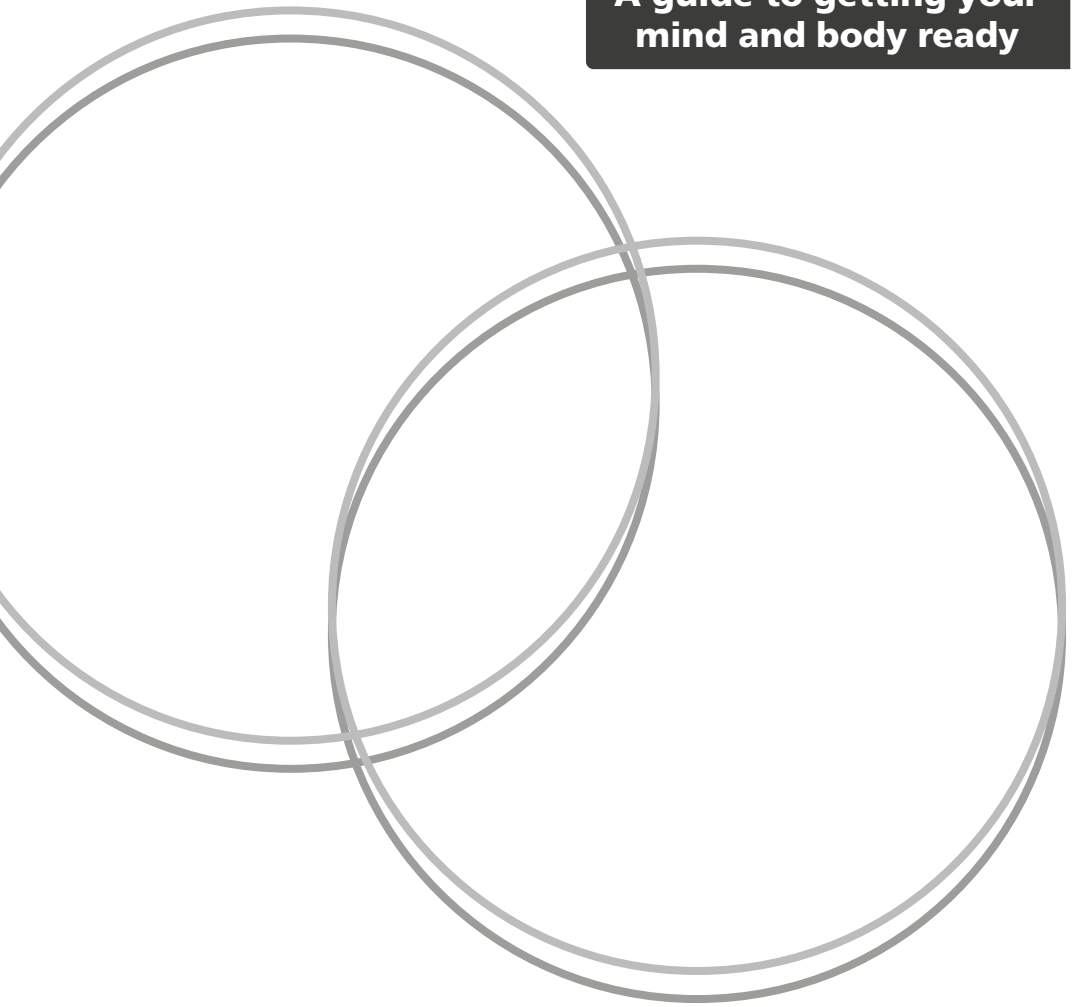
Oxford University Hospitals
NHS Foundation Trust

Preparing for your Stem Cell (Bone Marrow) transplant

A guide to getting your mind and body ready



Why this guide matters

Getting ready for a stem cell transplant (also called a bone marrow transplant) is about more than just medical treatment. Looking after your body, your mind, and your daily habits can make a real difference to your recovery.

