

RUH Understanding Chemotherapy

Introduction

This leaflet has been written to help you, your family and friends understand more about chemotherapy. It is based on the series of booklets produced by BACUP publications. We hope it answers some of the questions you may have about this type of cancer treatment and how to cope with any side effects it may produce.

The information on chemotherapy is divided into sections on how the treatment works, how it is given and how to manage some of the more common possible side effects. Although this leaflet can help you to understand what happens during chemotherapy treatment, you are still likely to have more questions and concerns about your own treatment. As there are different types of cancer and many variations of chemotherapy treatment it is best to discuss specific details of your own treatment with your GP or the hospital doctors looking after you.

At the end of the leaflet, there is a list of useful addresses and recommended books. If, after reading this leaflet, you think it has helped you, do pass it on to any of your family and friends who may find it interesting. They too may want to be informed so they can help you cope with any problems you may have.

What is chemotherapy?

The type of treatment you are given for your cancer depends on many factors, particularly the type of cancer you have and what cancer cells look like under the microscope.

Chemotherapy is the use of anti-cancer (cytotoxic) drugs to destroy cancer cells. The word simply means drug treatment and it is taken from two words - 'chemical' and 'therapy'. Chemotherapy treatment can be just one drug or several drugs, taken from a choice of about 40 different drugs available.

How do the drugs work?

Cancer is a disease of the body's cells. Normally, all cells divide and reproduce themselves in an orderly and controlled manner. In cancer, the process gets out of control and the cells multiply without proper control, forming a lump (which is called a tumour).

Sometimes cancer cells break away from a tumour and float in fluid to other parts of the abdomen or chest. When the cancer cells reach other parts of the body they may settle and start to develop into new tumours. These are known as secondary cancers or metastases.

Chemotherapy drugs work by interfering with the ability of a cancer cell to divide and reproduce itself. The affected cells become damaged and eventually die. As the drugs are carried in the blood, they can reach cancer cells all over the body.

The drugs damage the cancer cells in different ways. If a combination of drugs is used, each drug is chosen because of its different effects. Unfortunately, chemotherapy drugs can also affect normal cells in your body, sometimes causing unpleasant side effects. Unlike cancer cells, however, normal cells quickly regrow, so any damage to them is usually temporary and therefore most side effects will disappear once the treatment is over.

The cure rates vary depending on the type of cancer. In some cancers, cure may be unlikely and then chemotherapy may be given to shrink the cancer, prolong life and relieve symptoms.

How are the drugs given?

Chemotherapy may be given by a number of different routes, depending on the type of cancer you have and the drugs used. The commonest ways are by injection into a vein (intravenously) or by mouth (orally). Whichever way the drugs are given, they are absorbed into the blood and carried around the body so they can reach all the cancer cells.

Giving the drugs by intravenous injection

Sometimes the drugs are diluted into a large volume of liquid and given via a 'drip' into a vein in your arm. In these cases a fine tube will be inserted into the vein and taped securely to your arm. This tube is called a cannula.

Intravenous chemotherapy drugs are given over a period of time, usually ranging from half an hour to a few hours, or sometimes a few days. If it only takes a few hours, the drugs may be given to you as a day patient-at the hospital. To begin with you will be offered admission overnight to a ward at the hospital

until you are use to the treatment and know what to expect.

Giving the drugs by mouth

You may be given tablets to take at home as part of your treatment. You will be told when to take them and given other specific instructions such as whether or not to take them with food. If, for any reason, you cannot take your tablets as prescribed you should contact your doctor immediately for advice.

Where is the treatment given?

Some chemotherapy drugs can be given to you as a day patient at the hospital but other chemotherapy treatments will mean a short stay in hospital - perhaps overnight or for a couple of days.

Occasionally chemotherapy treatments will mean you need to stay in hospital for longer perhaps a few weeks. Your doctor will be happy to explain exactly what your treatment will involve before it starts. Specialists in chemotherapy give the treatment in the oncology unit (William Budd ward).

Treatment Planning

Your doctor will take several factors into consideration when planning your treatment. The most important of these are the type of cancer you have, where in the body it is situated and how far it has spread, if at all. Other factors include your age and general health. This means you will find other patients at the hospital are having different chemotherapy.

The frequency of your treatment and the length of time it takes will depend on several factors including: the type of cancer you have, the drugs you are taking, the response of the cancer cells to the drugs and any side effects the drugs may cause.

