



**University Hospitals Birmingham**  
NHS Foundation Trust



# **Prehabilitation: Preparing for cancer treatment**

**Building healthier lives**

**UHB is a no smoking Trust**

# What is prehabilitation?

Prehabilitation (or Prehab) is about getting your body stronger and healthier before treatment. This helps you recover faster and gets you back to what is important to you.

## Prehab includes:

- Eating well
- Exercising
- Taking care of your feelings and mental health

Prehab is like training for a big race. You wouldn't run a marathon without practising first! The same idea applies to treatment, you need to prepare.

# Why is prehab important?

## Prehab can help you:

- Feel stronger and recover quicker
- Have fewer side effects from treatment
- Have a shorter stay in hospital
- Feel happier and less tired
- Give your treatment the best chance to work

Even small changes can make a big difference in just 2-4 weeks. You may feel that this is too much to do, but prehab is important to help to give your treatment the best chance of success and to make your recovery as easy as possible.

# Exercise

## Why is exercise important?

It is common for people to lose strength and muscle mass while unwell with cancer and/or going through cancer treatments. Exercise before treatment helps to make your body stronger, and to protect against muscle loss in the future. Exercise also improves your heart health, builds muscle, and can make treatment easier.

## How much should I exercise?

### Try to do:

150 minutes of moderate exercise per week **or** 75 minutes of vigorous exercise **plus** muscle-strengthening activities at least 2 times a week (NHS 2024).

## Examples of these types of exercises are summarised below:

Vigorous activity	Moderate activities	Muscle strengthening activities
Running Swimming Riding a bike fast or up hills Skipping Aerobics Martial arts	Brisk walking Water aerobics Riding a bike Dancing Pushing a lawn mower	Yoga Pilates Tai chi Working out with resistance bands or body weight Lifting weights

If you are currently achieving the recommended amounts, you could try to increase your activity levels further. If you do not currently do any exercise, here are some helpful tips to get started:

- Start small – try 10–15 minutes, 3 times a week
- Choose exercises you enjoy
- Set small goals, like a 10-minute walk or 10 squats
- Take breaks when needed
- Be consistent

There are websites with online exercise programmes for different abilities at the end of this leaflet.

