

# Joint Pain Programme

This is your booklet for  
the Joint Pain Programme



# Welcome: what is the Joint Pain Programme?

## Programme aims



Enable you to manage your pain, get back to doing things you love and used to do without pain, fear or anxiety.



Help you find exercises that you enjoy, teach you to workout safely and ultimately reduce or eliminate pain.



Build a support community where you feel safe and comfortable, make friends and share experiences.

Supported	12 weeks	Two Personal Trainer led education and exercise sessions a week
Unsupported	12 weeks	Trial and application of learning with guidance from your Personal Trainer or Joint Pain advisor
Independent	6 months	Self-management and maintenance

# Joint Pain Programme structure

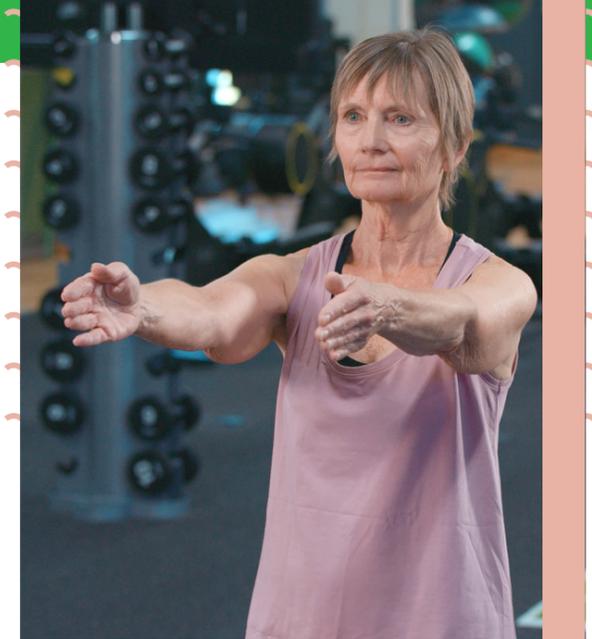
## What to expect on the Joint Pain Programme journey

### First session of the week

1. Introduction and goal setting
2. Why is exercise important?
3. Emotional wellbeing
4. Perceptions of pain
5. Healthy eating
6. Goal checking
7. Exercise and programming
8. Pain management
9. Weight management
10. Sleep, rest and recovery
11. Planning for success
12. Next steps

### Second session of the week

- ♦ What is Joint Pain?
- ♦ Activity and exercise diary
- ♦ **Step 1:** NHS emotional wellbeing advice
- ♦ **Step 2:** ask yourself questions to thrive
- ♦ **Step 3:** acts of kindness to others
- ♦ **Step 4:** are you living your values?
- ♦ **Step 5:** the rule of opposites
- ♦ **Step 6:** be happy that you are happy
- ♦ **Step 7:** accept your mood
- ♦ **Step 8:** sleeping better
- ♦ **Step 9:** worry less
- ♦ **Step 10:** the rule of the purple cat



# Exercise framework

The first session	The second session	Examples
<p><b>The first exercise session will be circuit based training.</b></p> <p>Improving fitness, strength and joint mobility.</p> <p>Sessions focusing on your physical function, making movement easier and more stable.</p> <p>Supported in a safe environment providing different exercises based on your function and ability.</p> <p>Providing options for exercising in the gym and at home.</p>	<p><b>The second session of the week will follow this pattern to maximize your physical improvement.</b></p> <p>Focusing on improving your joint mobility and strength to help reduce pain.</p> <ol style="list-style-type: none"> <li>1. Cardiovascular</li> <li>2. Joint mobility</li> <li>3. Joint stability</li> <li>4. Joint strength</li> <li>5. Cardiovascular</li> <li>6. Functional mobility</li> <li>7. Balance and stability</li> <li>8. Functional strength</li> <li>9. Cardiovascular</li> <li>10. Mobility</li> <li>11. Stability</li> <li>12. Strength training</li> </ol>	<p><b>Examples of the exercise classes you may take part in.</b></p> <p><b>Cardiovascular (CV)</b> Low impact CV training, step aerobics, cycling class</p> <p><b>Mobility</b> Yoga, aqua training, progressive stretching</p> <p><b>Stability</b> Yoga, aqua training, progressive stretching</p> <p><b>Strength</b> Strength training, compound movements, machine weights</p>

