

'WHAT IS THE PURPOSE OF PAIN?'

Our normal understanding of pain is that it serves to protect us.

We commonly refer to ACUTE pain which is:

- A warning system that tells us of damage or that there is something wrong
- It is part of our pre-programmed emergency system
- It is designed to be a strong, distressing, and unpleasant 'message' for us to take notice and to keep us alive.

We experience a new unpleasant sensation, we check it out/seek help, get a diagnosis and a treatment/cure.

An example of this is when we touch a hot saucepan, this sends a signal to the brain and we respond by drawing our hand away, experience the pain, look at our hand and we may put it under running water. Some of the response is pre-programmed or automatic and some of it depends on experience and context. A chef, after repeated history of burning his/her hand may have a different experience of pain to someone who cooks occasionally at home.

Another example of ACUTE pain is breaking a bone. The pain serves to tell us something is wrong so we have it treated and once the bone and tissues are healed the pain will go away.

We normally think of pain as straight forward, however the amount of tissue damage doesn't often match the severity of the pain. Think of a paper cut, a toothache or when you stub your toe. These experiences can have severe pain reactions but may not necessarily be severe damage.

'WHAT IS THE DIFFERENCE BETWEEN ACUTE AND CHRONIC PAIN?'

ACUTE pain normally tells us of new changes or damage to the body and ends with the healing process.

CHRONIC pain continues beyond 3 months after the original trigger/damage/injury.

With chronic or on-going pain, patients describe the unpredictable, 'never ending' and 'invisible' nature of the pain which makes it very difficult to cope with. Flare ups or episodes when pain is particularly intense, are a very common part of chronic pain and often doesn't follow any activity or event. These episodes of intense pain are less likely to be due to new damage or further injury.

It is important to mention that some chronic pain conditions such as Rheumatoid Arthritis and Colitis do have acute inflammatory episodes.

'WHY DID THEY TELL ME IT'S ALL IN MY HEAD?'

YOUR PAIN IS NOT IN YOUR IMAGINATION. IT IS REAL.

We often talk about pain as being located in muscles, joints and tissues. Pain however is more complex, it is not just in the head or just in the body. Pain is part of a signalling process within the nervous system and doesn't become pain until it's processed in the brain.

The nervous system is made up of nerves, the spinal cord, and the brain. It is constantly checking everything. When it detects change i.e., subtle changes in blood flow when you are sitting too long, the nerves will send messages to the spinal cord and brain to get you to move position – most of the time you will not notice your body's own responses. If the brain decides that it's under threat i.e., you've been standing for too long, it will trigger many processes that give a pain experience.

There is no scan or blood test for pain. It is invisible and therefore people, particularly in chronic pain are often on the receiving end of judgements and unhelpful comments.

A lot of people also report not wanting to talk about their pain because they feel like they are “moaning too much” and don’t want to “become a burden on others”. Therefore, “suffer in silence”.

‘WHY DOES MY PAIN CONTINUE WHEN THERE IS NOTHING TO FIX?’

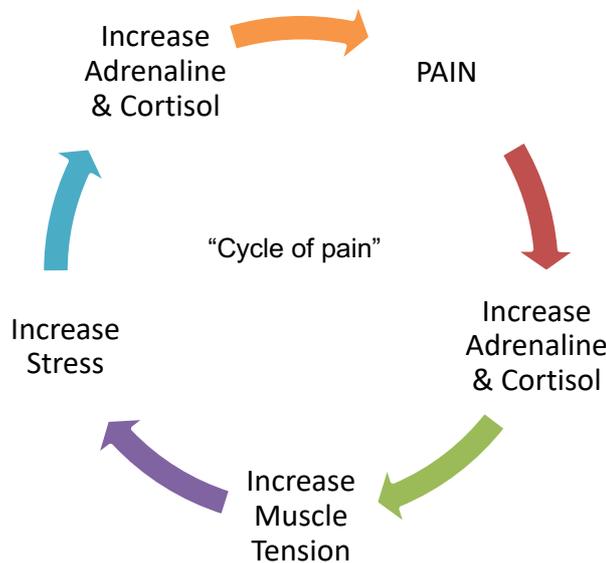
The nervous system ‘learns’ from repeated input or stimulus, so many of our actions become automatic, like making a cup of tea or driving a car/riding a bike. This makes the tasks that we do more efficient.

To maintain efficiency (or to take short-cuts), the nervous system learns to be ‘switched on’ if it repeatedly receives ‘messages’. It will repeatedly fire messages, which, via the spinal cord, will trigger the brain to process pain. This process is repeated so often the nerve pathway remains ‘switched on’ because it’s trying to be efficient. It is now contributing to a process called ‘wind up’. The experience of pain can continue in the absence of new tissue damage.

