

# My Get Active Guide

Helping People with Kidney Disease

MOVE towards feeling better and doing more



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## Introduction

Being physically active can be enjoyable and brings many health and wellbeing benefits. This booklet is designed to help you recognise your current physical activity habits and to help you to become more physically active.

The booklet outlines the importance of increasing physical activity in your daily life and offers some useful information on the kinds of activities you could try to include. It also suggests how you can keep track of your progress.

### Disclaimer

Please note that you should obtain approval from your doctor before embarking on any physical activity programme.

By using these materials you agree that Bangor University and the authors will not be responsible for any loss or injury sustained in connection with, or as a result of using this booklet.

Follow the safety advice on **page 13** to ensure you are exercising safely.

## Physical Inactivity – a vicious cycle

People on dialysis often feel tired and washed out. Your friends and family may encourage you to rest more. Unfortunately, the less you do, the less your body will be able to do. Being physically inactive by sitting or lying down for extended periods will result in your muscles getting weaker, your fitness level will decrease, you will become more breathless and even simple daily activities will become harder.

## You can break the cycle!

**Take the first step - continue reading to find out how....**

## Why be more active?

Did you know that people on dialysis who are more active report feeling better – both physically and mentally? Physically active patients say they can do more, get out and about, have more energy, and have a greater sense of control of their lives.

**Being physically active can have so many benefits. These include:**

- 
- ★ Increase your ability to do your daily activities that you need and want to do
  - ★ Improve your energy levels – reduce feelings of tiredness and fatigue
  - ★ Makes your muscles stronger so you can do more
  - ★ Reduce breathlessness
  - ★ Improve your sleep
  - ★ Help control your blood pressure and cholesterol
  - ★ Improve your mood – reduce feelings of stress, anxiety, depression, isolation
  - ★ Improve your blood sugar, controlling and preventing diabetes
  - ★ Reduce your risk of falling
  - ★ Reduce your risk of infections and may even reduce number of hospital admissions
  - ★ Prevents risk of developing other health conditions – diabetes, heart disease, even some cancers

**Physical activity can improve your health, wellbeing and quality of life!**

**"Before I started exercising regularly I was physically and mentally tired and I felt isolated. I was only able to walk a few hundred yards....**

**I did feel that the exercise was hard to begin with, but encouragement from others kept me going.**

**Now, I feel more confident, I don't feel tired all the time, I am able to do more and can walk up and down the town. I don't feel so different to anyone else anymore....**

**It's surprising how fun it can be, it makes treatment time go a lot quicker.**

**My advice to others.... give it a try, you can do it!"**

(Dialysis patient, Wales)

# It's not always that simple!

**We asked people on dialysis what are the most common reasons for physical inactivity**

**You said.....**

## **"Often I feel tired and fatigued"**

- Increasing your level of physical activity can actually help with these feelings, you may even find you have more energy!

## **"I have other health issues"**

- Physical activity is generally safe for everyone, even people who have chronic conditions. If you are worried ask your renal team if increasing your level of physical activity is safe for you. Regular physical activity can often help with other conditions – high blood pressure, high cholesterol, diabetes etc.

## **"I feel shaky and have poor balance"**

- By increasing your level of physical activity you can actually strengthen your muscles and improve your balance. To make sure you don't fall, why not start with some chair exercises (seated or standing), see examples of exercises in this booklet.

## **"I get really bad cramp"**

- Exercise during dialysis has been reported by patients to actually reduce and sometimes even prevent cramp. Maybe regular physical activity will help to reduce your experience of cramp too.

## **"Sometimes I get breathless"**

- If you are worried ask your renal team if it is safe for you to increase your level of activity. Remember to increase your level of physical activity gently over time, start with walking short distances or exercising on the spot. Over time you may find that you can do more or walk further before you start to feel breathless.

## **"I'm worried about injuring myself or causing harm"**

- It is important to build up physical activity slowly over time and follow the guidelines to exercising safely. By doing this, you are less likely to experience any muscle strain or joint pain that can occur due to exercise.

## **"I have a chronic illness and sometimes I feel like giving up"**

- Regular physical activity can actually help to improve your mood. Depending on the activities you choose to do, you may find you are getting out and about more, able to do more things. All of these things can help to improve your mood and reduce feelings of anxiety, depression or even isolation.

## Ask Yourself – How much activity do you do already?



### Think about how much physical activity you do already?

Use the blank diary on page 7 to write down the activities that you do.

### Do those activities make you feel any of the following?

Warm, slightly out of breath, maybe even a little sweaty = **moderate intensity activity**

Very warm and sweaty, you would struggle to have a conversation doing that activity = **strong intensity activity**

### Examples of activities include:

Moderate Intensity Activity	Strong Intensity Activity
Housework: Hoovering, mopping, washing windows, scrubbing	Daily activities: carrying heavy loads
Gardening: mowing lawn, raking, weeding	Gardening: shovelling, heavy work
Walking, marching, stepping	Very brisk walking, hiking, jogging
Cycling (level ground/few hills)	Cycling (faster/uphill)
Swimming	Swimming (hard)
Dancing	
Sporting activities: golf (walking, pulling clubs)	Sporting activities: football, tennis, rugby
Exercise classes (moderate) – aerobics, aqua aerobics, dance, tai chi, chair exercise	Exercise classes (hard)

Yes, even these activities count as physical activity!

**For health benefits - guidelines suggest:**

**150 minutes of moderate intensity activity per week**

Don't worry if you cannot meet these targets straight away. Starting with small increases in your physical activity is a step in the right direction

Alternatively, this can be achieved by doing 75 minutes of strong intensity activity per week or a combination of both moderate and strong activity.

# Are you active enough?

Make your 10 minutes count:  
the activity you do should be at least 10  
minutes at a time!

