



Patient Information

Stem Cell Transplant - you and your Rehabilitation Information

The aim of this leaflet is to give you information to help you with your mobility and fitness throughout your transplant. This may also help reduce the risk of some of the complications associated with high dose chemotherapy and stem cell transplant treatment.

It is important you continue to move around regularly during your inpatient stay up until the point where you feel this is no longer possible. Some patients find they can continue to move around easily all the way through their transplant admission however, for others this may not be as easy.

The ward staff will encourage you to mobilise around the hospital grounds prior to having your stem cells returned. Once you have had your cells re-infused we would advise you mobilise regularly in your room. If moving around becomes more difficult you will still be encouraged to get out of bed and sit in the chair in order to reduce the risk of complications from reduced mobility which may include

- Chest infections
- Joint Stiffness
- Low blood pressure
- Muscle wastage

The Fatigue Cycle

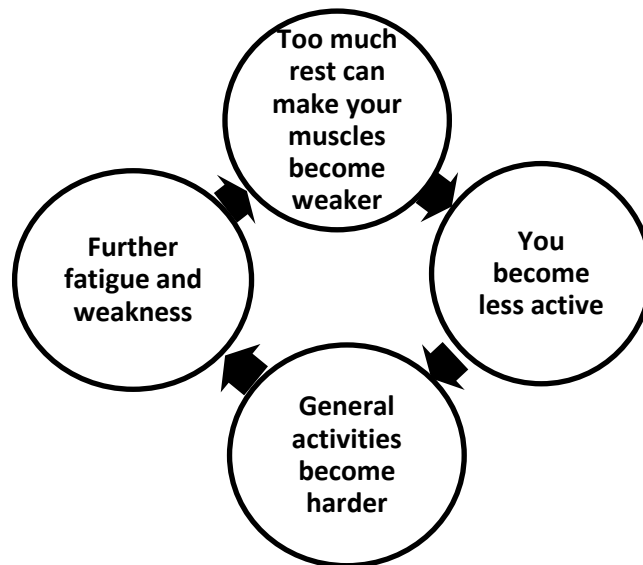
Fatigue is a common side effect of high dose chemotherapy and stem cell transplants. It can last for several months but does improve over time. Exercise has been proven to be effective in reducing fatigue and breaking the fatigue cycle. Exercise can also improve your mood and quality of life as well as aid in reducing pain. There is some evidence to suggest gentle exercise may reduce the time you need to spend in isolation.

Too much rest can make your muscles become weaker; this then makes it harder for you to move. As a result you then become less active. General everyday activities can become more difficult which results in further fatigue and weakness. This is called the fatigue cycle.



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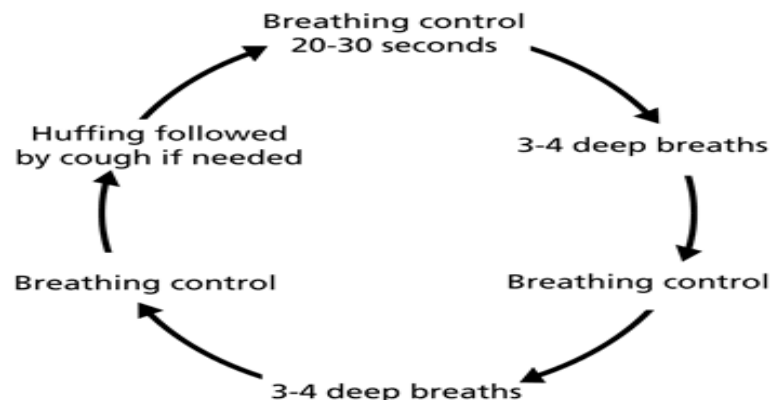
THE FATIGUE CYCLE



Whilst you are in hospital you have an increased risk of chest infections. Your immune system is very low due to the high dose chemotherapy you have received. You can reduce your chances of developing a chest infection by moving around.

The lungs sit inside your ribcage they are made of a very delicate spongy substance. This substance is made up of fine tubes (airways) and air sacs (alveoli). The alveoli help to absorb oxygen from the air when you breathe.

