

Physiotherapy department

Stem cell transplant, you and your rehabilitation

Information for patients and their carers

Stem cell transplant
exercise handout



Thank you for taking the time to read this leaflet.

The aim of this leaflet is to give you information to help you to:

- **Keep up your current level of mobility (moving around) before and after your transplantation.**
- **Reduce the risk of some of the complications of having a transplant.**

Keep on moving

Before you come in for your transplant it is important that you try to maintain your current level of mobility (moving around). You need to make sure you continue to move about regularly before and during your transplant, up until the point where you might feel this is no longer possible. Some patients find they can continue to move about all the way through their transplant journey, others do not. It is a very personal decision, specific to you and how you feel.

We are happy to help you to keep mobilising for as long as you feel it is possible. We will encourage you to walk up and down the corridors at quiet times and go to the day room, etc. Please check with your nurse/doctor for the best times to do this.

If you do have to stop moving about it is important to get up and mobilise as soon as it is possible. The nursing staff will encourage you to spend periods of time out of bed in your chair and to walk to the bathroom when you feel able. This is to prevent complications which are linked to not moving for long periods of time (immobility).

Complications of immobility include:

- chest infections
- joint stiffness
- low blood pressure.

Later in this document there is information on exercises you can do to help prevent these problems.

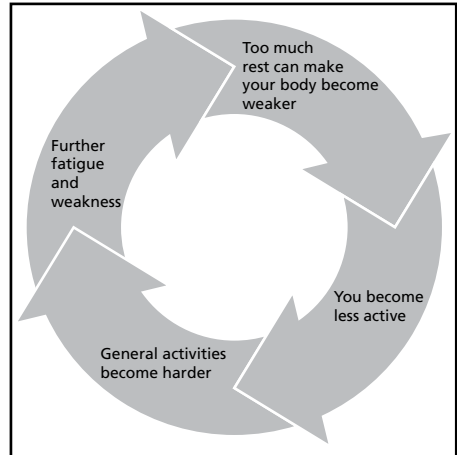
Importance of keeping moving

Dangers of the “fatigue cycle”

Fatigue (feeling worn out) is a big problem for cancer patients. Some people can feel like this for a long time. It is caused by a number of different things. Exercise can be part of the solution and does not involve any medication.

The fatigue cycle

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



So how can exercise help you feel less tired?

Exercise and keeping moving breaks the cycle. It can also help to improve your mood, your quality of life, limit your pain and some research has shown that it may reduce the amount of time which you might need to spend in isolation.

Helping to prevent chest infections

Unfortunately, when you are in isolation and receiving your treatment you are at risk of chest infections. These are not completely preventable but you can reduce the chances of developing a chest infection by making sure you are using all of your lungs to help the small airways inside stay open. To do this you must take regular deep breaths and keep yourself moving.

Your lungs

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

Deep breathing exercises

To open your airways and alveoli:

1. Take a deep breath so that your lungs feel as full as possible.
2. Hold this breath for a couple of seconds.
3. Breathe out naturally.
4. Repeat this deep breath four times in a row.

Repeat this exercise between three and four times a day.

If you get a chest infection you can use a similar exercise to try and clear the phlegm (catarrh or mucus). It's important that you do clear the phlegm as if it stays on your chest it can make it quite difficult and uncomfortable to breathe.

Again, the best way of clearing phlegm and moving air around your chest is to keep moving and changing position regularly. You can try lying on each of your sides and sitting out in a chair if you are able.

Another good way to bring phlegm higher up to make it easier to cough up is the Active Cycle of Breathing Technique (ACBT). Use the following technique if phlegm becomes a problem.

Active cycle of breathing technique (ACBT)

1. Start with relaxed breathing – sitting comfortably with your upper chest and shoulders relaxed; feel your breathing coming from around your stomach.
2. Take 3 - 4 deep breaths (as in the deep breathing exercises).
3. Return to relaxed breathing for approximately 30 seconds.
4. Do 2 huffs – make an 'O' with your mouth and force the air out quietly (like trying to steam up a mirror).

Repeat steps 1- 4 again.

5. Cough to clear any phlegm which may have come up.

Repeat the whole cycle until you have cleared as much mucus as you can without getting too tired.

If you are clearing phlegm then please ask someone for a sputum pot. We will want to see it as it will give us useful information about any infections you may have.

If you are struggling to clear your secretions please inform the nurses or doctors.

Smoking

If you are a smoker or have only recently stopped this will increase your risk of chest infections. Therefore, it is very important that you follow the above advice.

There are also many other health benefits of stopping smoking!

If you do smoke and you are thinking of giving up there are many ways the NHS can help you. Please ask for a "Start to Stop" leaflet from the ward staff.

Exercise

Try and stay as active as you can in the time leading up to your transplant.

During your transplant you should try and keep mobilising by walking up and down the ward as you feel able.

However, 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 feeling 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, try bed exercises and keep walking to the bathroom.

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

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.

“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 (i.e. low to moderate intensity).