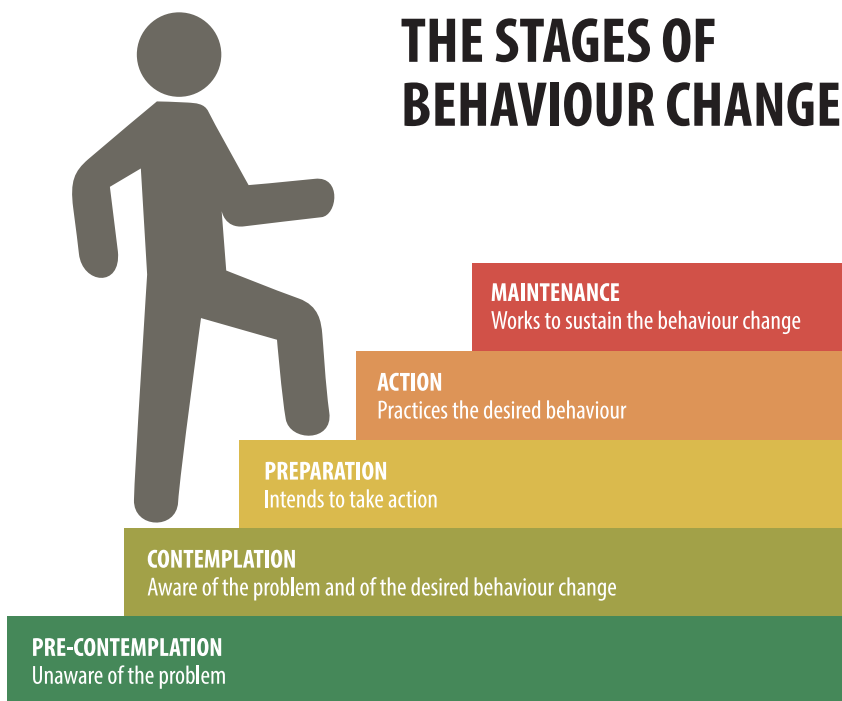
Write down the activities you have done:	How many days did you do these activities in the last week?	How much time did you spend doing these activities?	What was the intensity of this activity for you – moderate or strong?	Total time spent on that activity per week.
Example Person: Brian				
Walking with my friend	3	30 minutes	Moderate	90 minutes
Mowing the lawn	1	30 minutes	Moderate	30 minutes
Total physical activity per week?				120 minutes
Am I active enough?				120 minutes moderate activity per week = NO!
Write down the activities you have done:	How many days did you do these activities in the last week?	How much time did you spend doing these activities?	What was the intensity of this activity for you – moderate or strong?	Total time spent on that activity per week.
Total physical activity per week?				
Am I active enough?				

## Getting Started

### How do I become more physically active?

There are lots of ways in which you can become more physically active. It is important to choose something that you enjoy doing and build physical activity into your daily life.

If you are not currently reaching the recommended target – **DON'T WORRY!**



Reading this booklet and thinking about increasing your physical activity is a step in the right direction!

**BUILD UP ACTIVITY GENTLY OVER TIME**

**Just remember - small changes can make a BIG difference**



## Why not try some of these examples?

You can become more active right now by changing just a few habits

### At Home

- 👍 Avoid sitting or lying down for long periods during the day – move every 30 minutes
- 👍 Walk around when you are on the phone
- 👍 Be more active around the house – hoovering, sweeping, mopping
- 👍 Be more active in the garden – weeding, raking, mowing the lawn
- 👍 Take the dog for a walk
- 👍 Exercise at home (like the exercises given in this booklet)

Be active for  
at least 10 minutes  
at a time!



### Out and About

- 👍 Try using the stairs when you can instead of using the lift
- 👍 Walk to the shops
- 👍 Park further away, avoid trying to get the closest parking space to the shop
- 👍 Get off the bus one stop early
- 👍 Ask your taxi to drop you further from the door

### In Your Leisure Time

- 👍 Go for a walk with friends/family
- 👍 Exercise at home (like the exercises given in this booklet)
- 👍 Take part in organised activities in your local community
  - ✿ walking groups
  - ✿ chair exercise classes
  - ✿ dance classes
  - ✿ aerobics
  - ✿ yoga
  - ✿ tai chi
  - ✿ going to your local gym
  - ✿ playing sport - football, golf, tennis, rugby
  - ✿ swimming or cycling
  - ✿ exercise referral schemes (ask your renal unit)

Why not put more effort into the activities you are currently doing to increase intensity – get that heart rate up, breathe heavier, feel warmer, maybe even sweat a little!

**Remember - All of your activity adds up!**

## Make a change to your lifestyle - Move More!

Making a change to your lifestyle requires some time and support. Here are some strategies that other patients say helped them make a lasting, positive change to their lifestyle:



1. **Set a goal** – this is like a plan that will help you on your journey to becoming more active (see next page to set your own goals).
2. **Change one thing at a time** – you may want to change lots of things but focus on one at a time, this way you are more likely to succeed.
3. **Involve a friend/loved one/another patient** – not only does this make things more sociable but you will also have someone to share the ups and downs with, someone to help you keep motivated and focused on your plan.
4. **Ask for support** – this could be from your family, friends or even the renal unit. People who seek support when trying to change a behaviour are much more likely to achieve their goals!

# What do you want to achieve?

## Set your own goals

### Top Tip:

Your Goal needs to be **SMART**

**S**pecific – precisely what are you going to achieve?

**M**easurable – how will you know if you have achieved it?

**A**ttainable – it must be realistic, within your capabilities

**R**elevant – it must be related to what you want to achieve overall

**T**ime Bound – put a date in your diary to complete the activity

### Overall long-term goal:

*I want to achieve* \_\_\_\_\_

### Weekly short-term goal that will help me achieve my overall goal:

*What:*

*When:*

### Ask yourself:

On a scale of 0-10, how important is it for you to achieve your overall goal?

0 1 2 3 4 5 6 7 8 9 10

0 = Not important at all

10 = Very important

Tell someone  
about your goal, they can  
help you to stay  
motivated/focused

How confident are you that you will achieve your overall goal?

0 1 2 3 4 5 6 7 8 9 10

0 = Not confident at all

10 = Very confident

If confidence is <4,  
why do you think that is? It might  
be a good idea to chat about this  
with family/a friend/member of  
your renal team

**Note:** Use the blank goal sheet on page 45 for future goals

## What are you waiting for?

### What kind of activities should I do?

To improve the health and fitness of your whole body it is important that the activities you decide to do include the following kinds of activities:

#### ★Aerobic activities

#### ★Muscle strengthening activities

#### ★Flexibility activities

**Aerobic activities** – these are activities that work your heart and lungs. When you do aerobic activities your heart rate increases (your heart is working harder to pump blood carrying oxygen to your moving muscles) and your breathing rate increases (your lungs are working harder to breathe in more air) and you feel warmer and may even sweat! This is a normal response to aerobic activity.

Regular aerobic activity will improve your fitness – you will be more able to do the things you love doing, you will be able to walk further for longer, go up and down stairs more easily, have more energy, along with a balanced diet it will help you stay in shape or lose weight, your mood will improve, you will generally feel fitter and better!