## Eating Well (Nutrition)

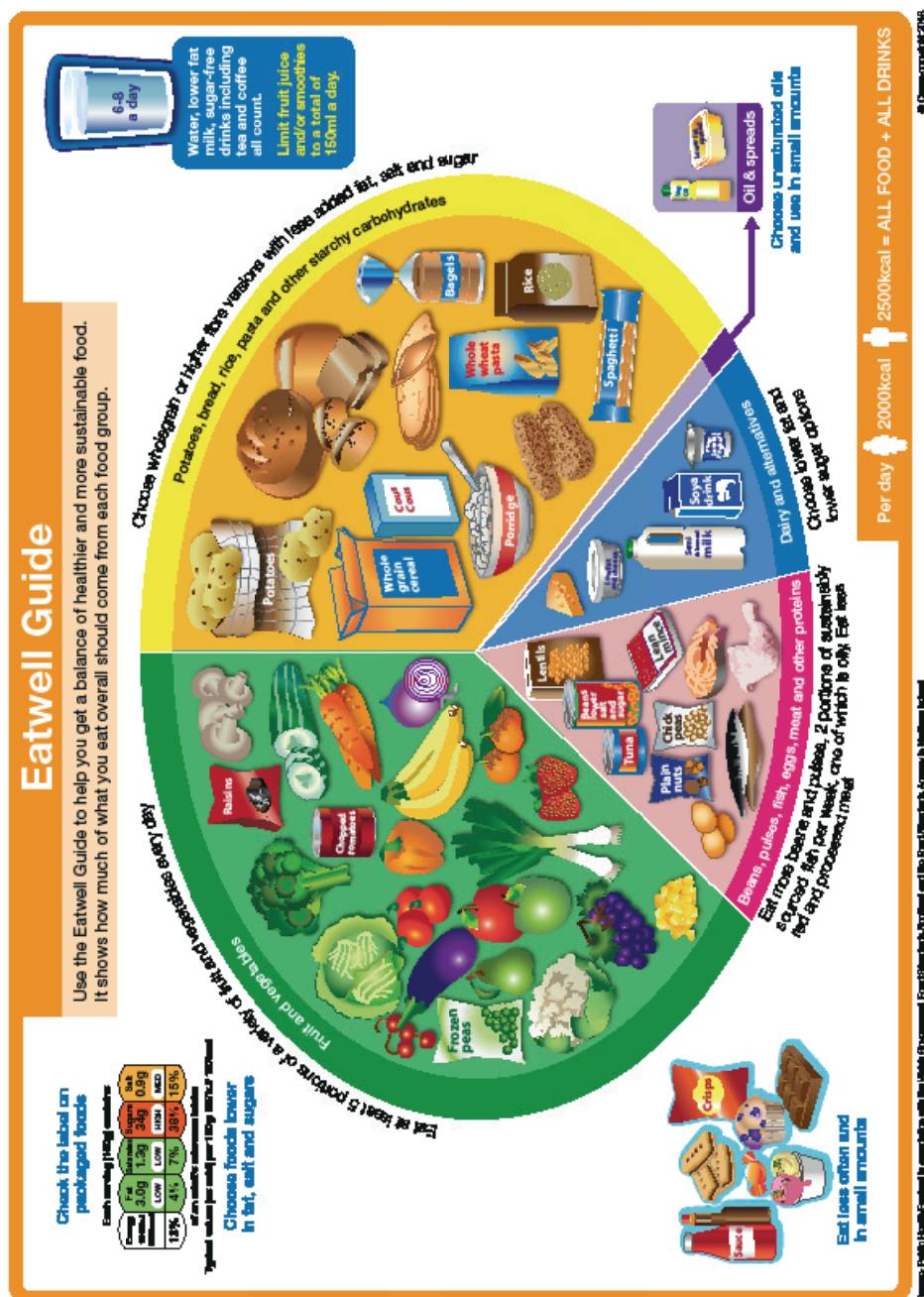
Eating a healthy, balanced diet helps your body stay strong. If you don't eat well, you may lose muscle, which can make it harder to recover. Muscle mass helps to reduce the side effects of treatment and improve overall survival. If your body is not getting enough nutrition, it is harder for it to heal and recover after treatment, making you more prone to infections and worsening the side effects of treatment.

### What should I eat?

#### Your meals should include:

- **Carbohydrates** (e.g., bread, rice, pasta) for energy
- **Protein** (e.g., meat, eggs, fish, beans) to build muscle
- **Fruits and vegetables** for vitamins
- **Dairy** (e.g., milk, cheese, yogurt) for strong bones
- **Healthy fats** (e.g., nuts, avocado, olive oil) See the UK Government Eatwell Guide (figure 1) for more information.

**Figure 1** – UK Eatwell Guide- OHID in association with the Welsh government, Food Standards Scotland and the Food Standards Agency in Northern Ireland.



In order to maintain or increase your muscle mass, you should try to eat protein with each meal and 1–2 protein snacks in the day.