Chemotherapy is usually given as several courses of treatment. Depending on the drug or drugs given, each course can last from a few hours to a few days. Each course is followed by a rest period of a few weeks, which allows your body to recover from any side effects of the treatment. The total number of courses you have will depend on how well your cancer is responding to the drugs. It may take several months to complete all the chemotherapy courses needed for the treatment of your cancer.

When chemotherapy is given via an infusion pump it can be given continuously over a period varying from several days to several weeks. Some patients on oral chemotherapy take smaller doses of chemotherapy

daily for several weeks or months, before they have a rest period.

It will usually be necessary for you to have blood tests or x-rays, or to see the doctor before you are given your chemotherapy and this obviously all takes time. All chemotherapy drugs are prepared in a special way and you may have to wait while the hospital pharmacy department prepares them to dispense to you. To help pass the time, it can be helpful to take a book, newspaper, crosswords or perhaps some letters to write.

Your doctor will be happy to explain your own treatment plan to you and if you have any questions don't be afraid to ask your doctor or ward sister. It often helps to make a list of questions for your doctor and to take a close relative or friend with you to remind you of things you want to know but can so easily forget.

Changes in the treatment plan

Your doctor will be assessing regularly the effects of the chemotherapy on your cancer. In order to do this you need frequent blood tests, x-rays and scans. The results from these tests show the doctor how much the cancer is reducing in size in response to the treatment. Sometimes depending on the results of the tests, your treatment plan may need to be modified in some way or even changed completely. Sometimes this is because the present drugs you are having are not shrinking the cancer sufficiently and changing to different drugs may produce a more effective response. Occasionally, your treatment may also be delayed because the chemotherapy drugs are temporarily preventing your bone marrow from functioning properly. Delaying the chemotherapy gives your bone marrow a chance to recover before the next course of drugs is given.

Treatment can also sometimes be delayed to fit in with special occasions you wish to attend and it may be possible to arrange your treatment around your holiday dates.

What are the Side effects of chemotherapy?

Not everyone being treated with chemotherapy will have side effects. Cancer treatments produce different reactions in different people and any reaction can vary from treatment to treatment. It may be helpful to remember that almost all side effects are only temporary and will gradually disappear once the treatment has stopped.

The main areas of your body that may be affected by chemotherapy are those where normal cells rapidly divide and grow, such as your mouth, digestive system, skin, hair and bone marrow (the spongy material that fills the bones and produces new blood cells).

If you want to know more about specific side effects which may be caused by your own chemotherapy treatment you should ask your doctor, as he or she will know the exact drugs you are taking. Although the side effects of chemotherapy can be unpleasant, they must be weighed against the benefits of the treatment. If, however, you are finding the treatment or its side effects are making you unwell, do tell your doctor, who may be able to give you medicines to help, or make changes to your treatment to lessen any side effects.

Your digestive stem

Sickness is a side effect associated with some chemotherapy drugs. Many people do not have any nausea and vomiting with their chemotherapy, nor does every drug cause sickness. If you are affected, however, the sickness will start from a few minutes to several hours after chemotherapy injections, depending on the drugs given. The sickness may last for a few hours and occasionally you may continue to feel sick the next day. In rare cases, the sickness may continue for several days. There are, however, several very effective anti-sickness drugs (antiemetics) which your doctor can prescribe to help prevent and relieve your sickness. Recently there have been major advances in the drugs used to treat sickness and this is now a much smaller problem than in the past. Many people now have no sickness at all.

This sick feeling may cause you to lose your appetite for a time. Your appetite may also be affected by the changes in taste sometimes caused by chemotherapy treatment. These changes may mean you go off certain types-of food or that some foods will taste different from usual. Some patients have an abnormal taste in their mouths during their chemotherapy treatment (see the section on 'Your mouth').

Some chemotherapy drugs may affect the lining of the digestive system and this may cause diarrhoea. If this is going to happen, frequent loose stools may be passed in the first few days following chemotherapy. More rarely, some chemotherapy drugs can cause constipation. If you do have any changes in your bowel habits, it is advisable to inform your doctor.

Helpful hints

If you do have nausea and vomiting it is very important to tell your doctor as soon as possible. We can prescribe anti-sickness drugs for you (antiemetics) which are usually very effective.

