radiotherapy as outpatients, travelling to the radiotherapy department each day. If you are driving to a treatment centre you may find you feel tired after awhile. You may want to arrange for a family member or friend to drive you to treatment.

If you have to travel a long way each day to treatment, you may be able to get some financial assistance towards the cost of accommodation or travel. To check your eligibility or to make an application speak to the hospital social worker or call 13 11 20.

How is radiotherapy given?

Radiotherapy can be given in two ways:

• External radiotherapy—a machine from outside the body aims radiation beams towards the cancer and surrounding tissues where the cancer may have spread.

• Internal radiotherapy (brachytherapy)—a radiation source is put inside the body on or near the cancer.

Depending on the type and size of the cancer and where it is in your body, you may have one or both types of radiotherapy.

How do I know the treatment has worked?

In the weeks and months following your course of treatment you will talk with your doctor, be examined and may have some tests. Cancer cells begin to die during a course of radiotherapy and this may continue for weeks or months after treatment ends. The examination and tests will show if the cancer has gone away although it may be some time after treatment finishes before the full benefit can be confirmed. This is because sometimes cancer can come back (recur) at the same place or in another part of the body. If radiotherapy is given as palliative treatment the relief of symptoms will tell you if the treatment has worked. This may take a few weeks.

Which health professionals will I see?

Health professionals who care for people having radiotherapy include:

<table>
<thead>
<tr>
<th>Health professional</th>
<th>Role</th>
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</thead>
<tbody>
<tr>
<td>radiation oncologist</td>
<td>a specialist doctor who prescribes and coordinates the course of treatment and advises about side effects</td>
</tr>
<tr>
<td>radiation therapist</td>
<td>plans and delivers the radiation treatments</td>
</tr>
<tr>
<td>radiation oncology nurses</td>
<td>help you manage emotional and physical problems such as side effects that you may experience during treatment</td>
</tr>
<tr>
<td>radiation physicist</td>
<td>ensures that treatment is delivered accurately and safely</td>
</tr>
</tbody>
</table>
dietitian recommends the best eating plan to follow while you are in treatment and recovery

social worker, psychologist, physiotherapist and occupational therapist advise you on support services and help you get back to your usual activities

pastoral carer helps with religious and spiritual concerns

**External radiotherapy**

In external radiotherapy high-energy x-rays are directed at the cancer from a machine outside the body. Different types of machines may be used, and they each vary slightly in how they look and how they work. The machine used will depend on the part of your body being treated and why radiotherapy is being given. Some are better at treating cancer near the skin; others are better for cancers deeper in the body.

Often external radiotherapy is given using a machine called a linear accelerator. Several specialised types of external radiotherapy may be used to treat certain cancers, such as three-dimensional conformal radiation therapy (3D-CRT), intensity modulated radiation therapy (IMRT) and image guided radiation therapy (IGRT). Many of these techniques allow the radiation beams to be delivered from several different directions. This reduces the amount of radiation to normal tissues.

**linear accelerator**

The type of cancer you have and the part of your body affected influences the choice of treatment machine.

**How long is a course of treatment?**

A course of treatment refers to the number of treatments.

The number of radiotherapy treatments needed varies, depending on the total dose required to treat your cancer, its location and the reason for the treatment. In general higher doses are given for curative treatment and usually over a longer period of time.
The total dose is usually divided into smaller doses called fractions. Most people have radiotherapy Monday to Friday for six to eight weeks. Weekend rest breaks allow the normal cells to recover. Some people have only one or a few treatments and occasionally, two treatments per day may be recommended.

Each dose of radiation causes a little more damage to cancer cells so it’s important you go to all your scheduled sessions to ensure you receive enough radiation to eventually kill the cancer cells or relieve symptoms.

Stopping smoking during and after treatment can make the treatment more effective. Call the Quitline on 13 7848 for support.

Planning treatment

Before you start radiotherapy treatment it will need to be planned. This is an important part of radiotherapy and may take several visits.