**Examples of protein sources and suggested portion sizes are below:**

Protein source	Portion size/Approximate weight for 20g protein
Beef, lamb, pork	2 medium slices/75 g
Turkey, chicken	1 small breast /75 g
Grilled fish	1 small fillet/100 g
Fish fingers	6 fish fingers/100 g
Salmon/tuna/mackerel	1 small tin or fillet/100 g
Shrimps/prawns	2 large spoons/100 g
Eggs	3 medium eggs.
Cottage cheese	4 tablespoons/ 150 g
Milk (skimmed/semi-skimmed)	1 pint/600ml
Yogurt – Skyr or Greek yogurt (not Greek-style yogurts)	1 medium pot/200g
Nuts (e.g. peanuts, cashews)	1 handful/30g
Seeds (e.g. sunflower, sesame)	8 tablespoons/100 g
Baked beans	A large tin/400g
Kidney beans/split peas (cooked)	10 tablespoons/300 g
Lentils (cooked)	10 tablespoons/240 g
Chickpeas	12 tablespoons/300g
Tofu- firm/silken (Soya bean curd)	1/2 packet/100 g
Soya milk	A large glass/700ml
Hummus	6 tablespoons/250 g
Peanut butter	100 g
Mycoprotein (eg Quorn™) pieces/mince	8–12 tablespoons/200g
Soya mince (chilled or frozen)	8–10 tablespoons/130 g

It is important to have a balanced diet and include food from each group. You should avoid cutting out entire food groups (e.g. carbohydrates or dairy) as this can deprive your body of important energy or vitamin sources. There is a lot of misinformation about what you should and should not eat whilst preparing for or undergoing cancer treatment. It is important to get your information from reputable sources such as the NHS, British Dietetic Association, Macmillan and World Cancer Research Fund.

## Wellbeing

When preparing for treatment, it's normal to feel worried before treatment and/or have other issues such as energy levels (fatigue) or sleep.

It is important to notice any issues you are having and to look after both your physical and emotional wellbeing to help you to cope better with prehabilitation, treatment and recovery.

### Here are some tips for managing your wellbeing when preparing for treatment:

- Be kind to yourself – recognise that what you are going through is stressful and difficult
- Take time to process how you are feeling and recognise any particular worries – talk to friends/family/health professionals, write your thoughts and feelings down, ask for more information if needed
- Make sure you are looking after yourself – keep to a healthy routine with diet, exercise/activity, sleep
- Take time to relax and to do things you enjoy – these are restorative and are important to help you to feel well
- Recognise that you are likely to have less energy than usual, and you may need to do things differently – make tasks as easy as possible for yourself, space tasks out and balance activity with time to rest,

don't feel guilty for not doing as much as usual, accept help if offered

- Try to build up activity and exercise levels but don't overdo it to the point of feeling exhausted – do what you can, when you can
- Try to keep to a regular sleep routine – go to bed and get up at the same time every day, try to avoid napping in the daytime, and avoid screentime and eating/drinking just before bed
- If feeling anxious when trying to sleep, try writing your worries down before bed, and try breathing slowly and deeply to relax and slow down your body and mind when trying to get to sleep
- Practicing some simple relaxation exercises regularly can be good for your mood and also to rest if feeling fatigued – for example, simple stretches, slow deep breaths in and out, closing your eyes and imagining a relaxing place

If you feel you are very affected by anxiety or low mood and this is too much for you to manage by yourself, let your specialist nurse or another health professional know.

## Setting goals

Setting goals can help you stay on track to get stronger before your treatment.

Think about what is doable and important for you. Write down what you want to do before your treatment, for example:

- "I will go for a 10-minute walk every day."
- "I will eat a protein snack in the afternoon."
- "I will stop smoking"

There is space on the back of this leaflet to keep track of your progress and celebrate your achievements.

## Getting ready for hospital

If you need to stay in hospital for your treatment, you can bring things that make you feel comfortable, like:

- Family photos
- Books, music, or games
- Comfy clothes

When in hospital, keep to a normal routine as much as you are able: spend time out of bed, change into your own comfortable clothes in the daytime, sit out of bed for meals, and open the blinds to let daylight in during the day.

Try to stay active in hospital. There will be days when you need to rest, but if you feel up to it, you could walk around the ward or do some simple exercises in your room. It is important to not overdo activity—stop if you feel unwell or exhausted. You should check with your medical team if they have any concerns about you exercising during your admission. Don't exercise if you are feeling ill.