Examples of aerobic activities include:

Brisk walking, marching, stepping, cycling, swimming, dancing, exercises classes, housework, gardening, variety of sports

**Ask your renal unit if cycling during dialysis is an option**

**Muscle strengthening activities** – these are activities designed to make your muscles stronger. Stronger muscles will help improve your balance and help you with your daily activities – examples: lifting/carrying shopping or heavy loads, getting on/off a chair, getting in/out of a car, going up and down stairs, being able to do more things for longer, your daily activities will become much easier.

Remember: even small changes in your muscle strength can make big differences to your daily life.

Examples of strengthening activities include:

Strengthening exercises (examples given in this booklet), strength training in the gym, lifting/carrying heavy loads

**Flexibility activities** - these are activities that help you maintain or improve the range of movement in your muscles and joints. Better flexibility will help you with your daily activities that require bending, reaching, stretching. Examples of activities include washing and dressing yourself, getting in/out of a car, reaching into cupboards.

Examples of flexibility exercises include:

Stretching exercises (examples given in this booklet), Tai Chi, Yoga

## Always Exercise Safely

- ① Always warm up before exercising, see warm up guidelines on page 14.
- ① Always cool down after you exercise, see cool down guidelines on page 30.
- ① Wear comfortable clothing and appropriate shoes (good support and padding).
- ① If you have diabetes, make sure your blood glucose is within the desired range (5.5 – 16.7 mmol/L).
- ① Make sure to adhere to the fluid and dietary restrictions set by your renal team.
- ① If you have a fistula or graft, exercising your arm is recommended. However, do not exercise it during dialysis (when it is needled) and ensure bleeding has stopped before exercising between dialysis sessions. Avoid impact on the access site itself.
- ① If you experience any of the symptoms below, stop immediately and contact your doctor or nurse.



- You have chest pain/angina
- You feel dizzy or light headed
- You feel nauseous
- You feel clammy/cold
- You cannot catch your breath
- You feel pain
- You have an infection or fever and you have achy muscles
- You have excessive fatigue

## Warming Up

You should always start your exercise session with at least a **5 minute, light intensity warm up**. The aim of the warm up is to get your body ready for exercise and to get your circulation moving to supply blood to your working muscles. Using the Rating of Perceived Exertion Scale (see page 17) choose a light intensity activity that you would rate 6-12 (very weak - light).

A warm up could simply be a light intensity version of the exercises you are planning to do for your main aerobic or muscle strengthening activities or you can warm up by doing some of the following activities:

## Example warm up activities

- ★ **Marching on the spot** (this can be seated or standing).
- ★ **Toe taps to the side**
  - ☆ Standing/sitting, put one leg out to the side and tap your toe, bring it back to the centre and repeat on the other side.
- ★ **Heel digs**
  - ☆ Standing/sitting, move one foot in front of the other and tap your heel on the ground in front of you, bring your foot back to the starting position and repeat on the other side.
- ★ **Knee raises**
  - ☆ Standing/sitting (if standing hold on to a chair for support), raise one knee to hip level and slowly return to the starting position, repeat on the other side.



## Aerobic Activities

Do you ever:

- Get out of breath going up the stairs?
- Avoid walking distance because it is just too difficult?
- Have you stopped activities around the house like hoovering/gardening or stopped doing the activities you loved to do – walking with friends, swimming...?
- Doing moderate aerobic activity regularly will make daily tasks like these much easier for you and you may even find that you can start to do the activities that you once loved to do!



### How often, how much?

To achieve and maintain health and fitness benefits it is recommended that you complete **moderate intensity aerobic activity on at least 5 days per week** or **strong intensity aerobic activity on at least 3 days per week** (see table below).

Intensity of Activity	Days per week	Time per Day	Total Time per Week	RPE (0-100)	Talk Test
Moderate	5 or more	30-60 minutes	150 minutes	23-30	Be able to talk, not sing
Strong	3 or more	20-60 minutes	75 minutes	42-75	Not be able to say more than a few words

**An example would be 30 minutes of aerobic activity 5 days per week.**

**Remember: this recommended amount per day can be accumulated in one continuous activity or broken down into several 10 minute bouts throughout the day.**

## How to gauge intensity of activity?

You can gauge the intensity of the activity you are doing using several simple methods

### Talk Test

This is a simple way to judge the intensity of the activity you are doing.

**Moderate intensity activity** - you should be able to talk but not sing whilst doing moderate intensity activities.

**Strong intensity activity** – you will not be able to say more than a few words without getting out of breath if the intensity of the activity you are doing is strong.

### Borg CR100 Rating of Perceived Exertion (RPE) Scale

Use this scale to gauge the intensity of the activity you are doing by reporting how strong your perception or feeling is.

Try to focus on your overall feeling of exertion; this should include your heart rate, breathing, sweating and muscle fatigue.

Look at the verbal descriptors and then choose the number in the vicinity of the word that best describes what you are experiencing.

“Maximal” (100) is an important level of intensity. It is the most intense perception you have ever had.

“Nothing at all” (0) means that you do not feel anything at all.

For example - if you feel the activity is moderate, then you may give an RPE rating of 25.

How you rate the intensity of an activity will depend on your current level of fitness and may be very different to what someone else would rate it.