- Avoid eating or preparing food when you feel nauseous.
- Avoid fried foods, fatty foods or foods with a strong odour.
- Eat cold or slightly warm food if the smell of cooked or cooking food causes nausea.
- Eat several small meals and snacks each day and chew the food well.
- Do not eat directly before treatment, but do have a small meal a few hours earlier.
- Drink plenty of liquid, slowly taking small sips. Avoid filling your stomach with a large volume of water before eating.
- If you have diarrhoea, eat less fibre, avoiding raw fruits, cereals and vegetables. Avoid the foods that can irritate the mouth and alter taste.
- Drink plenty of liquid to replace the fluid lost in diarrhoea.
- If constipation occurs, increase your intake of fibre, raw fruits, cereals, fluids and vegetables. Prune juice and hot drinks can often stimulate bowel action.
- Eating fresh pineapple chunks helps to keep your mouth fresh and moist (but brush your teeth after pineapple).
- Some people find that using relaxation techniques helps to fend off or lessen their nausea. Macmillan nurses have lists of tapes, books and classes that teach these techniques.

Your hair and skin

Hair loss is one of the most well known side effects of chemotherapy. Some chemotherapy drugs cause no hair loss or the amount of hair lost is so slight it is hardly noticeable. Others, however, do cause temporary partial or complete hair loss. Some chemotherapy can damage hair, causing it to break off at or near the scalp a week or two after the chemotherapy has started. The amount of hair lost, if any, depends on the type of drug or combination of drugs used, the dosage given and the person's individual reaction to the drug.

If hair loss is going to occur, it usually starts within a few weeks of beginning treatment, although very occasionally it can start within a few days. Body and pubic hair may be lost as well. If you do lose your hair as a result of chemotherapy, it will always grow back once you have completed your treatment.

Some chemotherapy drugs can affect your skin. The drug may cause your skin to become dry, slightly discoloured or more sensitive to sunlight. Any rashes should be reported to your doctor. Your nails may grow more slowly and you may notice white lines appearing across them.

Helpful hints

- If your drugs are likely to cause hair loss, consider having your hair cut quite short prior to treatment. The weight of long hair pulls on the scalp and may increase the rate of hair loss if it is going to occur.
- Use gentle hair products and avoid the harsh chemicals found in perms and hair colourings.
- Try not to brush or comb your hair too vigorously. A baby brush may help.
- Avoid using hair driers, curling tongs and curlers. Gently patting hair dry will be less harmful.
- If it is likely you may lose your hair, ask about wigs early on, so the wig can be as close a match as possible to the colour and texture of your real hair. There are many other ways of disguising hair loss and the RUH has a wig specialist who will want to see you before any treatment starts.
- If your skin becomes dry or itchy rubbing in a little moisturising cream can help to relieve it.
- False nails or nail varnish can be used to disguise white lines on your nails.
- Wear a high factor sun-blocking cream if you are going out in the sun, to prevent your skin burning.

Some people having certain chemotherapy drugs may be able to prevent hair loss by using a 'cold-cap'. This works by temporarily reducing the blood flow and the amount of the drug reaching the scalp. Unfortunately the cold cap is uncomfortable and does not work for everyone and it is not likely to block the action of the chemotherapy drugs used for ovary disease

Your bone marrow

Bone marrow is a spongy material that fills the bones and contains cells that normally develop into the three different types of blood cell.

- Red blood cells contain haemoglobin to carry oxygen around the body:

If the level of haemoglobin in your blood is low you will become very tired and lethargic. Because the amount of oxygen being carried around your body is decreased, you may also become breathless. These are all the symptoms of anaemia - a lack of haemoglobin in the blood.

Anaemia is very successfully treated by blood transfusions. The extra red cells in the blood transfusion very quickly pick up the oxygen from your lungs and transport it around the body to other tissues and organs. You will feel more energetic and the breathlessness will be eased.

During your chemotherapy treatment you will have regular blood tests to count the number of red cells in the blood and will be given blood transfusions each time you are running short of these cells.

- White blood cells are essential for fighting infections:

If the number of white cells in your blood is low you will be more prone to infection as there are fewer white cells to fight off bacteria.

As white blood cells are the body's most important line of defence against infection you may need antibiotics during your chemotherapy treatment to help them fight off any infections. Your regular blood tests will also calculate the number of white cells in the blood and you may need antibiotics given directly into the blood (intravenously) if your white cell count is low. Sometimes you may need to be admitted to hospital for antibiotic treatment.