Planning helps ensure that enough radiation reaches the cancer but does as little damage as possible to the surrounding healthy tissues and organs. Planning consists of several steps:

- Examination—your radiation oncologist will examine you and may request further x-rays or scans to find out more about the cancer. They will then decide which part of your body to treat, how much radiation to use (the dose) and the number of treatments you will have.
- Planning appointment—your planning appointment may take several hours, but the actual treatment will be much shorter.
- Simulation—you will be asked to lie still on a table while the radiation therapist uses a special x-ray machine called a simulator to pinpoint the exact area on your body where the radiation beams will be aimed. This is like having an x-ray but may take a little longer. At the same time a radiation therapist will take measurements of you.
- Some simulators use CT (computerised tomography) scans instead of x-rays. A CT scan takes pictures of the cancer from different angles to build up a three-dimensional picture of the area. You will lie in exactly the same position as when you have your treatment. You may also have an MRI (magnetic resonance imaging) scan, PET (positron emission tomography) scan or an ultrasound. The measurements and the information from the scans are fed into a computer that helps the radiation oncologist plan your treatment precisely.
- Moulds and casts—depending on the type of radiotherapy treatment you receive you may need a special device to help keep an area of your body still during treatment sessions so radiation is directed at the same place each time. For example if you need radiotherapy to the head and neck area you will wear a plastic mask called a shell or cast and markings can be made on the shell rather than your skin. You will be able to hear, speak and breathe normally while wearing the shell but it may feel strange and claustrophobic at first. Tell the staff if you feel worried or anxious as they may be able to offer you strategies to help you cope.
- Skin markings—to ensure the radiation is aimed at exactly the same position at each treatment session, two or three very small semi-permanent ink marks or tattoos may be placed on the skin. These tattoos are less than the size of a freckle and are too small to be seen easily. If marks are made on your skin ask the radiation therapist if you can wash off the ink or if you need to keep it until your full course of treatment is finished. The ink will gradually fade but it can be redrawn periodically during the course of your radiotherapy treatment.

Having treatment

You will probably be asked to change into a hospital gown before you are taken into the treatment room. The treatment itself takes only a few minutes but each session can last 15 to 20 minutes because of the time it takes to set up the equipment and put you in position. The room will be in semi-darkness while this is done.

During your planning appointments you will be given instructions about what to wear or what you should avoid using during radiotherapy. You will also be advised if any specific instructions (e.g. full or empty bladder) are needed for your treatment appointments.
If you have had a support device made such as a mask, it will be used during treatment.

A shield made of thick lead-like metal may be placed between the machine and the parts of the body not being treated to protect them. This is called a multileaf collimator. An extra piece of rubber-like material or a block of specially made wax may also be placed on the skin. This makes sure that the skin gets the computer-planned dose of radiation.

Once you and the machine are in the correct position the radiation therapist will go into a nearby room to operate the machine. You will be alone in the treatment room but you can talk to the radiation therapist over an intercom and they will watch you on a television screen or through a window.

You can breathe normally during treatment but you need to stay very still while the machine is working. This ensures that the treatment is accurate. You can often listen to music while you are having radiotherapy to help you relax.

If treatment is needed from different angles the radiation therapist will move the machine several times. This is often done from outside the treatment room. It is important that you remain still while the machine is being rotated around the treatment table. The radiation therapist will tell you when it is okay to move. If you feel uncomfortable tell the therapist as they can switch off the machine and start treatment again when you’re ready.

You may hear the term EPID. This means electronic portal imaging device. This makes pictures of the radiation beam as it passes through your body. It helps to ensure your treatment is being given accurately – it is not used to see if the tumour is changing.

**Will radiotherapy be painful?**

Radiotherapy is painless. During treatment you will not see or feel anything but you may hear the machine buzzing. You may find that while lying on the treatment table you have pain due to the cancer or discomfort from the position you are in. If you feel ill tell the radiation therapist, who will pause the treatment.