# Borg CR100 Rating of Perceived Exertion (RPE) Scale



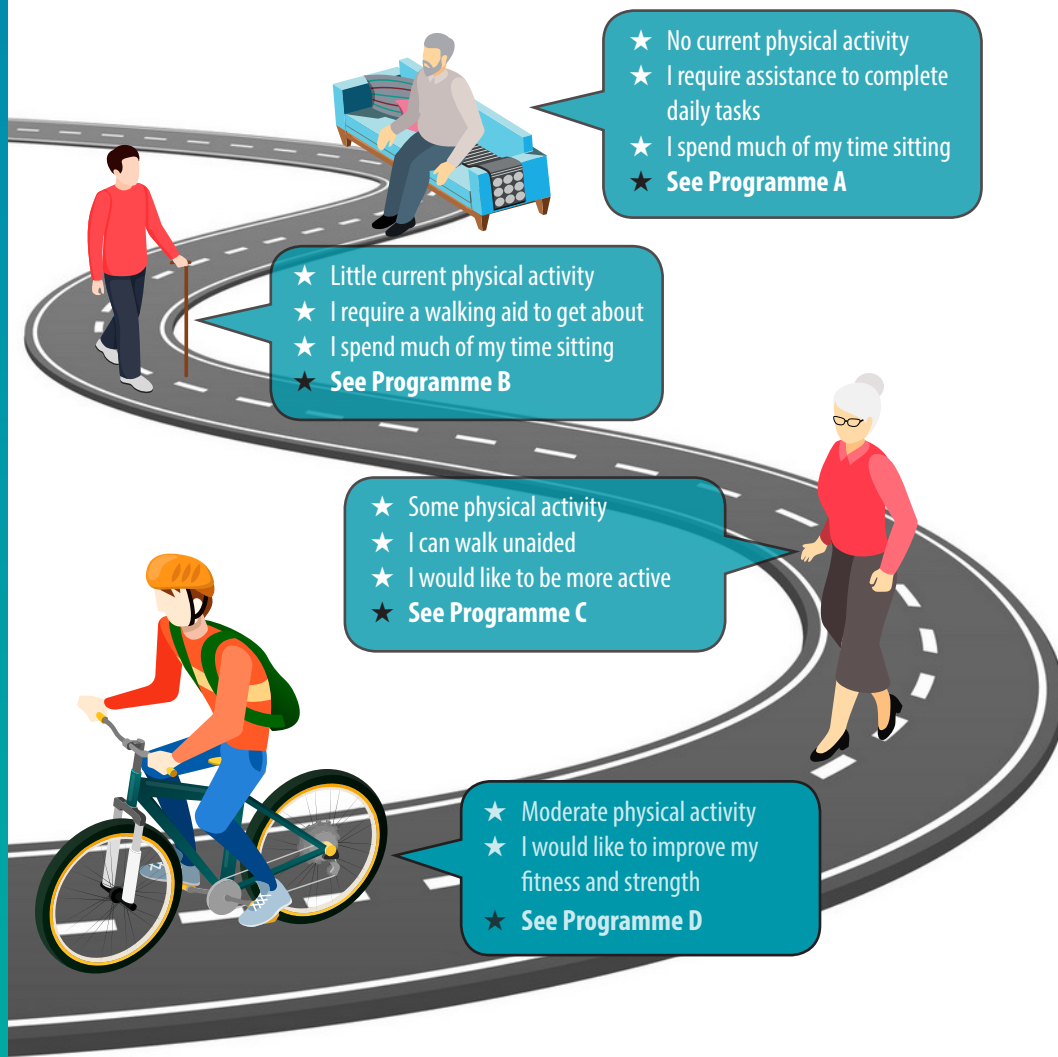
What are you waiting for?

## Road to Activity

Below is an example of progression of physical activities based on your current functional ability

- ★ Using the road map below, identify where you are and follow the suggested exercise programmes.
- ★ Increasing your level of physical activity over time will help you to move along this road.

**Move towards being active and doing more!**



## Suggested Programme A

### Aerobic Activities:

- ★ Start with some seated aerobic exercises
  - ✦ marching, toe taps, heel digs
  - ✦ over time increase time spent on doing these activities
- ★ Try to do these activities 3-5 days per week



### Strengthening Activities (see page 21):

- ★ Choose the exercises that you can do seated
- ★ Complete as many of these activities as you can
- ★ Start without any weight and try to do 10 repetitions of each exercise
- ★ Over time build up to 2 to 4 sets of 10-15 repetitions
- ★ Aim: to complete these activities on 2 days per week

### Flexibility Activities (see page 30):

- ★ Choose the exercises that you can do seated
- ★ Complete as many of these activities as you can
- ★ Try to do these activities 2-3 days per week

## Suggested Programme B

### Aerobic Activities:

- ★ Seated aerobic exercises
  - ✦ marching, toe taps, heel digs
- ★ Increase time spent walking (around your house), using your walking aid
- ★ Build up to 10 minutes of aerobic activity per day
- ★ Try to do these activities 3-5 days per week

### Strengthening Activities (see page 21):

- ★ Choose the exercises that you can do seated
- ★ Start without any weight and try to do 10 repetitions of each exercise
- ★ Over time build up to 2 to 4 sets of 10-15 repetitions
- ★ Aim: to complete these activities on 2 days per week

### Flexibility Activities (see page 30):

- ★ Choose the exercises that you can do seated
- ★ Complete as many of these activities as you can
- ★ Try to do these activities 2-3 days per week



## Suggested Programme C

### Aerobic Activities:

- ★ Build aerobic activities into your daily life (see suggestions on page 9)
- ★ Choose aerobic activities that you enjoy doing
- ★ Try to complete 30 mins of aerobic activity (moderate intensity) on 5 or more days per week (target = 150 minutes moderate aerobic activity per week)
- ★ Your 30 minutes of activity per day can be made up of 10 minute bouts
- ★ Try to do these activities 5 or more days per week

### Strengthening Activities (see page 21):

- ★ Choose 8-10 muscle strengthening exercises
- ★ Follow the muscle strengthening progression guide on page 21
- ★ Over time build up to 2 to 4 sets of 10-15 repetitions, progress weights as required
- ★ Aim: to complete these activities on 2 or more days per week

### Flexibility Activities (see page 30):

- ★ Complete all flexibility activities
- ★ Try to do these activities 2-3 days or more per week



## Suggested Programme D

### Aerobic Activities:

- ★ Build aerobic activities into your daily life (see suggestions on page 9)
- ★ Choose aerobic activities that you enjoy doing
- ★ Try to incorporate strong aerobic activity, guidelines suggest that you should aim to complete at least 75 minutes of strong aerobic activity on 3 or more days per week or a combination of both moderate and strong aerobic activity
- ★ Your 30 minutes of activity per day can be made up of 10 minute bouts
- ★ Try to do these activities 3-5 days per week (if combination of moderate and strong intensity)

### Strengthening Activities (see page 21):

- ★ Choose 8-10 muscle strengthening exercises
- ★ Follow the muscle strengthening progression guide on page 21
- ★ Over time build up to 2 to 4 sets of 10-15 repetitions, progress weights as required
- ★ Aim: to complete these activities on 2 or more days per week

### Flexibility Activities (see page 30):

- ★ Complete all flexibility activities
- ★ Try to do these activities 2-3 days or more per week



# Muscle Strengthening Activities

## How often?

It is recommended that you should do muscle strengthening activities on **two or more days per week**.

Ideally you should complete 8-10 different exercises involving large muscle groups, but avoid the same exercises on consecutive days.

## How many, what weight?

This depends on your current ability. If you are new to muscle strengthening activities or have not done any in a while then the general rule of thumb is to start light and gradually build up. Starting with a weight that is too heavy could cause injuries.

Use the timeline below to gauge how many of each exercise you should do and when to progress.