# What are musculoskeletal conditions?

The term ‘musculoskeletal conditions’ is often used to include a broad range of health conditions affecting the bones, joints, muscles and spine, as well as rarer autoimmune conditions such as lupus. In fact, musculoskeletal conditions comprise over 100 different diseases and syndromes that interfere with people’s ability to carry out their normal daily activities. Common symptoms include pain, stiffness and a loss of mobility and dexterity.

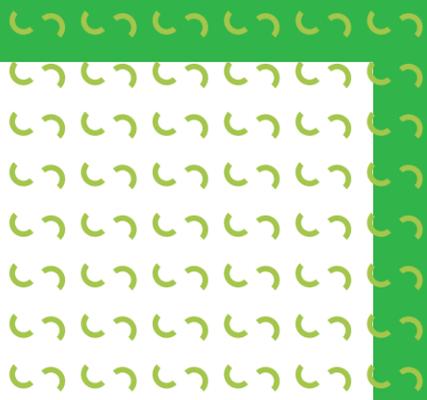
**Broadly speaking there are three groups of musculoskeletal conditions:**

Structure	Age	Progression	Prevalence	Impact	Main treatment	Treatment location	Risk factors
Inflammatory conditions: (e.g. rheumatoid arthritis)	Affects any age	Often rapid onset	Common (e.g. over 400,000 adults in the UK have rheumatoid arthritis)	Can affect any part of the body including skin, eye and internal organs	Treated by suppressing the immune system	Urgent specialist treatment needed usually provided in hospital (outpatients)	Genetic factors, sex, smoking, obesity and diet
Conditions of musculoskeletal pain (e.g. osteoarthritis, back pain)	More common with rising age	Gradual onset	Very common (e.g. 8.75 million people in the UK have sought treatment for osteoarthritis)	Affects the joints, spine and pain systems	Treated with physical activity and pain management, and in severe cases joint replacements	Treatment based in primary care	Age (late 40s onwards), sex, genetic factors, physical injury, obesity and previous joint illness or injury
Osteoporosis and fragility fractures (e.g. fracture after fall from height)	Affects mainly older people	Osteoporosis is a gradual weakening of bone, fragility fractures are sudden discrete events	Common (e.g. 300,000 fragility fractures occur in the UK each year)	Hip, wrist and spinal bones are most common sites of fractures	Medication to strengthen bones, falls prevention fracture treatment	Prevention is based in primary and ambulatory care; fractures may require surgery	Age, genetic factors, smoking, alcohol, inflammatory disorders, poor nutrition and low physical activity

# Goal setting

Please write down what it is you want to achieve from this programme. Describe how important this is to you – you may want to add a numerical value from 1-5 to indicate how close you are to your goal. We will be reviewing this at the halfway mark and end point to track your personal progress.

Goal 1	Results
	BMI
	Weight
	Blood pressure
	Timed up and go test
Goal 2	
Goal 3	



# Week 1: what is Joint Pain?

Joint Pain is a combination of different conditions and disorders. There are two categories in which Joint Pain conditions can be classified.

## Inflammatory conditions: Rheumatoid Arthritis

Rheumatoid Arthritis is an autoimmune disease. This means your immune system – which usually fights infection – attacks the cells that line your joints by mistake, making the joints swollen, stiff and painful.

Over time, this can damage the joints, cartilage and nearby bone.

There may be periods where symptoms become worse, known as flare-ups or flares.

A flare can be difficult to predict, but with treatment it's possible to decrease the number of flares and minimise or prevent long-term damage to the joints.