**Fear of radiotherapy**

The machines used for radiotherapy are large and may be confronting when seen for the first time. Some people find having radiotherapy a bit frightening at first but feel more at ease as they get to know the staff and procedures at the treatment centre. If you suffer from claustrophobia let your doctor know as they can help you to overcome this issue.

**Will I be radioactive?**

External radiotherapy does not make you radioactive because the radiation doesn’t stay in your body. It is safe for you to be with children, family, friends and anyone who might be pregnant. This is the same throughout the course of treatment and afterwards.

**Internal radiotherapy**

Internal radiotherapy is only used for certain types of cancer. It delivers radiation close to the tumour, giving a high dose of radiation directly to the cancer while limiting the dose to the surrounding normal tissues. This is given in several ways.

- **Brachytherapy**—the radioactive sources are placed in the body, close to or inside the cancer. This is called an implant. The type of implant used depends on the type of cancer you have and may include seeds, needles, wires, capsules or other devices.
- **Radioisotope therapy**—this uses radioactive liquid that is taken by mouth as a capsule or given by injection.
Your doctor may recommend internal radiotherapy alone or in combination with external radiotherapy.

**Brachytherapy**

**How is the implant placed in the body?**

The doctor may use an applicator to hold the implant against the surface of the tumour. This may require admission to hospital or it may be done as a day procedure. You may need anaesthetic while the doctor positions the applicators using an imaging test such as an x-ray, to look at the exact area where they need to go.

The applicators come in different shapes and sizes and can contain different radioactive materials. Once the applicators are in the right position the radioactive sources are passed into the applicator by a machine.

**How long will it be in place?**

Implants can be temporary or permanent. Some implants deliver low doses of radiation; others deliver high doses.

- Temporary implants—these may be in place for one to six days before being taken out. You will stay in hospital during this time. In other cases the implant delivers radiation over a few minutes during several sessions.
- Permanent implants—seeds or pellets about the size of a grain of rice are left in place permanently to gradually decay. Over a period of weeks or months the radiation level drops but the seeds remain in place with no lasting effect.

**Will the implant be painful?**

You should not have any severe pain or feel ill during implant therapy. If your implant is being held in place by an applicator it may be uncomfortable but your doctor can prescribe medicine to relax you and relieve any pain.

Once the applicator is removed you may be sore or sensitive in the treated area for some time. In some cases your doctor might suggest that you limit physical and sexual activity for a while.

Internal radiotherapy is only available at some hospitals and the procedures can vary between hospitals. If this treatment is recommended the staff involved will give you more information.

**Will I be radioactive?**

While the radioactive applicator is in place some radiation may pass outside your body. For this reason hospitals take several safety precautions to avoid unnecessary exposure to hospital staff or your family and friends while the implant is in place. The hospital staff will explain any restrictions to you before you start treatment. These may include the following requirements:

- You may be nursed alone or in a room away from the main ward.
- Hospital staff will only stay in the room for short periods and visitors may be limited while the implant is in place – children under 18 or pregnant women usually can’t enter the room.
- You can use an intercom to talk to hospital staff and visitors. Once the temporary implant is removed you are not radioactive and there is no risk to others.

If you have a permanent implant you will be radioactive for a short while and may need to stay in an isolated room for a few days. You may have temporary restrictions placed on your activities such as being around small children or pregnant women.
Let the staff know if you feel claustrophobic or lonely. Take in reading material and other items to keep you occupied while you’re in the single room. You may be able to watch television or listen to the radio.

**Radioisotope therapy**

This uses radioactive material that is taken by mouth as a capsule or given by injection.

Different radioisotopes are used to treat different cancers including liver cancer and non-Hodgkin lymphoma. The most common radioisotope treatment is radioactive iodine which is used to treat thyroid cancer.

This treatment requires a short stay in hospital. During this time you will be in an isolation room while you are temporarily radioactive. The radioactive iodine taken up by the thyroid cells becomes less radioactive each day. Any iodine not taken up by the thyroid cells is passed out of the body in urine, sweat or faeces.