This booklet explains how you can prepare yourself before, during, and after your transplant. If you're having CAR-T cell therapy, much of this advice will still apply.

Four key areas to focus on

Eating well

Good nutrition helps your body stay strong during treatment. If you have an appetite, try to eat little and often. High-protein or high-calorie snacks can help you maintain your weight.

Staying active

Exercise helps your body cope with treatment and can improve sleep, mood, and strength. Aim for regular activity, but even small movements make a difference.

Looking after your mental health

It's completely normal to feel a mix of emotions. Understanding what to expect and talking to others can help you feel more in control.

Healthy lifestyle choices

Smoking, alcohol, and recreational drugs can make recovery harder or interact with medication. Speak to your team if you need support to reduce or stop these.

Mental health: coping with the challenge

Here are some simple ways to support your emotional wellbeing:

- **Ask questions** – Knowledge can ease anxiety. Your team is here to help.
- **Stick to a routine** – Structure can help you feel more in control.
- **Talk to someone** – Whether it's a friend, a member of your medical team, or a support group, sharing how you feel can help.
- **Use calming techniques** – Try breathing exercises, music, or mindfulness.
- **Take breaks from worrying** – Distract yourself with something you enjoy.

Moving your body before transplant

Why it matters:

Strengthening your body helps it cope better with the stress of transplant and can support a smoother recovery.

What to aim for (if you feel able):

- 5 sessions of light cardio per week (e.g. walking)
- 2 sessions of strength exercises per week
- Even if you can't meet these goals, any extra movement helps.

Tips to get started:

- Increase your daily steps gradually (1,000 extra steps = 10 minutes walking)
- Try short sessions if you feel tired (5-10 minutes at a time)
- Mix walking with strength exercises
- Use a step counter or fitness app to track progress

Before starting:

Check with your transplant team if you have any concerns about exercising, especially if your blood counts are low or you're receiving transfusions.

Warm up and cool down exercises

Doing a warmup before exercise and a cool down after prevents injury.

This is particularly important if you have a previous or current heart condition.

Example warm up routine:

Marching or brisk walking on the spot



1. Lift your legs up and down on the spot whilst swinging your arms
2. Continue this for 2 to 3 minutes

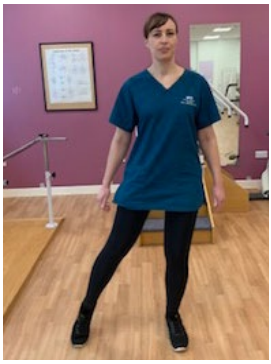
Beginner: Marching on the spot whilst seated.

Intermediate: Marching on the spot in standing holding on to something.

Advanced: Brisk walking on spot in standing without holding on to anything.

Side steps





1. Step your left foot out to the side and back and then your right foot out to the side and back
2. Continue this for 2 to 3 minutes

Beginner: Lift your feet out to the side and back whilst seated.

Intermediate: Lift your feet out to the side in standing holding on to support.

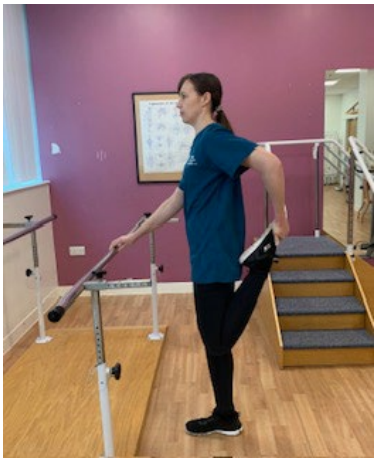
Advanced: Lift your feet and arms out to the side and back without holding support.

