

# Chemotherapy

**Chemotherapy are drugs given to kill the growth of cancer cells and prevent spreading.**

Cancer cells divide more quickly than healthy cells, and chemotherapy drugs effectively target those cells. Unfortunately, fast-growing cells that are healthy can be damaged too. There are many different chemotherapy drugs with the potential for many different side effects. These effects vary from person to person and from treatment to treatment.

Factors that play a role in side effects include;

- Other ongoing treatments
- Previous health issues
- Age
- Lifestyle.

Some patients experience few side effects while others feel quite ill. Although most side effects clear up shortly after treatment ends, some may continue well after chemotherapy has ended, and some may never go away.

The drugs can be given by inserting a tube with a needle into a vein in your arm or into an implantable device with a line into the vena cava in your chest. Some chemotherapy drugs can be taken in pill or capsule form, injection directly in a site, muscle, superficially under the skin or in a cream to use topically for skin cancer. The frequency of the treatment may be given in many variations of, for instance weekly for 6 or every other week there are many variations. Patients can spend many hours in the chemotherapy day unit waiting for the drugs to drip into the veins.

## **Intravenous**

- PICC Line (Peripherally inserted central catheter line)
- Port a cath, implantable port is a tube with a rubber disc at the end inserted into a vein.
- Central line, A central line is a long, thin hollow tube. It is inserted into a vein in your chest

## **Orally**

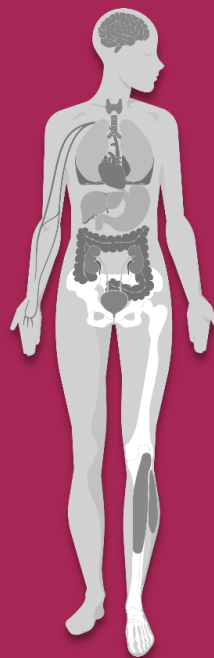
## **Injection**

## **Cream**

Chemotherapy can be excreted through perspiration by the skin. When massaging, hygiene is very important, especially washing your hands before & after treatment and wearing gloves within the first 72 hours of clients receiving chemotherapy.

The most common chemotherapy's that can be excreted through the skin are Methotrexate, Cytosine, Cyclophosphamide and Cytoxan which is the most popular one you will encounter, there are many others. Pregnant therapists should avoid massaging a client on the drug Thiotepa without gloves. Thiotepa is harmful to the foetus. It is extremely rare therapists will come into contact or be asked to massage someone who is on thiotepa therapy.

Patients are given instructions to shower 2-3 times a day in the 48 hours following treatment. They are usually on a combination of drugs 5-10 each with their own side effects.



## Chemotherapy Side Effects

As therapists we deal with the many side effects from these drugs and cancer treatments. The side effects determine how we will use the APP formula (**A**void, **P**osition & **P**ressure) in our treatment plan.

Chemotherapy drugs are most likely to affect fast growing cells in the body common areas to be effected are the digestive tract, hair follicles, bone marrow, mouth, and reproductive system. However, cells in any part of the body may be damaged.

The most common side effects are nausea and fatigue when this hits a high point, patients think about stopping chemotherapy treatment to relieve themselves from these side effects. Research has found that a relaxation programme including massage reduces the side effects of nausea, vomiting and diarrhea.

- **Fatigue**
- **Nausea**
- **Sickness**
- **Diarrhea**
- **Constipation**
- **Oedema**
- **Fever/Chills**
- **Osteoporosis**
- **Thrombosis**

## Mouth symptoms

Chemotherapy causes mouth sores and a dry mouth, which makes it difficult for patients to chew or swallow. This can also cause bleeding and infection. They might even have a metallic taste in the mouth and a white or yellow coating on the tongue which affects the taste buds of the patients, thereby giving unpleasant taste of food.

## Hair Loss

Many chemotherapy drugs cause loss of hair (alopecia) on the head, eyelashes and body within few weeks of the first treatment.

## Skin

It causes skin irritations such as itching, skin dryness and the patient may be sensitive to the sun making it easier to get sun burn. Discolouration of the skin.

## Nails

Changes in the colour of the fingernails or toenails to yellow or brown and makes the nail ridged and brittle and it may slow down the growth of the nails which makes it crack and break easily.

## Anxiety and Stress

Taking a toll on the emotion of the patient by making the patient feel anxious or stressed or fearful about their appearance and their health. It also causes depression when patients have to think about financial implication of the chemotherapy treatment.

## Depression

Depression is a common feeling, as patients juggle work, family, and financial responsibilities on top of cancer treatment.

## Chemo brain or Chemo fog

Patients forget things that they usually have no trouble recalling "memory lapses", affecting concentration and may make it difficult to concentrate, they can't focus on what they're doing, have a short attention span, may "space out" They may also have trouble remembering details like names, dates, and sometimes larger events. Trouble multi-tasking, like answering the phone while cooking, without losing track of one task (they're less able to do more than one thing at a time). They may also have trouble remembering common words (unable to find the right words to finish a sentence) They may also take longer to finish things (disorganised, slower thinking and processing).

## Hand and foot syndrome

Skin that is red, swollen, cracked, blistered, painful or tender and can have tingling or numbness. Not to be confused with peripheral neuropathy.

## Peripheral Neuropathy

Chemotherapy can affect the nerves in the hands or feet. This can cause tingling or numbness, or a feeling like pins and needles. Often it gradually gets better when chemotherapy is over but sometimes it's permanent. Known as Chemo induced peripheral neuropathy.

### **Anaemia.**

Chemotherapy can reduce the number of red blood cells in the blood, causing symptoms of fatigue, breathless dizziness and light-headedness. These symptoms happen because the red blood cells contain haemoglobin, which carry oxygen around the body. Cancer patients often are given a blood transfusion but can be given medication.

### **Neutropenia**

Low white blood cell count resulting in a suppressed immune system. White blood cells play an important role in the immune system. Precautions must be taken to avoid exposure to viruses, bacteria, and other germs.

### **Thrombocytopenia**

Low platelet count. Cells called platelets help blood clot. Low platelet count means you're likely to bruise and bleed easily. Cells called platelets help blood clot. Symptoms include long periods of nosebleeds, blood in vomit or stools, and heavier-than-normal menstruation. Cancer patients can be given a platelet transfusion.

### **Increased bruising and bleeding**

### **Muscular symptoms**

Muscles may feel tired, achy, or shaky, reflexes and small motor skills may slow down, and clients may also experience problems with balance and coordination.

### **Reproductive symptoms**

Chemotherapy drugs are known to alter hormones in both men and women. In women, hormonal changes can bring on hot flashes, irregular periods, or sudden onset of menopause, dryness of vaginal tissues and the chance of developing vaginal infections also increases. Some women may become temporarily or permanently infertile. In men, some chemo drugs can harm sperm or lower sperm count and can have temporary or permanent infertility.

### **Kidney Function**

Kidney and bladder cells can become irritated or damaged. Bladder irritation which causes a feeling of burning when urinating and increased urinary frequency. Swollen hands and feet. Some medications cause urine to turn red or orange for a few days.

### **Petechiae**

Tiny red or purple spots on the skin sometimes cluster to form a rash.