The amount of radiation that is in your body is measured regularly during your hospital stay. Once the radiation level in your body reaches a safe level you will be able to go home.

There may be some special precautions or care that you need to take for a short while after you are home. Talk to your radiation oncologist or nurse about what to bring to hospital with you and about any special care that may be required after discharge.

**Treating secondary bone cancer**

Radioisotopes can be used to treat secondary bone cancer. The radioisotope is injected into a vein and circulates to the area of the cancer in the bone. This is a simple procedure and a hospital stay is usually not needed.

**Selective internal radiotherapy treatment (SIRT)**

SIRT is a way of delivering high doses of internal radiotherapy to treat liver tumours. It uses tiny pellets called microspheres which contain a radioactive substance.

The pellets are injected into a thin tube called a catheter which is inserted into the main artery that supplies blood to the liver (hepatic artery). The radiation from the microspheres damage the tumours’ blood supply so the tumours can’t get the nutrients they need and shrink. This process is sometimes called radioembolisation. Each pellet gives out radiation to a small area. This means normal liver cells should only receive a small amount of radiation. The pellets deliver radiotherapy continuously for 10 to 14 days. After they have stopped working the pellets remain in the body permanently but don’t cause any problems.

**Managing side effects**

Radiotherapy is an effective treatment for many cancers but it can cause side effects. People react differently to radiotherapy and some people may have no side effects.

Side effects vary depending on the part of the body being treated. Reactions can also vary from one period of radiotherapy to the next. Before your treatment begins talk to your radiation oncologist about the possible side effects from your particular treatment. You will be asked to give your consent to having treatment so it’s useful to have all your questions answered.
There are ways to reduce discomfort and most side effects go away in time. Other less common side effects may be permanent and some may not start until treatment has finished.

During your course of treatment tell your radiation oncologist, radiation therapist or nurse of any side effects you notice. These can usually be controlled with the right care and medicine.

If you have severe side effects the doctor may change the treatment or prescribe a break in your course of treatment. However this may not be possible if your doctor thinks pausing the treatment could affect how well it’s working. Check with your doctor.

Always ask your radiation oncologist first before using any medicines, home remedies or creams to ease side effects. Some of these remedies can affect how radiotherapy works in your body.

**Fatigue**

During radiotherapy your body uses a lot of energy dealing with the effects of radiation on normal cells. Fatigue usually builds up slowly during the course of treatment particularly towards the end and may last for a few months after treatment finishes.

Many people find that they cannot do as much but others are able to continue their usual activities without much change.

- Do fewer things and spread out daily activities.
- Rest or take naps during the day if you can.
- Let family and friends assist you. They can help with shopping, childcare, housework and driving.
- Take a few weeks off work during or after your radiotherapy or reduce your hours. You may be able to work at home. Some people feel well enough to continue working full time and organise treatment appointments to suit their work hours.
- Do light exercise such as walking, and keep up with your normal exercise routine. Research shows that regular exercise can boost energy levels and make you feel less tired. Talk to your health care team about suitable activities for you.
- Limit caffeinated drinks like tea, coffee and soft drinks. While they may boost your energy, caffeine can make you feel jittery and irritable. It can also cause insomnia.
- Eat a healthy, well-balanced diet and don’t skip meals.
- Smoking reduces your energy. If you smoke talk to your doctor or call the Quitline on 13 7848 about stopping.

**Skin problems**

Radiotherapy may make your skin dry and itchy in the treatment area. Your skin may peel and look red, sunburnt or tanned. These reactions fade with time and you’ll be given special dressings. Some of the radiation passes through your body and out the other side so the skin in that part of your body may also be mildly affected.