### Risk factors

- Weight (obesity)
- Hereditary (family history)
- Gender (women 2x more likely after menopause)
- Occupation (manual work)
- Age (45+)
- Joint trauma or surgery
- Skeletal abnormality
- Smoking
- High sugar diet
- Sedentary lifestyle.

## Musculoskeletal pain: Osteoarthritis

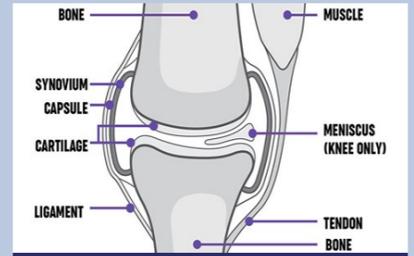
Osteoarthritis (OA) is the most common form of arthritis. It is found predominantly in knees, hips, feet and hands.

In a healthy joint there is a tough smooth coating at either end of the bone called cartilage, this allows the two bones to smoothly glide against each other.

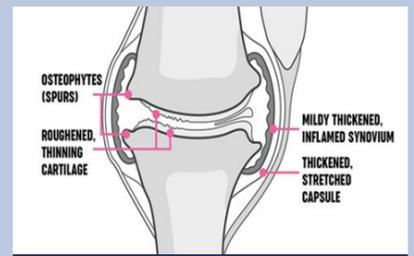
When OA develops, the cartilage begins to become rough and thinner and stops smooth movement of the joint.

When the cartilage becomes more damaged, all tissue in and around the joint becomes more active and sensitive as the body tries to repair itself. The repair process can change the joint structure allowing the joint to move in a normal way. This alteration can cause stress, strain and further damage in that joint or elsewhere in the body.

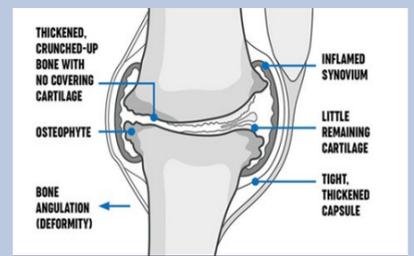
Osteoarthritis is a natural process of joint change, these symptoms may start to affect your daily activities. There is no miracle cure, but there are a variety of factors that are important to treat.



A normal joint



A joint with mild osteoarthritis



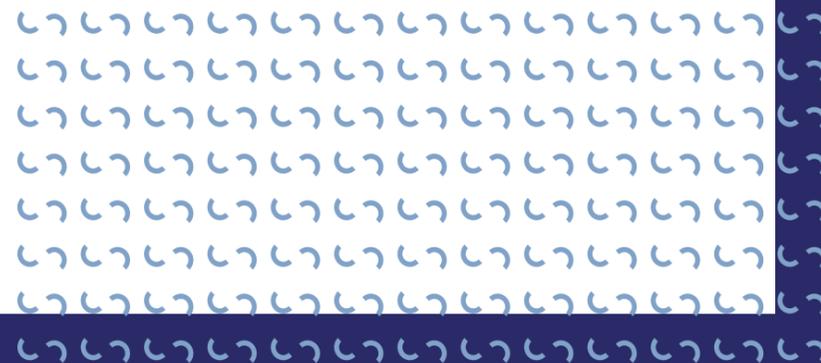
A joint that has been deformed by severe osteoarthritis

# Training programme classification

Each week a small table is available for you to be able to write down the exercises you performed during the session. Please make use of this so you are able to remember what you did during your session, and are able to build on it from there. Tracking your progress and recording your sessions will be important for when you complete the Supported Stage and move into the Un-Supported Stage. Your Joint Pain advisor will help you complete and understand the programme cards for each week.

Please see below a 'key' for what the different components for each section of the table means.

Exercise	Reps	Sets	Duration (m)	Recovery (s)	Weight (kg)
The name of the exercise that you performed.	A rep is the number of times you perform a specific exercise.	A set is the number of cycles of reps that you complete.	The length of time in minutes you performed an exercise.	The amount of time in seconds between sets of exercises before starting the exercise again.	The amount of weight in kilograms the exercise was performed with.