## How many, what weight timeline:

Reps = repetitions (the number of times you complete the movement)

- No additional weight
- Try to complete 10-15 reps
- If you can't do 10 – do as many as you can
- Build up to complete 15 reps over time

1

- Try adding some \*weight
- Complete 10-15 reps
- Rest: 2-3 minutes
- Repeat 10-15 reps

\* Choose a weight that allows you to complete the exercise with good technique, but is still challenging

3

- Increase the weight
- Complete 10-15 reps
- Rest between sets
- Over time: progress 2-4 sets

5

Set = the number of times you complete a 10-15 rep block

Example:

2 sets = 10-15 repetitions  
2-3 minute rest  
10-15 repetitions

2

- No additional weight
- Complete 10-15 reps
- Rest: 2-3 minutes
- Repeat 10-15 reps to complete a second set

4

- Using weight
- Complete 10-15 reps
- Rest: 2-3 minutes
- Try to complete 3 sets
- Over time - progress to 4 sets

## To complete muscle strengthening exercises safely:

- ✓ Your movements should be smooth and steady – to avoid injury.
- ✓ Always breathe out as you lift, and breathe in as you relax.
- ✓ Avoid holding your breath. With control breathe in through your nose and out through your mouth.
- ✓ If an activity is too difficult try doing one arm at a time and build up to using both arms.
- ✓ Always rest for 2-3 minutes between sets. For example do 10-15 repetitions, rest for 2-3 minutes, repeat 10-15 repetitions.
- ✓ Progression from one stage to the next will be different for everyone, if you can complete 10-15 repetitions, 4 sets easily, then it is time to add or increase the weight! If you are struggling to complete 10-15 repetitions using a weight, then reduce the weight and build up slowly.
- ✓ **STOP** exercise immediately if you have chest pain or feel sick, dizzy or faint and inform your doctor or nurse.
- ✓ Listen to your body – exhaustion, painful muscles and joints are an indication you are over doing it.
- ✓ The best approach is to start off slowly and build up gradually – you are more likely to succeed!



## What can I use as weights?

The great thing about the exercises in this booklet is that they can be done at home and at no extra or very little cost!

### To add weight you could use any of the following:

- Fill a bottle with water or sand
- A tin of tomatoes (or anything in a tin)
- A bag of sugar
- Dumbbells – available from 0.5kg upwards
- Ankle/wrist weights – available from 0.5 kg upwards



### Where can I buy dumbbells or ankle weights?

Dumbbells and ankle weights can be bought from your local sports shop and several online retailers.

#### Examples include:

#### NRS Healthcare

##### Dumbbells:

Visit the website: <https://www.nrshealthcare.co.uk/health-aids-personal-care/gentle-exercises/exercise-balance/vinyl-dumbbell>

Variety of weights available – 0.5-2.5kg, cost from £4.74 – £10.74. Sets of weights also available.

##### Ankle/wrist weights:

Visit the website: <https://www.nrshealthcare.co.uk/health-aids-personal-care/gentle-exercises/exercise-balance/strap-on-ankle-wrist-weights-pair>

Variety of weights available – 0.5-2kg, cost from £19.99.

#### Argos

##### Dumbbells:

Visit the website: [argos.co.uk/browse/sports-and-leisure/fitness-equipment/weight-training/dumbbells/c:30630/type:dumbbells/](https://argos.co.uk/browse/sports-and-leisure/fitness-equipment/weight-training/dumbbells/c:30630/type:dumbbells/)

Variety of weights available – 0.5-6kg, cost from £4.99 - £20.00. Heavier weights and sets of weights also available.

##### Ankle/wrist weights:

Visit the website: [argos.co.uk/search/ankle-weights/](https://argos.co.uk/search/ankle-weights/)

Variety of weights available – 0.5-1.25kg, cost from £7.99.

## What Muscle Strengthening Activities?

The following activities are just some of the activities you can do to increase your muscle strength.

For more examples and exercise videos please visit our website: [move.bangor.ac.uk](http://move.bangor.ac.uk)

Ever have trouble getting in and out of a car, going up and down stairs or lifting or carrying the shopping?

Doing muscle strengthening exercises regularly will make daily tasks like these much easier for you and you may even find that you can start to do tasks that you were not previously able to do!

### Upper Body Activities (these can be done seated or standing)

- ☒ Bicep curl
- ☒ Lateral arm raise (to the side)
- ☒ Shoulder press
- ☒ Tricep curl



### Lower Body Activities

- ☒ Chair sit to stand
- ☒ Squat
- ☒ Sideways leg lift
- ☒ Leg extension (to the back)



### Seated Activities:

- ☒ Seated knee raise
- ☒ Seated knee extension





## Upper Body Strengthening Exercises

### Bicep curl

- Start with your arms by your side, palms facing forward, breathe in
- Breathe out and slowly bend your elbows and raise your hands until they meet your shoulders
- Keep your elbows at your sides
- Breathe in and slowly return to the starting position
- Repeat 10-15 times

#### Progression:

2-4 sets

Increase weight over time

#### Aim:

Increase strength of your bicep (muscle at the front of your upper arm). This will help you to lift and carry heavy items and complete daily activities that require strength.



### Lateral arm raise (to the side)

- Arms by your side, breathe in
- Breathe out slowly and lift your arms to the side until your arm is parallel to the floor
- Elbows should be slightly bent
- Breathe in and slowly return to the starting position
- Repeat 10-15 times

**Note:** It may be easier to do one arm at a time

#### Progression:

2-4 sets

Increase weight over time

#### Aim:

Increase strength of shoulders. This will help you to lift, carry and move heavy items. May even help to reduce injury whilst doing these tasks.



## Shoulder press

- Raise your arms so that your elbows are in line with your shoulders, breathe in
- Breathe out slowly and raise your arms above your head, elbows slightly bent
- Breathe in slowly and return your arms to the starting position
- Repeat 10-15 times

### Progression:

2-4 sets

Increase weight over time



### Aim:

Increase strength of shoulders, chest and upper back. This will help with daily activities that require lifting, carrying heavy items. It also helps to engage your core muscles.

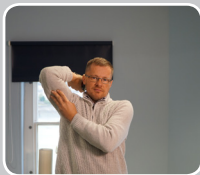
## Tricep curl

- Hold one arm above your head, reaching for the ceiling
- Use the other arm to support your raised arm
- Slowly breathe in and bend your elbow to lower your hand behind your head
- Breathe out and slowly raise your hand to the starting position
- Repeat 10-15 times
- Switch arms

### Progression:

2-4 sets

Increase weight over time



### Aim:

Increase strength of triceps (muscle at the back of your upper arm). Strong triceps improve shoulder stability and helps with everyday activities that require pushing and pulling movements.