- Ask your treatment staff before using any soap, deodorant, perfume, talcum powder, creams, cosmetics, medicines or other products on the treatment area. Many leave a coating that can interfere with radiotherapy. If needed you may be prescribed a special moisturiser.
- Wear loose soft clothing such as cotton, next to your skin. Don’t wear tight-fitting clothes, girdles, close-fitting collars or belts over the treatment area.
- Tell your doctor about changes to your skin e.g. cracks or blisters, moist areas, rashes, infections or peeling.
- Choose loose, old clothes that you can throw out if the dye or ink marks rub off on them.
- Stay out of the sun where possible, and cover your treated skin before going outside. Ask your doctor about using a sunscreen (SPF 30+).
- Let the dye outlines wear off gradually.
- Don’t put hot water bottles, heat packs, wheat bags or ice packs on the treatment area. Bathe or shower in lukewarm water – hot water can damage your sensitive skin. Pat skin dry with a soft towel.
• Don’t use a razor blade on the treatment area. Check before using an electric razor.

Loss of appetite

Try to eat a healthy, balanced diet during treatment. Good nutrition helps you remain as well as possible and get the most from your treatment.

Some people lose interest in food during radiotherapy. This can depend on where on the body the radiotherapy is targeted. You may be advised to maintain adequate nutrition to complement how well radiotherapy is working.

• Eat smaller amounts as often as possible.
• Try to eat extra on days when you have an appetite.
• Ask the hospital dietitian for advice on the best diet during treatment and recovery.
• You may be advised to try a nutritional supplement. You can buy these at a pharmacy without a prescription and you can use them alone or with other foods.
• Do not use any supplements or medicines without getting your treating doctor’s advice. Some supplements could interfere with treatment.
• If you don’t feel like eating solid foods try enriching your drinks with powdered milk, yoghurt, eggs, honey or weight-gain supplements.
• Sip water regularly to avoid becoming dehydrated.
• Sometimes cooking smells can put you off eating. It may help if someone else prepares your food if possible or you could consider heating pre-cooked meals.
• If you have radiotherapy to the head and neck area, chewing or swallowing might be difficult or painful. If eating is uncomfortable or difficult ask for something to relieve the pain. Good pain relief will help you eat well and feel better.

Hair loss

If you have hair in the area being treated (e.g. scalp, face or body) you may lose some or all of it during radiotherapy. Your hair will usually grow back a few months after the treatment has finished. Sometimes hair loss is permanent.

In general you will only lose hair in the treated area. However, when tumours on the face are treated hair on the back of the head may be lost due to small amounts of radiation passing through the head and out the other side.

• Wear a wig, toupee, hat, scarf or turban. Do whatever feels comfortable and gives you the most confidence.
• If you plan to wear a wig choose it early in your therapy so you can match it to the colour and style of your own hair. Cancer Council Helpline, your doctor or nurse may be able to help you find a wig.
• If you plan to leave your head bare protect it against sunburn and the cold.
• Expect the hair that grows back to be different perhaps thinner or curly where it was once straight. After a large dose of radiotherapy the new growth may be patchy for a while.
• Ask your hairdresser to make your hair look as good as possible. In time your hair will probably return to its normal condition.
• Contact Look Good...Feel Better. This program teaches techniques to help restore appearance and self-image during treatment. For more details see www.lgfb.org.au or call 1800 650 960.
How to make a head scarf

A head scarf can be a comfortable and attractive way to cover your head if treatment causes you to lose hair.

- Cut out a triangle, 110cm by 75cm by 75cm, from a piece of material. Choose fabric that doesn’t slip such as soft cotton.
- Hem the short edges of the fabric (75cm) if you wish.
- Attach a piece of foam to help keep the scarf in place. Lay a piece of foam (33cm by 7.5cm and about 1.25cm think) along the long edge. Fold over the fabric and sew in the foam, as shown below.

To wear the scarf, place the foam edge at the front of your forehead and tie the ends of the fabric behind your head. Push the foam edge up, until it is sitting comfortably on your head. Some people put a shoulder pad in the front of the scarf to give it some lift.

![Diagram of head scarf making process]

We thank the Royal North Shore Hospital (NSW) occupational therapy unit for this pattern.