# Example exercise session

Structure	Example	Reps	Sets	Duration (m)	Recovery (s)	Weight (kg)
Warm up	Exercise bike			2-3		
Stretches	Active stretching			4		
Lower body	Squats	10-15	2	2	30	
Upper body	Shoulder press	10-15	2	2	30	
Core/stability	Wobble board		2	2	30	
Cardio	Bike			2-4	30	
Lower body	Leg extension	10-15	2	2	30	
Upper body	Chest press	10-15	2	2	30	
Core/stability	Single leg balance		2	2	30	
Cardio	Walking shuttle			2-4	30	
Cool down	Exercise bike			2-3		
Stretches	Active/ passive stretching			4		





# Week 3: emotional wellbeing

Over the next 10 weeks we are going to be looking at small emotional wellbeing steps that can be completed to help support you through your journey. Starting with Step 1 we will look at ways we can support the education and exercise components of the Joint Pain Programme. Our emotional wellbeing can directly affect the amount of pain we perceive. If we are in control of our emotions, we have a greater control of our pain.

### What is emotional wellbeing?

A state of wellbeing in which an individual can function effectively, can cope with the normal stresses of life, can work productively and fruitfully, is able to maintain relationships and make a contribution to his or her community. Emotional wellbeing occurs when your life feels in **BALANCE**.

### How to spot poor emotional wellbeing:

- P** – Pleasure (reduced pleasure)
- A** – Appetite (poor appetite)
- U** – Unable to concentrate (inability to focus or concentrate)
- S** – Sleep (disturbed sleep)
- E** – Emotional changes (negative changes to your emotional state)



**Feeling happy** is a part of emotional wellbeing...but it's far from the whole picture.

Emotional wellbeing is...**more than just absence of mental ill health.**

# Step 1: NHS emotional wellbeing advice

The NHS advises us to stay connected, be active and keep learning. These may seem simple steps, but can be difficult to accomplish.

Write down three ways you can begin to accomplish each of these steps.

### For example:

**Connected:** I will call my family a minimum of once a week to check in with them.

**Be active:** I will do an exercise routine at home on top of my two Joint Pain sessions.

Connect	Be active	Keep learning
Connect with the people around you: your family, friends, colleagues and neighbours. Spend time developing these relationships.	You don't have to go to the gym. Take a walk, go cycling or play a game of football. Find an activity that you enjoy and make it a part of your life.	Learning new skills can give you a sense of achievement and new confidence.
Connect	Be active	Keep learning
1.	1.	1.
2.	2.	2.
3.	3.	3.





# Week 5: healthy eating

A balanced diet and the right foods are vital for reducing the symptoms of pain. There are some foods that help reduce inflammation in our joints, actively working to reduce swelling and stiffness and there are other foods that will increase inflammation in our joints, making them stiff and painful.

### Foods for healthy joints:

- ♦ **Fish** – rich in omega-3 (salmon, tuna, mackerel and herring), soy beans, tofu and edamame beans
- ♦ **Extra virgin olive oil, avocado and sunflower oil**
- ♦ **Broccoli** – high in calcium (slows the progression of OA)
- ♦ **Green tea** – anything high in antioxidants
- ♦ **Oranges, grapefruit and limes** (vitamin C)
- ♦ **Garlic** – limits cartilage damaging enzymes
- ♦ **Walnuts, pine nuts, pistachios and almonds** – protein, calcium, fat, magnesium and vitamin E.