## Lower Body Strengthening Exercises

**IMPORTANT:**  
Use a sturdy chair

### Chair sit to stand

- Sit tall on the chair\* with your feet hip width apart
- # Fold your arms across your chest, breathe in
- Lean forwards, breathe out and slowly rise to a standing position
- Breathe in and slowly lower yourself back to a seated position
- Repeat 10-15 times

\* Place chair against a wall for safety

# Use the chair arms if needed

#### Progression:

2-4 sets

Could add weight over time (holding a weight)



#### Aim:

Improves lower body strength, this will help you with many daily activities e.g. getting in/out of a car, on/off a chair or toilet

### Squat

- Using the back of a chair for support
- Stand with your feet hip width apart
- Breathe in and slowly bend your knees
- Keep your back straight, head and chest up
- Push your bottom out, making sure your knees are in line with your toes
- Breathe out and slowly return to a standing position
- Repeat 10-15 times

#### Progression:

2-4 sets

Increase weight over time



#### Aim:

Improves lower body strength by working your legs, bottom and core. Lower body strength is essential to complete many daily activities.

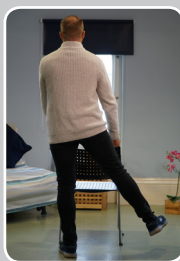
## Sideways leg lift

- Using the back of a chair for support
- Stand with your feet together
- Keep your back straight and look forward, breathe in
- Breathe out and slowly raise your right leg to the side, keeping your hips facing forward
- Breathe in and slowly lower your leg to the starting position
- Repeat 10-15 times
- Repeat on the other leg

### Progression:

2-4 sets

Could add ankle weight over time



### Aim:

Improves strength of your thighs, bottom and hips. Improves your strength and balance to help you with your daily activities.

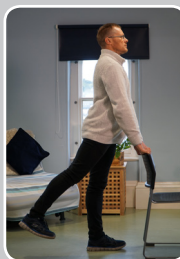
## Leg extension (to the back)

- Using the back of a chair for support
- Stand with your feet together
- Keep your back straight and look forward, breathe in
- Breathe out and slowly raise your leg to the back
- Try not to lean forwards, slightly bend the leg you are standing on
- Hold position for a few seconds
- Breathe in and slowly lower your leg (try keeping your foot off the floor)
- Repeat 10-15 times
- Repeat on the other leg

### Progression:

2-4 sets

Could add ankle weight over time



### Aim:

Improves strength of your lower back, thighs and bottom. Improves your core strength and your ability to do your daily activities.

## Seated Options:

### Seated knee raise

- Sit on a chair so that your feet are firmly on the ground
- Hold on to the sides of the chair for support, breathe in
- Breathe out and slowly raise your knee
- Hold the position for a few seconds
- Breathe in and slowly lower your leg (try keeping your foot off the floor)
- Repeat 10-15 times
- Repeat on the other leg

#### Progression:

2-4 sets

Could add ankle weight over time



#### Aim:

Improves strength of your hips and engages your core muscles essential for walking, standing and running.

### Seated knee extension

- Sit on a chair with your back supported
- Hold on to the sides of the chair for added support, breathe in
- Breathe out and slowly straighten your right leg, don't lock your knee
- Point your toes towards the ceiling and hold for a few seconds
- Breathe in and slowly lower your leg
- Repeat 10-15 times
- Repeat on the other leg

#### Progression:

2-4 sets

Could add ankle weight over time



#### Aim:

Improves strength of your knee, thigh and engages your core muscles.

## Cool Down

Always finish your exercise session with at least a 5 minute cool down. Just like the warm up, the cool down should be of light intensity (RPE 6-12). A cool down can be a light intensity version of the exercises you have just completed or you can repeat the suggested warm up activities on page 14.

## Flexibility Activities

It is important to include flexibility activities or stretching in your weekly physical activity plan. By doing flexibility activities regularly you will be able to move much more freely. This will mean you will be better able to do your daily activities like washing and dressing yourself, getting in and out of a car, reaching for something, picking up something off the floor, putting your socks on, tying your shoe laces!



### How often and how many?

Based on physical activity guidelines for health, it is recommended that you should do flexibility activities on **at least two to three days per week**. However, daily flexibility activities are most effective.

It is recommended that you should hold each stretch for 10-30 seconds (older adults may benefit from holding a stretch for 30-60 seconds).

Flexibility exercises should be repeated 2-4 times to reach a total target of 60 seconds stretching per flexibility exercise. This can be broken down into four 15 second stretches or two 30 second stretches per exercise, depending on your own ability and preference.

Ever have trouble putting your socks on or bending down to pick up something that you have dropped on the floor?

Doing flexibility exercises regularly will make daily tasks like these much easier for you!



## To complete flexibility exercises safely:

- Complete your flexibility activities after your aerobic and muscle strengthening activities. Stretching your muscles before they are warmed up may cause injury.
- When completing your flexibility activities you should stretch to the point of tightness or slight discomfort.
- Breathe normally when completing flexibility activities, avoid holding your breath.
- The movement should be smooth and controlled, avoid 'jerky' movements and locking your joints.
- To progress – as your flexibility improves try reaching further. Again, you should feel a tightness/mild discomfort but not pain.



## What Flexibility Activities?

The following activities are just some of the activities you can do to increase your flexibility.