Nausea

If you have radiotherapy to your stomach area you may have an upset stomach.

These problems will usually get better when your treatment is over. Some people feel queasy for a few hours after external radiotherapy.

To help with nausea:

- eat a bland snack such as toast, dry biscuits or apple juice before treatment
• ask your doctor for medicine to prevent nausea
• sip on fluids throughout the day to prevent dehydration
• nibble dry biscuits.

Anti-nausea medication can help. This medicine can be taken before, during or after radiotherapy treatment. You may be given anti-nausea tablets to take at home. These are best taken regularly. It may take some time before you find an anti-nausea medication that works for you so let your nurse or doctor know early on if your symptoms aren’t being relieved. If you still feel nauseous after a few days or are vomiting for more than 24 hours contact your doctor.

For more information, talk to your doctor or nurse or call 13 11 20 for information on eating well.

**Diarrhoea**

If you have radiotherapy to your stomach or part of your lower abdomen you may have diarrhoea. Diarrhoea can occur because the radiation irritates the lining of the bowel or stomach.

Symptoms include frequent loose, watery bowel movements, abdominal cramps and feeling an urgency to go to the toilet. It often begins in the third or fourth week of treatment.

• Ask your treating doctor or nurse about what to expect and when to report diarrhoea.
• Avoid high-fibre foods e.g. wholegrain bread and cereals and nuts and legumes, such as beans and lentils. You may also want to avoid spicy foods.
• Drink lots of clear liquids as soon as diarrhoea starts or when you feel it is going to start, to avoid becoming dehydrated. Apple juice, peach nectar, weak tea and clear broth will not worsen diarrhoea.
• Ask your radiation oncologist to prescribe medicine to relieve diarrhoea.
• After the diarrhoea has cleared up it is important to slowly reintroduce a healthy eating plan that includes fresh fruits and vegetables and wholegrain breads and pasta.
• Check with your radiation oncologist, radiation therapist or nurse before taking any home remedies during your radiotherapy treatment. If you feel ill eat or drink as well as you can so your body gets the energy and nutrients it needs.
• Contact your doctor immediately if you have blood in your faeces.

**Mouth and swallowing problems**

Radiotherapy is often used to treat cancer in the mouth, throat, neck or upper chest area. Depending on the area treated radiotherapy may affect your mouth and teeth and make eating and swallowing difficult.

After several weeks of treatment your mouth or throat may become dry and sore and your voice may become hoarse. This will gradually improve after treatment is completed but may take several weeks or even months depending on the treatment you’ve had. You may also have thick phlegm in your throat or a lump-like feeling that makes it hard to swallow.

Recovery of normal taste can sometimes take a long time after treatment is completed.

• Suck ice chips and sip cool drinks to keep your mouth wet.
• Avoid tobacco and alcohol because they will dry your mouth even more.
• Try to have more liquids or soft food if chewing and swallowing are painful.
• If your sense of taste changes during radiotherapy try different ways of preparing food. For example add lemon juice to meat and vegetables, marinate foods or add spices.
• If eating is uncomfortable or difficult ask for something to relieve the pain. Good pain relief will help you eat well and feel better.
• Ask your doctor or nurse for information about artificial saliva to moisten your mouth.
Dental problems

Radiotherapy to the mouth may increase the chance of tooth decay or other problems in the long-term. Future dental work can be more difficult due to problems with healing. It is often recommended that you have a dental check-up before treatment begins so that any dental work you need can be carried out prior to treatment.

Your dentist will give you detailed instructions about caring for your mouth and teeth to help prevent tooth decay and to deal with problems such as mouth sores. You will need ongoing dental care after treatment is completed.

Some cancer patients may be able to obtain dental services under Medicare. Visit www.health.gov.au/dental or call Medicare on 13 20 11.