### Foods that increase inflammation in joints:

- ♦ **Sugar** – refined carbohydrate and sugar cause spikes in insulin resulting in low grade inflammation
- ♦ **Salt** – causes cells to retain water causing swelling and can cause an inflammatory response
- ♦ **Fried food** – saturated fats cause an inflammatory response, increase cholesterol and may increase weight gain
- ♦ **White flour, refined pasta** – these are refined carbohydrates and cause low grade inflammation
- ♦ **Omega 6 fatty acid** – very beneficial for joint pain however, in excess, can have the opposite effect causing the development of inflammatory chemicals
- ♦ **Dairy** – shown to be one of the most prominent foods to cause joint pain and arthritis. It is acidic and promotes excess mucus filled with excess hormones
- ♦ **Alcohol** – can be high in sugar; processed beer is high in purines (protein, calcium, fat, magnesium and vitamin E).

# Portion control and a balanced diet

### The healthy eating plate

The three main components of any diet (protein, carbohydrates and fats) are needed for energy, recovery and immunity. Don't be scared of fats or carbs as they are necessary to keep you healthy and can aid with weight loss.

It's important to bear in mind the volume of food you eat, you can have too much of something good.



A serving of protein = 1 palm



A serving of vegetables = 1 fist



A serving of carbs = 1 cupped hands



A serving of fats = 1 thumb



# Week 6: goal checking (halfway through)



Goal 1
Goal 2
Goal 3

### Please look back at week one.

How close are you to your goal?  
Mark with a number how close you are.  
(1 being not close, 5 being achieved)

If you have achieved your goals at this point,  
set yourself a new goal you think is achievable  
by the end of the programme or in the long-term.

We will be reviewing these at the end  
of the programme.



# Step 4: are you living your values?

Values are our desires for the way we want to interact with and relate to the world, other people and ourselves.

They are leading **principles** that can guide us and **motivate** us as we move through life.

Write down 3 values – things that are important to you.  
Keep your values personal to you and your goals simple and attainable.

### Example value and goal

Value	Goal
Being healthy is important to me.	Eating vegetables with every meal.

Value	Value	Value
Goal	Goal	Goal





# Week 8: pain management

Pain is a complex biological mechanism that is influenced by many factors. The amount of perceived pain depends on the context in which the brain evaluates it.

Pain can both create, and be a product of other, non-desirable effects which can influence our emotional wellbeing. These include stress, disturbed sleep, reduced concentration and depression.

Recognising how your pain is having an effect on these areas is important for finding a future solution.

## Three tips for coping with pain:

1. **Awareness** – what factors influence your mind negatively and how to cope with these feelings.
2. **Visualisation** – visualising control and knowing all uncomfortable feelings will pass.
3. **Meditation** – guided meditation calms and soothes. Combine with gentle stretching or heat and ice to help alleviate pain.



# Helping you deal with a flare-up

**Heat:** Promotes blood flow through the affected muscles. Helps muscle relaxation to improve range of movement. (Nervous System Pain however is often eased with warmth).

**Ice:** Reduces swelling by restricting blood flow to the affected area, helping to reduce pain. (Applying cold to a joint with chronic pain and cold sensitivity could worsen symptoms).

## Experiment to find out which suits your joints when sore and inflamed

### Pain:

- ♦ Alternate heat and ice
- ♦ 20-30 minutes several times a day.

### Inflammation:

- ♦ Alternate heat and ice
- ♦ 5-10 minutes intermittently throughout the day.