During the stamina exercises you should feel that the intensity of exercise should be rated at a level of 2-3. If you rate your feeling of exercise at level 5, 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 4.

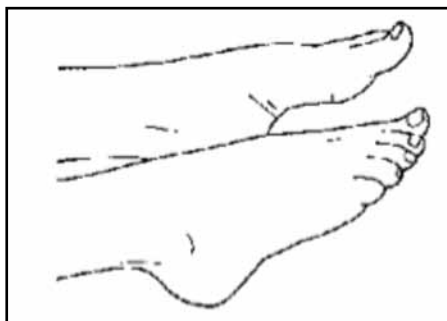
How hard are you exercising?	During exercise	Immediately after exercise	Day after
Level 1	Easy, effortless. Breathing comfortable. Muscles are not tense.	No aches or pains. Comfortable.	Rested. Could repeat the exercise.
Level 2	Mild effort. Breathing more deeply. Can feel muscles being used.	Recover 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.

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 and perform these exercises 2-3 times a day.



Lying on your back or sitting:

Bend and straighten your ankles briskly.

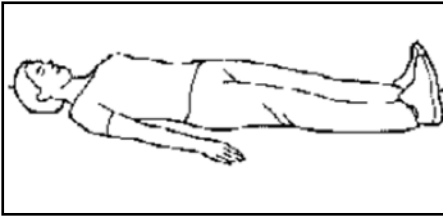
If you keep your knees straight during the exercise you can also stretch your calf muscles.



Lying on your back:

Bend your knee and pull it towards your chest.

Repeat with the other leg.

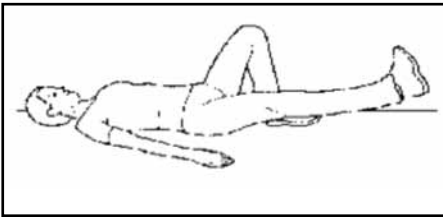


Lying on your back:

Keep both legs straight.

Pull up the toes on the right leg and push the knee down into the bed. Hold for 5 seconds then release.

Repeat 10 times on each leg.



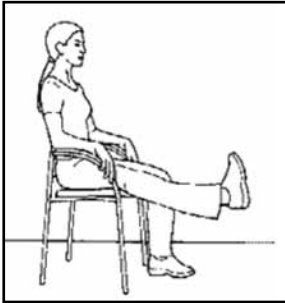
Lying on your back:

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 6 inches and hold for 5 seconds.

Lower slowly then repeat 10 times for each leg.

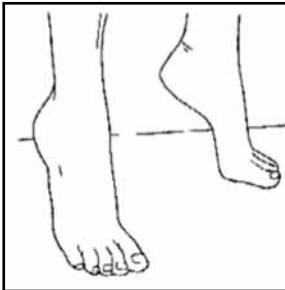
Once you are able to sit out of your bed in a chair you can move onto the following exercises:



In the chair:

Bend and straighten your knee slowly and smoothly as far as it will comfortably go.

Do this lots of times throughout the day with each leg.



In the chair:

Lift your heels off the floor.

Then rock your feet from the ball to the heel and back again.



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 and more difficult by changing the height of the chair or bed.)



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.

Repeat times.

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



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.

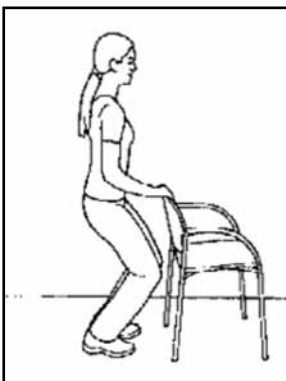


Stand straight, holding on to a support:

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.



Stand 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

- Aim for 20-40 minutes of exercise 3 times a week.
- Try and do activities that you enjoy; for example, walking, gentle cycling or swimming.
- Try and push yourself to a moderate intensity of exercise. This would equate to a score of around 4 on the “Feelings of Exercise” chart, as discussed earlier in the hand out.
- Further useful information can be found on the Macmillan website: www.macmillan.org.uk
- “Go Active” may be able to support you if you are Oxfordshire based and wanting to become more physically active. www.getoxfordshireactive.org

If you are finding these exercises too difficult or not challenging enough this page is blank for the Ward Physiotherapist to give you some specific exercises:

If you have any concerns about coping at home following your transplant please make sure you tell someone. There is a big team of people in the hospital who can help you. The Physiotherapist can look at your strength, walking and balance if need be. There are also people who can provide basic equipment to help you at home (Occupational Therapists) or you may be able to access some help at home through Social Services.

If you have any queries about exercising, stamina or strength, do ask the ward to contact the Physiotherapists, they will be happy to talk to you.

If you have any queries after you have been discharged please speak to your Transplant Specialist Nurse. They can get in touch with the Physiotherapist if necessary.

Your Physiotherapist's name is:

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Contact Details

Haematology ward: **01865 235 048** or **08165 23 5049**

Churchill Hospital

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473** or email **PALSJR@ouh.nhs.uk**

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