For more examples and exercise videos please visit our website:  
[move.bangor.ac.uk](http://move.bangor.ac.uk)

### Upper body activities

- ☒ Neck rotations
- ☒ Upper back stretch
- ☒ Upper body twist



### Lower body activities

- ☒ Calf stretch
- ☒ Hamstring stretch (back of thigh)
- ☒ Quad stretch (front of thigh)





## Neck rotations

- This exercise can be completed seated or standing
- Sit or stand upright and look straight ahead
- Slowly turn your head to one side until you feel a slight tightness
- Hold this position for 10-30/30-60 seconds
- Then gently turn your head to the other side
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching



## Upper back stretch

- This exercise can be completed seated or standing
- Relax your shoulders and keep your upper body still
- Reach forward and hold your arms out in front of you at shoulder height
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching

### Progression:

Try linking your fingers together as you progress





## Upper body twist

- This exercise can be completed seated or standing
- Sit or stand upright and look straight ahead
- Cross your arms and place your hands on the opposite shoulder
- Slowly turn your upper body to one side (your hips should remain facing forward)
- Hold this position for 10-30/30-60 seconds
- Repeat on the other side
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching



## Calf stretch

- Using a chair for support
- Stand behind the chair with your feet hip width apart
- Bend one knee and move your other leg back until you feel a tightness in the back of your lower leg (calf muscle), push your heel into the floor
- Both feet should remain facing forward, hold the stretch for 10-30/30-60 seconds
- Repeat on the other side
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching



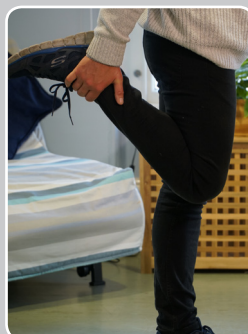
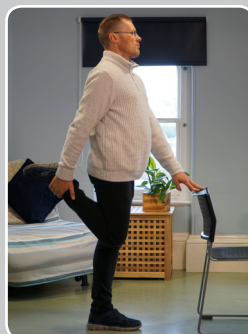
## Hamstring stretch (back of thigh)

- This exercise can be completed seated or standing
- Bend your left knee and place your right leg straight out in front of you
- Place your hands on your left thigh for support
- Keeping your back straight, point your toes to the floor
- Hold the stretch for 10-30/30-60 seconds
- Repeat on the other side
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching



## Quad stretch (front of thigh)

- Using a chair for support
- Stand behind the chair with your feet hip width apart
- Bend your right knee and lift your leg behind you towards your bottom
- Grab hold of your right foot with your right hand
- There should be a slight bend in your left knee
- Gently pull until you feel a tightness in the front of your right leg
- Hold the stretch for 10-30/30-60 seconds
- Repeat on the other side
- Hold this position for 10-30/30-60 seconds
- Repeat until you have completed a total of 60 seconds stretching



## Exercise during Dialysis

Why not complete some muscle strengthening exercises during dialysis?

There are several upper body and lower body muscle strengthening exercises that you can complete during dialysis.

For exercise videos visit our website: [move.bangor.ac.uk](http://move.bangor.ac.uk)

### What some patients have said about exercise during dialysis

"It's a great use of time"

"I like doing the exercises because it makes the time go quicker"

### How many, what weight?

Follow the same instructions given for completing muscle strengthening exercises at home on page 21

### Key points to remember:

- ✓ Always warm up (approx. 5 minutes) before completing muscle strengthening activities. This can simply be the exercises you plan to do at a lower intensity with no added weight.
- ✓ You should aim to complete your exercises within the first 2 hours of dialysis.
- ✓ Your movements should be smooth and steady – to avoid injury.
- ✓ Always breathe out as you lift, and breathe in as you relax.
- ✓ Avoid holding your breath. With control breathe in through your nose and out through your mouth.
- ✓ If you have a fistula, only exercise the non-fistula arm during dialysis. Don't forget to exercise your fistula arm at home. This is to ensure you avoid muscle strength imbalances.
- ✓ Always rest for 2-3 minutes between sets. For example do 10-15 repetitions, rest for 2-3 minutes, repeat 10-15 repetitions.
- ✓ Progression from one stage to the next will be different for everyone, if you can complete 10-15 repetitions, 4 sets easily, then it is time to add or increase the weight! If you are struggling to complete 10-15 repetitions using a weight, then reduce the weight and build up slowly.
- ✓ **STOP** exercise immediately if you have chest pain or feel sick, dizzy or faint and inform your doctor or nurse.
- ✓ Listen to your body – exhaustion, painful muscles and joints are an indication you are over doing it.
- ✓ The best approach is to start off slowly and build up gradually – you are more likely to succeed!

## Upper Body Strengthening Exercises

If you have a fistula, only exercise the non-fistula arm during dialysis. Don't forget to complete the upper body exercises on your fistula arm at home (once your needling site has stopped bleeding).

### Bicep curl

- Start with your elbow by your side, palm facing towards ceiling, breathe in
- Breathe out and slowly bend your elbow and raise your hand until it meets your shoulder
- Keep your elbow at your side
- Breathe in and slowly return to the starting position
- Repeat 10-15 times

**Note:** if you do not have a fistula, repeat on the other arm

#### Progression Key:

2-4 sets

Increase weight over time



### Shoulder press

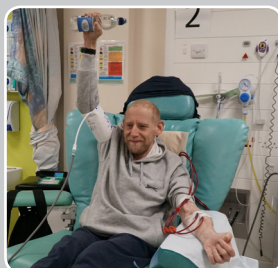
- Raise your arm so that your elbow is in line with your shoulder, breathe in
- Breathe out slowly and raise your arm above your head, elbow slightly bent
- Breathe in slowly and return your arm to the starting position
- Repeat 10-15 times

**Note:** if you do not have a fistula, repeat on the other arm

#### Progression Key:

2-4 sets

Increase weight over time



## Front arm raise

- With your arm in front of you, breathe in
- Breathe out whilst you raise your arm in front of you to shoulder height
- Breathe in and lower your arm to the starting position
- Repeat 10-15 times

**Note:** if you do not have a fistula, repeat on the other arm

### Progression Key:

2-4 sets

Increase weight over time



## Lateral arm raise (to the side)

- With your arm by your side, breathe in
- Breathe out slowly and lift your arm to the side until your arm is parallel to the floor
- Elbow should be slightly bent
- Breathe in and slowly return to the starting position
- Repeat 10-15 times

**Note:** if you do not have a fistula, repeat on the other arm

### Progression Key:

2-4 sets

Increase weight over time



## Lower Body Strengthening Exercises

### Straight leg raise

- Sit on the dialysis chair or bed with your back supported
- Straighten one leg, breathe in
- Breathe out and slowly lift your leg (approx. 30-40°)
- Breathe in and slowly lower your leg to return to the starting position
- Note: you can bend your other leg for support if needed
- Repeat 10-15 times
- Repeat on the other leg

#### Progression Key:

2-4 sets

Add weight over time



#### Note:

if you cannot raise your leg to 30°, lift your leg as high as you can and progress to 30° over time

### Outer thigh lift

- Sit on the dialysis chair or bed with your back supported
- Straighten one leg, breathe in
- Breathe out and slowly move one leg sideways away from your body
- Breathe in and slowly return your leg to the starting position
- Note: you can bend your other leg for support if needed
- Repeat 10-15 times
- Repeat on the other leg