Calf stretch



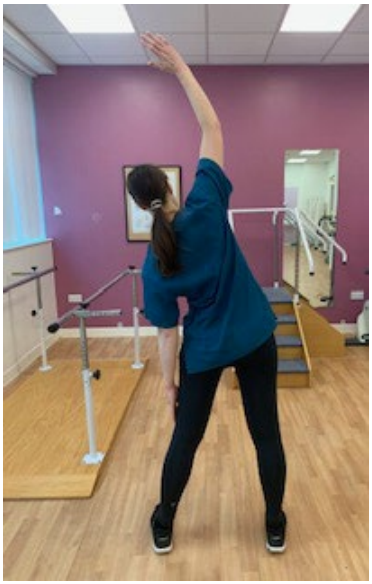
1. Stand holding on to wall or chair
2. Step one leg behind you
3. Keep your front leg bent and your back leg straight.
4. Keep your toes pointing forward
5. You should feel a stretch in your back leg in your lower leg muscle.
6. Hold for 30 seconds. Repeat on the other leg.

Front thigh stretch



1. Stand holding on to a rail or wall for support.
2. Stand upright as possible and grasp your hand around the front of your foot.
3. Gently bend you knee and pull your foot towards your bottom.
4. Hold for 30 seconds.
5. Repeat on the other leg.

Side stretch



1. Stand with your feet hip width apart.
2. Slowly side your left hand down your left leg to where comfortable and reach towards the ceiling with your right arm.
3. Hold for 30 seconds then return to the start position.
4. Repeat on the other side.

Shoulder stretch



1. Stand as upright as possible with your feet hip width apart.
2. Bring your left arm across your body and use your right arm to gently push your left arm further across until you feel a stretch in your shoulder.
3. Hold for 30 seconds.
4. Repeat on your right side.

Please note stretching should not be painful. Ease off the stretch or stop stretching if you experience pain.

The same exercises can be used for cooling down after exercise but with the aim of gradually slowing your heart and breathing rate down.

Examples of strengthening exercises you can do before your transplant:

A guide for the number of exercises to aim for: 10 times, rest, 10 times (20 total).

Once a day or every other day as able.

Please note you don't have to do all of these in one go.

1. Wall press ups





1. Standing in front of a wall.
2. Place your hands on the wall, with fingertips pointing upwards and elbows slightly bent.
3. Bend your elbows to lean forwards into the wall and then straighten your elbows to return to the start position.
4. Keep your eyes looking forwards straight ahead of you and keep your back straight throughout the exercise.

Beginner: Start with being a close distance away from the wall.

Intermediate: Move slightly further away from the wall or increase repetitions.

Advanced: Do the same exercise but use a sturdy bench or work top.

2. Mini squat



1. Stand tall with your feet hip-width apart.
2. Hold onto a rail/chair for support.
3. Bend your knees and hips as if you were going to sit down and lower yourself into a half squat position.
4. Using your leg muscles push back up into a standing position. Keep your back straight throughout the exercise.

Beginner: Mini squat holding on to rail/chair (only bend your knees and hips a small amount).

Intermediate: Mini squat without holding rail or chair.

Advanced: Mini squat holding light dumbbells in each hand.

3. Arm curls





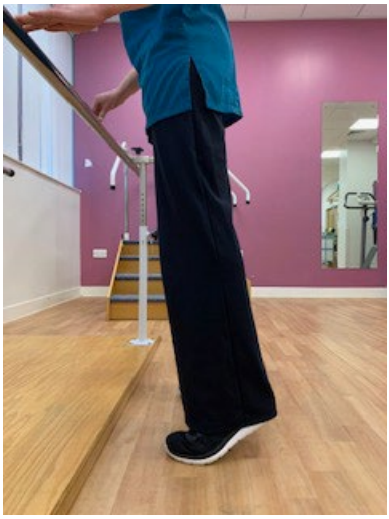
1. Sitting or standing.
2. Place a 1-2kg weight in each hand (this can be done with a can of beans/water bottle).
3. Keep your elbows in at your waist.
4. Bend your elbow and slowly lower it to a straight position.

Beginner: Complete the exercise while seated.

Intermediate: Complete the exercise in standing.

Advanced: Complete the exercise in standing and gradually increase the weight or number of repetitions.