- Rinse your mouth regularly with a non-alcoholic mouthwash recommended by your doctor or dentist.
- Your doctor may also refer you to a dietitian who can suggest nourishing foods that will not hurt your mouth.
- If you lose too much weight you may need extra feeding through a tube that goes into your stomach. Your doctor will discuss this with you.
- See a speech pathologist if you have difficulty swallowing.

Sexual intercourse and radiotherapy to the pelvic area

Radiotherapy to the pelvic area can make sexual intercourse uncomfortable for a while. You may notice a change in your sexual desire (libido). This is common and may only be short term.

Radiotherapy may make you feel too tired or nauseated to want to be intimate. Some people may also feel less sexually attractive to their partner because of changes to their body. Talking to your partner about your concerns may help.

Effects on women

Radiotherapy may cause changes in the vagina. It may feel dry, itchy or burning. Treatment may also cause vaginal tissue to shrink and stiffen making sex painful. If you have these problems tell your doctor or nurse as the symptoms can usually be relieved. They may advise you to use vaginal lubricant or an instrument to expand the vagina (dilator) or to have regular intercourse. Some women stop having their periods during treatment and may experience menopause. The signs of menopause include hot flushes, dry skin and vaginal dryness.

Effects on men

Men may have problems getting and maintaining erections or ejaculation may be painful for a few weeks after treatment.

Using contraception

During treatment

Although radiotherapy can affect fertility it is still possible for a woman to become pregnant while having radiotherapy. A man receiving radiotherapy could still make his partner pregnant.

Women having radiotherapy or whose partners are having radiotherapy are usually advised not to become pregnant. In a woman
radiotherapy to the pelvic area may affect either her eggs (ova) before conception or her unborn child. Radiotherapy to an area close to a man’s testicles may cause him to produce abnormal sperm.

If pregnancy is possible you and your partner will be strongly advised to use contraception or abstain from sex during radiotherapy. If you or your partner becomes pregnant talk to your doctor as soon as possible.

After treatment

It may be recommended you use a barrier method (such as a condom or a female condom) for a certain period of time. This is to prevent the risk of infection if you have any sores that are healing.

Talk to your doctor for more information about using contraception. Your health care team can also give you advice if you are planning on starting a family after cancer treatment.

For more information about self esteem and managing the effects of radiotherapy on your sexuality call 13 11 20.

Fertility issues

Having radiotherapy near your reproductive organs could affect your ability to have children naturally (fertility).

Effects on women

Radiotherapy to the pelvic area can cause periods to become irregular or stop for a short time. For some women their periods stop permanently (menopause). Talk to your doctor about ways to relieve the symptoms of menopause.

Effects on men

Radiotherapy to an area that includes the testicles may reduce sperm production temporarily. You may feel the sensations of orgasm but ejaculate little or no semen. This is called a dry orgasm. Usually, semen production returns to normal after a few months but for some men infertility is permanent.

If you want to father a child you may wish to have sperm stored before your treatment starts. This would allow your partner to conceive through artificial insemination later. Discuss this with your doctor.

Speak to your doctor about the effects on fertility before you start radiotherapy treatment.

Questions to ask your doctor

You may find this checklist helpful when thinking about the questions you want to ask your doctor about your disease and treatment. If your doctor gives you answers that you don’t understand it is okay to ask for clarification.

- Why do I need radiotherapy?
- What do you expect the radiotherapy to do to the cancer?
- What kind of radiotherapy treatment will I have?
- Will it be my only treatment or will I have other treatments too?
- What side effects should I expect? Will they be long- or short-term side effects?
- How long will treatment take (each treatment individually and the series of treatments overall)?
- Where will I have the treatment? Do I have the radiotherapy treatment as an inpatient or outpatient?
• Will I be radioactive? Will my partner?
• Is it safe to have sex if I’m having radiotherapy treatment?
• Will treatment interact with any other medication or vitamins I am taking?
• When will we know whether the radiotherapy treatment has been successful?
• How much will treatment cost?
• Will the cost of my treatment be covered by health insurance?
• If needed can I get help with travel expenses or accommodation?