- Platelets help to clot blood and prevent bleeding: If the number of platelets in your blood is low you will bruise very easily and may bleed heavily from even minor cuts or grazes; so if your platelet count is low you will need to be admitted to hospital for a platelet transfusion. This is similar to a blood transfusion but all red and white cells have been removed and a clear fluid containing only platelets is transfused into your blood. These platelets will start to work immediately, clotting together to prevent bruising and bleeding as soon as the body is injured. Your regular blood tests will also be used to count the number of platelets in your blood and you can have a platelet transfusion in hospital as often as necessary.

Many people worry that they may get an infection from a blood transfusion. All blood is carefully screened before use and the chances of picking up an infection are extremely remote.

Helpful hints

- Inform your doctor IMMEDIATELY if you develop a fever (temperature over 38°C), or notice any sign of bleeding or bruising while you are having chemotherapy or in the rest period afterwards as you may need treatment.

- Try to avoid crowded places (aeroplanes) and people with infectious illness, but it is not necessary to become a hermit.
- Maintain high standards of personal hygiene.
- Always wash your hands thoroughly before preparing your food.
- Try to eat as healthy a diet as possible; include plenty of fresh fruit and salads. Ensure all your food is well cooked and avoid 'take aways'.
- Take care to avoid injury if you are gardening—wear thick gloves.
- To avoid picking up an infection keep away from animals especially their excreta (cat litter trays, bird cages).
- If you do cut yourself at any time, you may need to apply pressure to the cut for longer than usual to stop the bleeding.
- Rest whenever you feel tired. Try to avoid organising busy periods on the day of your treatment and plan to take it easy for a couple of days afterwards.

Your mouth

Some chemotherapy drugs can cause a sore mouth and, sometimes, small mouth, ulcers. If this is going to happen it usually occurs about five to ten days after the drugs are given and will clear up within three to four weeks. Sometimes the mouth ulcers can become infected, and your doctor can give you treatment to help clear infection. With chemotherapy where mouth ulcers are common, your doctor may prescribe treatment for you to prevent infection.

Some chemotherapy drugs can cause your taste to change; food may taste more salty, bitter or metallic. Normal taste will return once the chemotherapy treatment is over.

Helpful hints

- Clean your mouth and teeth gently every morning, evening and after each meal.
- A soft-bristled or child's toothbrush will be kinder to a sore mouth.
- Remove and clean dentures every morning evening and after each meal.
- If your toothpaste stings, or brushing your teeth makes you feel nauseous, try a bicarbonate of soda mouthwash instead (one teaspoon of bicarbonate of soda dissolved in a mug of warm water).
- Use dental floss daily.
- In cold weather, keep your lips moist by using Vaseline or a flavoured lip balm.

- Avoid neat spirits, tobacco, hot spices, garlic, Pinion, vinegar and salty food. These may increase abnormal tastes and irritate your mouth.
- Keep your mouth and food moist. Add gravies and sauces to your food to make swallowing easier and try to drink at least one and a half litres (three-pints) of fluid a day, in the form of beverages (tea or Coffee), fruit and vegetable juices and soft drinks.
- Let your doctor know if you develop mouth ulcers, as you may need drug treatment to help heal the ulcers and prevent or clear any mouth infection.

Will chemotherapy affect my everyday life?

Even though chemotherapy treatment can cause unpleasant side effects, some people still manage to lead an almost normal life during their treatment. Even if you feel unwell during your treatment course, many people find they recover quickly between courses and can resume their usual activities as they begin to feel better. If you are taking chemotherapy tablets at home, you may find the treatment causes very little disruption to your everyday life. You may be able to go to work and carry on with your social activities as usual.

Some people feel very tired during chemotherapy. This is quite normal and may be caused by the drugs themselves and your body fighting the disease or simply because you are not sleeping well. For someone who normally has a lot of energy feeling tired all the time can be very frustrating and difficult to cope with.

Try to restrict any unnecessary activities and ask your family or friends to help you with chores, such as shopping and housework. Don't fight your tiredness, give yourself time to rest and if you are still working see if it is possible to reduce your hours while you are having your treatment. If you are having problems sleeping, your GP may be able to prescribe some mild sleeping tablets for you. Intravenous chemotherapy can be given to you as a day patient at the hospital, but if you do need to spend time in hospital, you are likely to need to make more changes to your usual routines. Most employers will be sympathetic if you explain why you need time off work. If you are unable to work, your employer will pay your first 28 weeks' sick pay. If, after this period, you are still unable to work you can claim Invalidity benefit from the DSS.