4. Heel raises



1. Stand tall with your feet hip-width apart.
2. Rise onto your tiptoes and in a controlled manner lower yourself back down.

Beginner: Two hands holding the handrail. Rise up on both feet.

Intermediate: One hand holding the handrail. Rise up on both feet.

Advanced: Complete the exercise holding a light hand weight in each hand.

You can do this exercise seated if unable to do this in standing position.

5. Sit to stands





1. Sit on the edge of the chair, feet hip-width apart.
2. Lean slightly forwards and push up into a standing position until you are fully upright.
3. Return to sitting position.

Beginner: Use both arms to push up from a chair.

Intermediate: Sit to stand with your arms crossed.

Advanced: Do the same exercise whilst holding a light weight in each hand.

6. Bridge

Start position



Exercise



1. Lying down on a mat or bed with your knee's bent up.
2. Keeping your chin tucked in and knee's slightly apart, squeeze your bottom muscles and slowly lift your bottom up off the bed or floor.
3. Hold for 3 seconds then slowly lower back down to the start position.

Beginner: Arms by your sides.

Intermediate: Arms crossed over your chest.

Advanced: Arms raised with fingertips pointing up towards ceiling.

When not to exercise:

This is not an exhaustive list so please be guided by your body and do not start to exercise if you are feeling unwell.

If you have chest, neck, arm or jaw pain or worsening breathlessness – call 999 straight away

Should you experience any of the following, stop exercising and seek prompt advice from your GP or your specialty team:

- Bad headache
- A fever
- Problems with your blood pressure
- New diarrhoea, nausea or vomiting in past 48hrs
- Developed new pain which has not resolved
- Uncontrolled blood sugars
- Loss of coordination
- Mental confusion
- Loss of power in your upper or lower limbs
- Experiencing dizziness or light headedness

If your blood counts are low or if you receive regular transfusions, please speak to your transplant team for advice before you start exercising (please see contact details on last page of this booklet).

Barriers and enablers

Making lifestyle changes or adapting to a new routine can be challenging.

It can be beneficial to identify any potential barriers and how you might overcome these (enablers). Examples of barriers could be time, fatigue, hospital appointments.

Examples of enablers could be using your phone to monitor your step count, asking a friend or relative to exercise with you or using a weekly meal planner.

Staying active during your hospital stay

- Try to sit out of bed and move around if you feel able.
- Take short walks to the bathroom or around the ward.
- Use the day room or garden if available.
- If you're too tired to move around, try doing the bed or chair exercises in this leaflet.

Helping your lungs: prevent chest infections

While in isolation, you're at higher risk of chest infections. Regular breathing exercises can help.

Deep breathing:

- Breathe in deeply
- Hold for a few seconds
- Breathe out slowly
- Repeat 4 times, 3-4 times a day

To clear phlegm (if needed):

- Try the Active Cycle of Breathing Technique (ACBT)
- Start with relaxed breathing – sitting comfortably with your upper chest and shoulders relaxed. Place your hands on your stomach.
- Keep your shoulders down and take a deep breath. You will feel your hands rise on your stomach as you breathe in. Relax.
- Repeat 2-3 times.
- Do 2 'huffs' – make an 'O' shape with your mouth and do a sharp, short breath out, as if you were steaming up a mirror or glasses
- Cough to clear any phlegm which may have come up
- Move and change position regularly. Let your nurse or doctor know if you're struggling to clear your chest.

If you smoke:

Quitting will help your recovery. Your team can help you get support.

Exercises to try on the ward when having your transplant

Bed exercises

If you find yourself feeling unwell and spending time in bed on the ward, try and do these exercises. They will help you to keep up your muscle strength and movement in your joints.

A guide for the number of exercises to aim for: 10 times, rest, 10 times (20 total).

Once a day or twice a day as able.

1. Ankle pumps





1. Sitting with your legs straight out in front of you on the bed.
2. Pull your toes up towards you then point them down towards the floor.

You can also do this exercise whilst sitting in a chair.