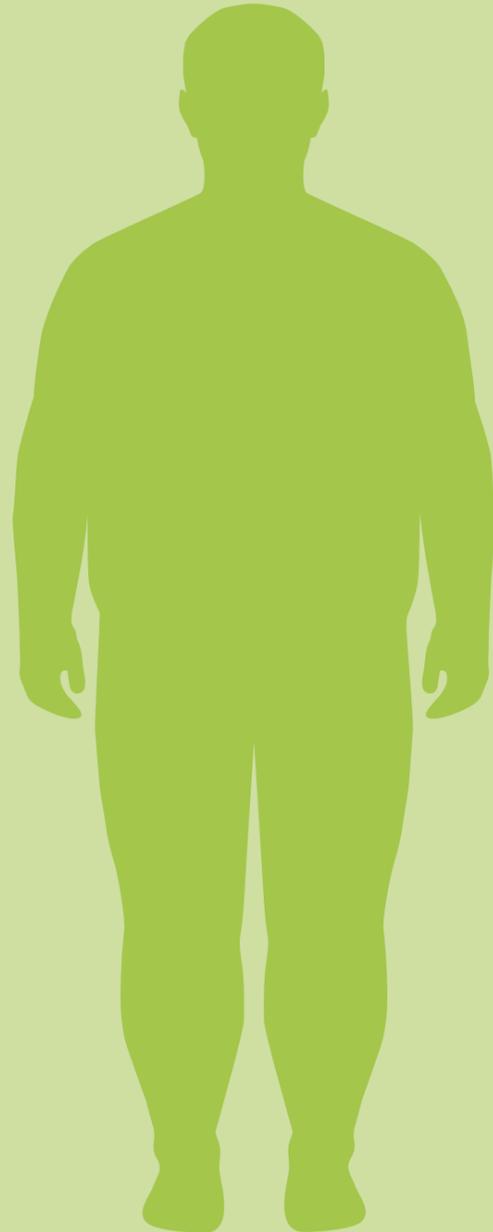


# Week 9: weight management

Obesity is one of the largest causes of Osteoarthritis.

The more weight through the joint, the higher the stress on the joint. This increases the likelihood of the cartilage wearing down. The most affected areas are your knees and hips as these are the weight bearing locations. Every pound of extra weight exerts about 4 pounds of extra pressure, so 10 pounds of extra weight translates to 40 pounds extra pressure on the knees alone.

The actual fat itself creates and releases chemicals which promote inflammation in the affected joints. Evidence suggests that the chemicals produced increase the development of OA. Obese people commonly have wrist OA and the wrists aren't weight-bearing joints. It's thought that the fat cells actually cause an increased breakdown in the cartilage.



- Diabetes x5
- Knee arthritis x4
- CVD x3
- Cancer 42%
- Sleep apnoea
- Diabetes 44% linked to obesity
- Lower back pain
- Depression



# Step 7: accept your mood

Accepting an emotion or mood is essential to prevent it worsening – after all it is already there.

Emotions are basic survival mechanisms – and exist to tell us something to keep us safe.

- When you notice distress (low mood, anxiety) try and sit with it for a while.
- ♦ Where is the emotion in your body?
  - ♦ What sort of a sensation is it?
  - ♦ What colour is it?
  - ♦ Try to label the emotion.

If you can do this you will stop your mind from trying to get rid of the emotion and it will pass more quickly.

**Avoid getting low about feeling low or anxious about feeling anxious.**





# Step 8: sleeping better

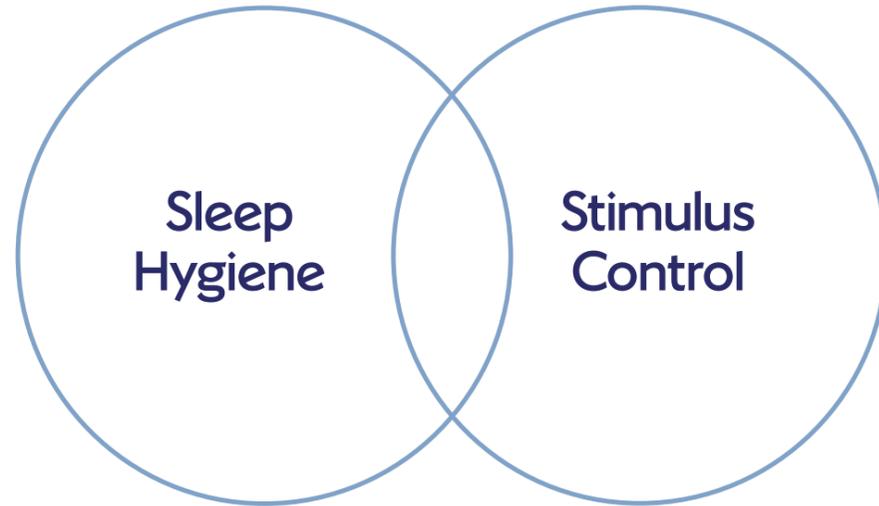
**Poor sleep can affect:**

- Emotional wellbeing
- Memory and concentration
- Motivation
- Increased risk of diabetes, high blood pressure and obesity.

