

Physiotherapy

Department of Rehabilitation

Stem Cell Transplant

The aims of physiotherapy are to:

- i) Minimise risk of musculoskeletal and pulmonary complications
- ii) Prevent deconditioning
- iii) Improve outcomes

Why should we exercise?

Effects of HSCT	Benefits of Exercise
Prolonged bed rest reduces lung expansion and causes phlegm to be trapped, increasing risk of chest infection.	Improves lung expansion and phlegm clearance, thereby decreasing the risk of lung infections.
Lack of physical activity can weaken muscles and decrease stamina. This may affect your ability to perform daily activities and you may feel tired more easily.	Exercise prevents muscle waste, promotes better skeletal health, improves stamina, combats fatigue, and facilitates cardiac function and blood circulation.
Your mood and feelings may take a downward turn if you spend most of your time in bed.	Exercise is known to promote well-being, improve mood, reduce depression and anxiety.

Prevention of Chest Infection

You will be taught to perform deep breathing exercises with the incentive spirometer. You are advised to practise the incentive spirometer for 10 repetitions, every hourly.

Some safety precautions of exercise for HSCT patients

- DO NOT exercise if:
 - Your platelet count $< 10 \times 10^9/L$
 - Your Hb level $< 7 \text{ g/dL}$
 - You require blood transfusion.
 - You are having a fever.
 - You are experiencing new or active bleeding.
 - You are feeling unwell (e.g. giddiness, short of breath, chest discomfort, pain, exhaustion).
 - Check with your nurse or physiotherapist for the day if you are unsure.
- Avoid high-impact exercises, or aggressive weight training.
- Take fall precautions during exercise.
- Level of breathlessness:
Use the numerical rating scale of dyspnea during exercise. From a range of 0 (not breathless at all) to 10 (extremely breathless), you should exercise at a range of 2-3.

Disclaimer:

The information provided in this publication is meant purely for educational purposes and may not be used as a substitute for medical diagnosis or treatment. You should seek the advice of your doctor or a qualified healthcare provider before starting any treatment or if you have any questions related to your health, physical fitness or medical conditions.

Straight Leg Raises



Lie on your back, tighten your thigh muscle and straighten your knee.

Lift your leg off the bed. Hold ___ sec, repeat ___ times.

Hip Abduction



Lie on your side with your knees bent, bring the upper knee upwards while keeping both heels together. Repeat ___ times.

Bridging



Lie on your back with knees bent. Squeeze your buttocks together and lift your bottom off the floor. Hold for ___ seconds. Return to starting position. Repeat ___ times.

Sit to Stand



Place your feet behind your knees. Stand up by tightening your buttock muscles and slowly sit down. Repeat ___ times.

Knee extension



Sit on a chair, keep your thighs on the chair and slowly straighten your knee. Hold it for ___ seconds. Repeat ___ times.

Seated Marching



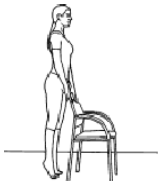
Lift your knee up towards your chest while keeping your back straight. Hold for ___ seconds, repeat ___ times.

Marching on the Spot



March for ___ mins. Hold on to a wall for support if required.

Heel raises



Hold on to a support. Push up on your toes, hold for ___ seconds. Repeat ___ times.