Taking regular deep breaths may also help in reducing infection. Below you will find a description of the Active Cycle of Breathing Technique (ACBT), an effective exercise for clearing the chest.





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Breathing Control

Place one hand over your diaphragm and one hand over the top of your chest. As you breathe in, you should feel your diaphragm rise away from your body. As you breathe out you should feel it sink back in. Try to keep your shoulders and upper chest completely relaxed.

Deep Breaths

Draw in a larger volume of air using the diaphragm to ensure the air gets to the bottom of your lungs. Hold it, and then sigh out gently through an open mouth.

Long Huff

Take a small breath in. Open your mouth wide and huff out, as if you were steaming up a mirror. Repeat this two-or three times.

Short Huff

Take in a deep breath. Then huff out through an open mouth - the huff should be short and sharp.

If you do develop a chest infection you can use a similar technique to try and clear any phlegm (catarrh or mucus). It is important that you do try to clear this phlegm as it can cause difficulty in breathing. **If you are producing sputum please inform the nursing staff so a sample can be sent for culture if required.**

If phlegm is a problem the active cycle of breathing technique (ACBT) is also effective. The best way to clear phlegm and to encourage air to move around your lungs is to mobilise around. Changing position in bed regularly and sitting upright in the chair will also be beneficial. **If you are not able to clear any phlegm please inform the nursing staff.**

Should you require help with how to perform these exercises speak to the nursing staff who can arrange for the Physiotherapist to assist.

Exercise

During your transplant you should try and keep mobilising around your room as much as you feel able.

If you feel unwell, dizzy or exhausted then you should leave the exercises until you are feeling stronger. On these days we encourage you to still sit out of bed if you can. We would recommend you try the bed exercises and keep walking to the bathroom.



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When exercising you may find you become slightly breathless, sweaty and your arms and legs can ache. These are all the normal side effects of exercise and you should continue even if you notice these symptoms.

If you are too breathless to “walk and talk” this means you are doing too much or doing the exercise too quickly. If this happens you should stop or slow down.

If you are particularly tired the day after exercising you need to think about whether you feel you did too much the day before. Try to reduce what you do that day or allow yourself a rest day.

If you feel you are struggling with any form of exercise or mobility please speak to the nursing staff. We can then refer you to our in-patient physiotherapist who can offer support.

Bed Exercises

While you are not feeling well and still spending a lot of time in bed try and do these exercises to help prevent the complications previously discussed. They will help you to maintain your muscle strength and movement in your joints.

We have put together some basic exercises to give you a little guidance. Start by doing these twice a day and see how you get on. If you are happy with them, build up how many of each exercise you do and the number of times you do them throughout the day.

Try to perform these exercises two or three times a day.

1. Lying on your back: Bend and straighten your ankles briskly.
If you keep your knees straight during the exercise you can also stretch your calf muscles.
2. Lying on your back: Bend your knee and pull it towards your chest. Repeat with the other leg.
3. Lying on your back: Keep both legs straight. Pull up the toes on the right leg and push the knee down into the bed. Hold for five seconds then release. Repeat 10 times on each leg.
4. Lying on your back: Brace one knee straight and pull your toes towards you. Keeping the knee straight and your toes pointing up to the ceiling, lift up the leg six inches and hold for five seconds. Lower slowly then repeat 10 times for each leg.

Chair Exercises

Once you are able to sit out of your bed in a chair you can move onto the following:

1. In the chair: Bend and straighten your knee slowly as far as it will comfortably go. Do this several times throughout the day with each leg.



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2. In the chair: Lift your heels off the floor. Then rock your feet from the ball the heel and back again.
3. Sitting with your arms crossed: Stand up and then sit down slowly on a chair keeping your arms crossed on your chest. (This can be made easier or more difficult by changing the height of the chair or bed.)
4. Sit or stand holding your hands on your chest with/without weights in your hands. Using one arm at a time, lift the weights (or just your hand) from your chest straight up and bring it back down. Take it in turns to do this with each arm.