Routine is one of the most important factors for consistent and good sleep. Creating an easy to stick to structure to apply every day will greatly help your pain and emotional wellbeing.

**Example sleep routine**

Pre-bed routine	Sleep and wake time	Rise routine
Stretch 5-10 minutes	11pm	Stretch 5-10 minutes
Get into bed for 10pm		Meditate 5 minutes
Listen to story book for 1 hour	6am	Coffee
Turn phone and lights off		



**Sleep hygiene is about forming good sleep habits. Stimulus control works to strengthen the connection between the bed and sleep behaviour.**

# Step 8: sleeping better – continued

**To improve your sleep quality think small and act big:**

- Sleep and wake at consistent times
- Remove stimulus from your bedroom (i.e. “blue light” from screens/devices)
- Wind your mind down before sleeping
- Reduce the amount of caffeine consumed in a day (try not to have caffeine after 2pm).

**Other things you can do:**

- Give to others and improve your emotional wellbeing
- Being a volunteer can help to reduce mortality among older adults
- Committing an act of kindness even just once per week can help people improve in their levels of wellbeing
- Think of a time where you did something for someone else
- What can you do for others around you, or people you see that will make them smile?

Take a moment to think about changes you can make to your own routine. Use the table below to create a new, healthier bed time routine.

Pre-bed routine	Sleep and wake time	Rise routine



# My plan

Use the tables below to write down your own personal weekly plan for the next two weeks

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY

DAILY ROUTINE

SLEEP AND WAKE TIME

# Step 9: worry less

Think for a minute about the type of worries you have.

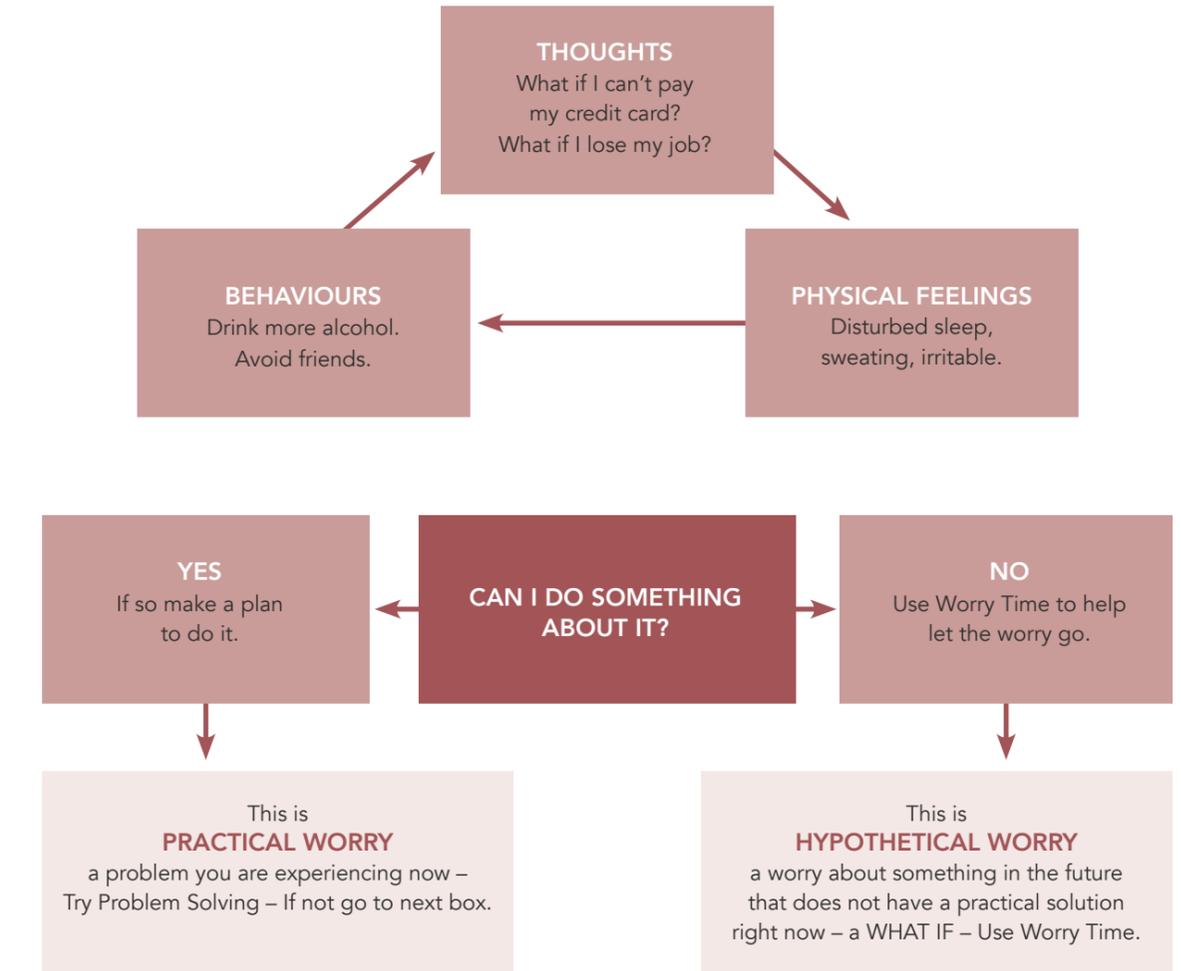
There are Practical Worries that we can act on and Hypothetical Worries that we can't do anything about.