#### Progression Key:

2-4 sets

Add weight over time





## Front thigh lift

- Sit on the dialysis chair or bed with your back supported
- Place a rolled up towel/cushion/round bolster under one knee, breathe in
- Breathe out and slowly lift your leg (approx. 30-40°)
- Breathe in and slowly return your leg to the starting position
- Note: you can bend your other leg for support if needed
- Repeat 10-15 times
- Repeat on the other leg

### Progression Key:

2-4 sets

Add weight over time



### Note:

if you cannot raise your leg to 30°, lift your leg as high as you can and progress to 30° over time

## Knee extension

- Sit on the side of your chair or bed with your feet flat on the floor
- Hold on to the side of the chair for added support (with your non-fistula arm), breathe in
- Breathe out and slowly straighten one leg, don't lock your knee
- Point your toes towards the ceiling and hold for a few seconds
- Breathe in and slowly lower your leg to the starting position
- Repeat 10-15 times
- Repeat on the other leg

### Progression Key:

2-4 sets

Add weight over time



## Heel raises

- Sit on the side of your chair or bed with your feet flat on the floor
- Hold on to the side of the chair for added support (with your non-fistula arm)
- Slowly raise your heels off the ground, hold for a few seconds
- Slowly lower your heels to the ground
- Repeat 10-15 times

Note: could do one leg at a time if needed

### Progression Key:

2-4 sets

Add weight over time

(make sure to place weight above knee and not around ankle)





# Keep track of your progress

## My Aerobic Exercise Diary

Date:

Week:

Moderate intensity activities – make you feel warm, slightly out of breath, maybe even a little sweaty  
Strong intensity activities – make you feel very warm and sweaty, you would struggle to have a conversation doing that activity

Day	Activity	Time (minutes)	Total Time (minutes)
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

My Weekly Total =

Remember your weekly target:

- ❖ 150 minutes of moderate intensity activity per week OR
- ❖ 75 minutes of strong intensity activity per week OR
- ❖ a combination of both (1 minute of strong activity equates to 2 minutes of moderate activity)

# My Strength Exercise Diary

NOTE: Record how many repetitions and sets you completed and weight used

Date:

Week:

		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Upper body	Bicep curl							
	Lateral arm raise							
	Shoulder press							
	Tricep curl							
	Front arm raise							
Lower body	Chair sit to stand							
	Squat							
	Sideways leg lift							
	Leg extension							
	Heel raises							
	Knee raise							
	<b>Seated Options:</b>							
	Knee extension							
	Knee raise							
	Heel raises							

# My Flexibility Exercise Diary

NOTE: Record time (seconds) position held and number of repetitions completed.

Date:

Week:

		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Upper body	Neck rotations							
	Upper back stretch							
	Upper body twist							
Lower body	Calf stretch							
	Quad stretch							
	Hamstring stretch							
	Seated: Calf stretch (toe flexing)							

Keep track of your progress

# My Dialysis Exercise Diary

NOTE: Record how many repetitions and sets you completed and weight used

Date:

Week:

		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Upper body	Bicep curl							
	Shoulder press							
	Front arm raise							
	Lateral arm raise							
Lower body	Straight leg raise							
	Outer thigh lift							
	Front thigh lift							
	Knee extension							
	Heel raises							

Remember - if you have a fistula don't forget to complete the upper body exercises on your fistula arm at home (once your needling site has stopped bleeding).

Note: if you complete cycling during dialysis also use My Aerobic Exercise Diary to make a record of exercise duration and intensity.

# My Goals

## Top Tip:

Your Goal needs to be **SMART**

**S**pecific – precisely what are you going to achieve?

**M**easurable – how will you know if you have achieved it?

**A**ttainable – it must be realistic, within your capabilities

**R**elevant – it must be related to what you want to achieve overall

**T**ime Bound – put a date in your diary to complete the activity

### Overall long-term goal:

*I want to achieve* \_\_\_\_\_  
\_\_\_\_\_

### Weekly short-term goal that will help me achieve my overall goal:

*What:*

*When:*

### Ask yourself:

On a scale of 0-10, how important is it for you to achieve your overall goal?

0      1      2      3      4      5      6      7      8      9      10  
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

0 = Not important at all

10 = Very important

How confident are you that you will achieve your overall goal?

0      1      2      3      4      5      6      7      8      9      10  
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

0 = Not confident at all

10 = Very confident

## My Activity Options:

### What's happening in my local community?

#### 1. **Ask your renal team if exercise during dialysis is possible in your renal unit.**

Cycling and/muscle strengthening exercises during dialysis may be an option in some renal units.

#### 2. **Find out what is available in your local community.**

Search Google to see if any of the following are available in your local community:

*(Simply type in the activity you are interested in and your local area and see what comes up!)*

- ★ Walking groups
  - ☆ England/Scotland/Wales - [ramblers.org.uk](http://ramblers.org.uk)
  - ☆ England - [walkingforhealth.org.uk](http://walkingforhealth.org.uk)
- ★ Mens Shed – visit [menssheds.org.uk](http://menssheds.org.uk) for more information
- ★ Gardening groups
- ★ Local leisure centre/gym
- ★ Local swimming pool – swimming/aqua aerobics
- ★ Local exercises classes - chair exercises, dance, aerobics, Tai Chi etc.
- ★ Community Navigator – find out if there is one in your area, they will help you to find activities in your local area.

#### 3. **Ask your GP or your renal unit about exercise referral schemes**

- Wales – National Exercise Referral Scheme (NERS) is available to patients referred by their GP or medical team. NERS offers gym based activities and a wide variety of class based activities (some examples include walking, swimming, gentle exercise classes, aerobics, strength and balance, pilates).
- UK – Ask your GP or medical team if GP Exercise Referral Schemes are available to you.

# My activity options

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## Acknowledgements

This publication was produced as part of an impact project funded by the Bangor University ESRC Impact Acceleration Account (awarded to Dr. Jennifer Cooney, Dr. Jamie Macdonald, and Professor Jane Noyes of Bangor University and the Wales Kidney Research Unit).

We would like to thank the renal units (patients and staff) who very kindly took part in the focus groups. Thank you for your time and excellent discussions, your input has been extremely valuable.

A very big thank you goes to the stars of this publication, the participants who very kindly gave up their time to feature in our exercise pictures and videos. Without your contribution this publication would not have been possible.

Finally, thank you to the following companies who have helped us to produce this publication:

Excellent Design, Beaumaris for the graphic design of this publication.

Ben Roberts - benro.tv for the photography, filming and editing of the exercise pictures and videos.