If you are unemployed and not fit to work you will need to switch from Unemployment Benefit to

Sickness Benefit. To do this you should contact your local DSS office and arrange to send regular sickness certificates from your doctor.

Social workers at the hospital or attached to your family doctor's surgery can help you find out about any benefits or social services to which you are entitled while you are having chemotherapy.

Your local Citizens' Advice Bureau can also give useful information and advice on available benefits. During intravenous chemotherapy you may find you cannot do some of the things you used to take for granted, but you needn't abandon your social life completely. Depending on how well you feel, there is no reason to stop going out or visiting friends, especially if you can plan ahead for social occasions. For example, if you are going out for the evening, you could make sure you get plenty of rest during the day so you have more energy for the evening. If you are planning to go out for a meal, you may find it helpful to take anti-sickness tablets before you go and to choose your food carefully from the menu. For most people, having the occasional alcoholic drink will not affect their chemotherapy treatment but you should check with your doctor beforehand.

If you are going abroad on holiday, it is important to remember that you should not have any 'live virus' vaccines while you are having chemotherapy. These include polio, measles, rubella (German Measles), Mow (the new triple vaccine for measles, mumps and rubella), BCG (tuberculosis), yellow fever and oral typhoid. There are, however, vaccines that you can have, if necessary, while you are having chemotherapy. These include diphtheria, tetanus, flu, hepatitis B, hepatitis A, rabies, cholera and typhoid injection.

It is often possible to alter the treatment if you have an important social event coming up. Changing the timing of treatments may help you can feel as well as possible for the occasion.

How will I feel during Chemotherapy?

Many people find that having cancer, needing chemotherapy treatment and the effect that both of these may have on their lives can sometimes make them feel anxious, afraid or depressed. Often these feelings can be prompted by something seemingly trivial, such as having to change your usual daily routine to fit in with the treatments, or something more obvious, such as the side effects of the treatment, or the risk of infertility. If you do feel low or worried, for whatever reason, it is important to know that you are not alone. You can be sure many cancer

patients have felt as you do at some time during their treatment and that, like them, you can overcome feeling fearful or discouraged.

One of the first steps to solving problems successfully is to identify exactly what is causing the problem in the first place. You may be feeling anxious for example, asking yourself questions like; 'are the drugs working?' 'what effects are they going to have on my body or long term health?' 'how am I going to cope with the side effects?'

Depression can set in as the drugs start to work on the cancer. Side effects, especially hair loss and tiredness which are caused by some of the drugs, can make you feel less happy about your appearance. Having to change your normal routine to make time for the treatments can also be upsetting. Sometimes, if the cancer is taking time to respond to the drugs, you can start to become discouraged and feel depressed.

The greatest fear of all is fear of the unknown. Many cancer patients feel afraid of the future and what it might bring. Some also do not understand what is happening to their bodies and are frightened of the possible effects of the disease or the treatment. The main aim should be to keep a positive attitude. To achieve this easy-to-say, difficult-to-do feat you need to know what your treatment involves, what is expected to happen, what side effects, if any, to expect, what can be done about them and what should be reported to your doctor. In short, you need to gather as much information as possible about your disease and treatment so you can play an active part in tackling your disease. Learning is an ongoing process. You may need to ask questions over and over again or ask new questions every time you see your doctor. This is fine. It's your disease and you need to work with your doctor in order to beat it.

How others can help you

Although there may be times when you want to be alone with your thoughts, at other times being able to share your feelings and this can lift a weight off your mind. Patient support groups will put you in touch with other people undergoing similar treatment. Talking with these people can be a good way of giving vent to feelings that relatives or friends may not understand and you can also pick up some useful 'coping tips'.

Family and friends usually want to help you bear the burden of coping. They may, however, find it difficult at first to grasp exactly what it is you are going

through. The key is to keep communication going. Just at a time when you think loved ones should be rushing to your aid, they may stand back and wait for you to make the first move. This is often because they are worried they may say the wrong thing, or they think you may want to cope alone or they may even be feeling emotionally worn out themselves. Be open and honest about how your treatment is going and how you feel about it. In that way, misunderstandings can be avoided and others are given opportunities to show their love and support.

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Nick Johnson, Consultant Gynaecologist