Standing Exercises

When you are able to stand you can move onto the following exercises:

1. Standing up: Stand with support in front of you (the bed or a worktop). March on the spot – lifting your knees as high as is comfortable.
2. Stand straight, holding on to a support: Lift your leg sideways keeping the knee straight and your toes pointing forwards. Bring it back to the centre. Repeat on each leg 10 times.
3. Standing in front of a table or chair holding on with both hands: Slowly bend your knees and squat, keeping your back straight and heels on the floor. Stay down for approximately 20 seconds and feel the stretching in your buttocks and the front of your thighs.

When you are discharged from hospital

1. Gradually increase your mobility and exercise slowly
2. Aim for 20-40 minutes of exercise three times a week over a period of time.
3. Try and do activities that you enjoy; for example, walking, gentle cycling or swimming (advised once your central line has been removed and your neutrophil count has recovered).
4. Try and push yourself to a medium/moderate intensity of exercise.
5. Further useful information can be found on the Macmillan website:
www.macmillan.org.uk

Attached at the back of this leaflet is some additional medium intensity exercises recommended by our physiotherapy department you may like to use either during your in patient stay or when you are discharged.

“Feelings of Exercise” chart

As you increase your intensity and level of exercise, you may become more breathless and start to feel your muscles working harder. The chart below is a simple method of working out whether you are reaching the most effective intensity of exercise. This is the level which will help your heart the most (low to moderate intensity).



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During the stamina exercises you should feel that the intensity of exercise should be rated at a level of two or three. If you rate your feeling of exercise at level five, you are pushing yourself too hard and you should try to bring down the level at which you are exercising.

As you become fitter and more used to exercising, you can slowly increase the intensity of your exercise to level four.

How hard are you exercising?	During exercise	Immediately after exercise	Day after
Level 1	Easy, effortless. Breathing comfortable. Muscles are not tense	No aches or pains. Comfortable.	Rested. Could repeat the exercise.
Level 2	Mild effort. Breathing more deeply. Can feel muscles being used.	Recover quickly (2-5 minutes). No aches or pains. Comfortable.	Rested. Could repeat the exercise.
Level 3	Breathing harder. Slight sweat. Can feel muscles working. Heart beating faster.	Short recovery (4-7 minutes). Comfortable.	Comfortable. No aches or pains. Could exercise again.
Level 4	Breathless but not speechless. Sweating. Muscles working hard. Heart beating strongly.	Short recovery (5-10 minutes). Comfortable. Feel that muscles have worked. Alert, invigorated.	Not tired. Feeling of wellbeing.
Level 5	Very breathless-speechless. Uncomfortable. Chest tight. Dizzy. Muscles hurt. Nauseous.	Long recovery time (greater than 10 minutes). Muscles still tense. Palpitations. Nauseous. Dizzy.	No energy. Exhausted. Depressed. In pain. Feeling sick.



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Useful Support Groups

HUG Haematology / Oncology United Group

www.hugswindon.co.uk

abc Affected by Cancer Community Group

www.abcswindon.org.uk

Swindon Carers

www.carers.org/local/south-west/swindon

Useful contact numbers:

Macmillan Cancer Support

Tel: 0808 808 00 00

www.macmillan.org.uk

Local Macmillan Advice Worker

Sue Williams & John Bristow Tel:

01793 496154

Cancer Research UK www.cancerhelp.org.uk

CLIC Sargent Social Worker

Tel: 01793 646145

(Patients 18-25 age group)

www.clicsargent.org.uk

Leukaemia Research Fund

Tel: 020 7405 0101

www.lrf.org.uk

Lymphoma Association

Tel: 0808 808 5555

www.lymphomas.org.uk

International Myeloma Foundation

Tel: 0800 980 3332

www.myeloma.org.uk

LIFT Counseling Services

Tel: 01793 836836

<http://lift.awp.nhs.uk/swindonandwilts>



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From 1st January 2019 smoking will not be permitted on any NHS site in England. Smoking will not be permitted within any of our buildings or anywhere outside on our sites. Smoking facilities will not be provided. Please be considerate of others when vaping in hospital grounds.

This information sheet is available to order in other languages and formats. If you would like a copy, please contact us on 01793 604031 or email gwh.pals@nhs.net

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