Sitting up instead of lying down can help keep your muscles strong and make recovery easier. The more time you spend in bed, the weaker you will get. Sitting up is better for your lungs, circulation, and muscles, which will help with your treatment recovery.

## Useful resources

### General:

#### UHB Cancer Information Centres

Located at Queen Elizabeth, Heartlands, Good Hope and Solihull hospitals, the Patrick rooms provide a range of cancer information leaflets and details of local support groups within the local area.

**Monday–Friday, 9am–5pm**

**CancerInfo@uhb.nhs.uk**

#### Macmillan cancer support

**[www.macmillan.org.uk](http://www.macmillan.org.uk)**

**0808 808 0000**

More information on prehabilitation can be accessed at:

**[patient.info/news-and-features/what-is-prehabilitation](http://patient.info/news-and-features/what-is-prehabilitation)**

### Exercise:

#### Guys and St Thomas: Being Active When You're Living with Cancer

This website has a lot of information, advice, and videos for being active before, during and after cancer treatment for different fitness levels.

**[info.guyscanceracademy.co.uk/being-active-with%20cancer/index.html](http://info.guyscanceracademy.co.uk/being-active-with%20cancer/index.html)**

#### NHS Exercise videos and guides

This website includes a range of exercise, from chair-based exercise to aerobic exercises. There are also links to other exercise programmes available for free via the NHS.

**[www.nhs.uk/live-well/exercise](http://www.nhs.uk/live-well/exercise)**

#### Prehab4Cancer

Run by Greater Manchester's Prehabilitation service, but accessible for everyone, this website includes online exercise programmes for

different abilities.

**[www.prehab4cancer.co.uk/exercise-2](http://www.prehab4cancer.co.uk/exercise-2)**

## **Nutrition**

### **Macmillan Healthy eating and cancer**

**[www.macmillan.org.uk/cancer-information-and-support/impacts-of-cancer/healthy-eating-and-cancer](http://www.macmillan.org.uk/cancer-information-and-support/impacts-of-cancer/healthy-eating-and-cancer)**

### **British Dietetic Association- Cancer diets: Myths and More**

The BDA has produced an evidence-based overview of common cancer fad diets and explores the myths and truths behind them.

**[www.bda.uk.com/resource/cancer-diets-myths-and-more.html](http://www.bda.uk.com/resource/cancer-diets-myths-and-more.html)**

### **Malnutrition pathway protein diet sheet**

Examples of protein sources, with suggested meal ideas for eating a high protein diet.

**[www.malnutritionpathway.co.uk/library/proteinideas.pdf](http://www.malnutritionpathway.co.uk/library/proteinideas.pdf)**

## **Wellbeing:**

### **Macmillan - Cancer and Your Emotions**

**[www.macmillan.org.uk/cancer-information-and-support/treatment/coping-with-treatment/cancer-and-your-emotions](http://www.macmillan.org.uk/cancer-information-and-support/treatment/coping-with-treatment/cancer-and-your-emotions)**

### **Maggie's Cancer Support – Managing Emotions**

**[www.maggies.org/cancer-support/managing-emotions](http://www.maggies.org/cancer-support/managing-emotions)**

### **Macmillan – Managing Fatigue**

**[www.macmillan.org.uk/cancer-information-and-support/impacts-of-cancer/tiredness](http://www.macmillan.org.uk/cancer-information-and-support/impacts-of-cancer/tiredness)**

### **Patient information- managing fatigue**

**[patient.info/news-and-features/living-with-cancer-fatigue](http://patient.info/news-and-features/living-with-cancer-fatigue)**

Goal setting

You may want to use this space to write down some goals and monitor your progress weekly or fortnightly.

Goal	Progress

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- World Health Organization (2020)- WHO guidelines on physical activity and sedentary behaviour.  
Available at: [www.who.int/publications/i/item/9789240015128](http://www.who.int/publications/i/item/9789240015128)

Please use the space below to write down any questions you may have and bring this with you to your next appointment.

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**Nutrition and Dietetics**

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