2. Knee bends



1. Sitting with your legs out in front of you on the bed.
2. Keep your toes up and bend and straighten your knee.

3. Straight leg lifts



1. Sitting on floor or bed with legs out in front of you.
2. Pull your toes towards you.
3. Squeeze your knee down in to bed or floor.
4. Lift your leg approximately 5cm straight up off bed or floor. Return to start position.

4. Bridge

Start position



Exercise



1. Lying down on a mat or bed with your knee's bent up.
2. Keeping your chin tucked in and knee's slightly apart, squeeze your bottom muscles and slowly lift your bottom up off the bed or floor.
3. Hold for 3 seconds then slowly lower back down to the start position.

5. Thigh squeezes



1. Sitting with legs out in front of you on the bed.
2. Pull your toes up towards you and squeeze your knee down in to the bed.
3. Hold for 3 seconds then relax.
4. To increase difficultly with this exercise, hold for 5 seconds or increase repetitions.

Seated exercises if able to sit out to a chair on the ward

A guide for repetitions with each exercise: 10 times, rest, 10 times (20 total).

Once a day or as able.

1. Knee lifts





1. Sitting out in a chair with bottom against the back of the chair.
2. Slowly lift one knee up towards the ceiling and back down again.
3. Repeat on the other leg.

2. Straightening knee out in front of you



1. Sitting in a chair.
2. Keep your back straight, pull your toes towards you and straighten your knee.
3. Hold for 3 seconds.
4. Return to start position and repeat on the other leg.

3. Arm curls





1. Sitting or standing.
2. Light weight in each hand (e.g. water bottle).
3. Keep your elbows in at your waist.
4. Bend your elbow and slowly lower it to a straight position.

When you are feeling stronger, and able to stand without help, you can move on to the standing exercises at the beginning of this booklet.

Please check with your medical team and nurse caring for you first that they are happy for you to do standing exercises. Please hold on to something or have someone next to you if your balance is affected.

Going home from the ward

- Keep moving, even if it's just small activities
- Pace yourself and take breaks
- Break tasks down into manageable chunks

If you have any concerns about managing at home following your transplant, please make sure you tell your nurse on the ward before you are due to be discharged.

If you have any questions about exercising do ask the ward for a Physiotherapy visit, they will be happy to talk to you.

Extra resources

Websites and charities that offer advice, videos, and support:

- **Cancer Care Map**
  www.cancercaremap.org
- **Anthony Nolan – Exercise Guide**
  www.anthonynolan.org/
- **Trekstock (for people in their 20s–30s)**
  www.trekstock.com/get-active
- **Better at Home**
  www.better.org.uk/what-we-offer/activities/exercise-at-home
- **NHS seated exercise video**
  www.youtube.com/watch?v=EJgZygWBKaE
- **Exercise and keep fit classes for seniors | Age UK**
  www.ageuk.org.uk/services/in-your-area/exercise
- **Exercise support and resources | The Royal Marsden**
  www.royalmarsden.nhs.uk/your-care/support-living-with-and-beyond-cancer/guidance-advice/staying-active/exercise-support-and-resources
- **Be More Active Whilst Living With A Health Condition**
  www.weareundefeatable.co.uk
- **Mind (Mental Health)**
  www.mentalhealth.org.uk/explore-mental-health
- **NHS Stop Smoking Support**
  www.ouh.nhs.uk/patient-guide/here-for-health/smoking-cessation/
- **Alcohol support – NHS**
  www.nhs.uk/live-well/alcohol-advice/alcohol-support

Contact details

This booklet has been created for patients who are about to undergo or currently going through stem cell transplant.

We have tried to make this information meet your needs. If it does not meet your individual needs or situation, please ask your healthcare team for more details or information. They will be happy to help.

If you have any questions about anything covered in this booklet please contact:

Bone Marrow Transplant team on **07919 305681**

If you have received **CAR-T cell therapy** please text or call **07920 183239**.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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