These are often the 'what if' type thoughts about the future.

People who worry a lot often find they have a lot of Hypothetical Worries.



A practical way to deal with worrying



# Programme card

Structure	Exercise	Reps	Sets	Duration (m)	Recovery (s)	Weight (kg)
Warm up						
Progressive stretches						
Cool down						
Stretches						

# Week 12: next steps

Sometimes when you go through ups and downs it can be difficult to see the improvements you've made. Track and check your progress however small it may be. Make small achievable goals, not just physiological ones but psychological and sociological goals too. Improvement is a whole body and persons approach. Rest when you need to and move when you can.

Goal 1

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Goal 2

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Goal 3

*"I'm in pain all the time, 'I said,' and if I gave in I'd do nothing."*  
 (Bernard Cornwell, 2014)

Results	
BMI	
Weight	
Blood pressure	
Timed up and go test	

Look back at week 1 and 6, have you achieved these goals? Rate them from 1-5 (1 being not close, 5 being achieved). Have you achieved your goals from the programme? What do you think you can achieve moving forward onto the next 12 weeks? Give this a rank from 1-5 as to how important it is to you.



# Building a healthier nation

We are the UK's largest healthcare charity\*. For the last 60 years, our team of experts have been working together to make the UK fitter, healthier, happier and stronger, all for the public benefit.

As a not-for-profit charity with no shareholders, we invest all our income back into our family of 31 award-winning hospitals, 113 fitness and wellbeing centres, healthcare clinics and over 130 on-site workplace wellbeing services, as well as developing flagship activities supporting our communities – all to realise our vision to build a healthier nation.

What makes us unique is our unrivalled, award-winning and industry-leading network of health and wellbeing services capable of helping people in a variety of ways. Our team of experts take a personalised approach by getting to know every individual, so we can provide the best possible care and support now and in the future – wherever they are on their journey.

**For further information please liaise with your Programme Coordinator.**

\*Nuffield Health is a registered charity in England and Wales (205533) and Scotland (SC041793). Source: Charity Commission Nov 2020 report. Top 10 charities – 30 November 2020.