Fibromyalgia or widespread body pain is an example of how the nervous system can be switched on in the absence of a detectable trigger or tissue damage. The changes or adaptations that occur within the brain and the spinal cord are referred to as ‘central sensitisation’. Nerves, out of efficiency start ‘communicating with each other’. People often say that pain feels like it is spreading. Touch and simple every day movement are experienced as pain.

In summary the nervous system has become very sensitive and on guard to anything that it perceives as ‘threat’, which might be triggered by weather changes, stress, doing different or more activity, sitting, standing, or walking slightly longer than usual.

‘I UNDERSTAND WHY I AM IN PAIN, BUT WHY DO I FEEL SO TERRIBLE?’



As part of the pain process, the brain triggers the release of different chemicals or hormones. These include the ‘fight or flight’ hormones or stress chemicals which are a normal and effective part of our protective system. We can experience; tense muscles, faster shallow breathing or breath holding, increased heart rate, sweat, nausea and anxious thoughts. When pain persists, this ‘alarm’ system can be switched on. This causes a sensitised nervous system, often called ‘faulty signalling’. This creates a threat response and a further release of stress chemicals.

Another way to describe this process is imagining the brain sometimes acts like a faulty house alarm. The alarm switched on to a burglar in the house and alarmed loudly so it grabbed our attention. Imagine the alarm has become

so sensitive that it now sounds even when there is no one in or around the house. This is similar to the fault with chronic pain.

Increased stress chemicals over a long period of time, can make people feel very fatigued.

Chronic or on-going pain can have a significant impact on a person's quality of life. Many people notice that they worry more, often feel frustrated and low in mood. They describe that they move less and do less activity, which in turn, can cause secondary pain from body deconditioning and more distress. Pain often disturbs sleep and adds to the overall struggle to cope.

Often people with chronic pain report a difficult 'journey' in trying to get help for their pain. Often people have seen several doctors and therapists. Some of them have had many scans, diagnoses, mixed messages or not a satisfactory explanation or help for their pain. The relentless search, the natural, pre-programmed, biological drive to control pain adds to the suffering.

'SO, WHAT CAN I DO ABOUT IT?'

Once we understand how our pain works and what it is affected by, we can learn to manage and cope with the pain in daily life and during flare-ups by learning new techniques and strategies aimed at reducing the sensitization of the nervous system and reducing the adrenaline and cortisol in the body.

Pain Management can be learnt through a Pain Management Programme or by focusing on specific reasons why your pain can flare up.

For instance- learning relaxation or mindfulness techniques can help to manage stress and pain long term. Mindful movements can help with our body conditioning. Adapting our activity and pacing our energy levels can help to contribute to our overall experience and improve quality of life.

'WHAT HAS BREATHING GOT TO DO WITH MY PAIN?'

Have you ever noticed that you have been holding your breath against the pain or the speed and depth of your breath has changed?

When we feel something emotional like anxiety or stress, this tends to cause further changes to our breathing and add further tension within the body.

'HOW COULD BREATHING TECHNIQUES HELP ME?'

Breathing techniques are a pain self-management strategy that can help gain more balance between the threat and soothing responses, increasing our ability to cope with pain. Breath awareness and breathing techniques can help soften the understandable muscle tension experienced with pain and can also calm emotions such as anxiety and stress.

We can become aware of the breath from the sensations we feel in the body such as the rise and fall of the belly and the chest. The breath is always with us, and we can take our awareness back to the breath very easily with practice.

RATHER THAN JUST TELL YOU, LET'S SHOW YOU WHAT WE MEAN...

If you are able, make a tight fist with one hand and keep it in this position for a moment, have you done that?

And now notice what has happened to your breath?

You'll probably find that you were holding your breath?

Not only have you got the fist but you're also holding your breath which means that you've got extra tension to deal with. Now relax the 'fist' completely and rest your hand.

In this example the 'fist' represents the pain or discomfort we may have in our body ...sometimes we hold our breath against the pain, leading to more tension and more pain. If you feel emotions, like anxiety, this tends to cause physical tension in the body such as a clenched jaw or tight stomach. These are all normal reactions which are automatic, and you may or may not have been aware of it happening.

Now, just make a tight fist with one hand once again and keep it in this position...

This time focus onto your breath, particularly noticing the breath as you breathe out. Taking gentle breaths, breathing in and out whenever is comfortable for you.

Imagine guiding the breath gently down into your fist... imagine breathing gently into your fist... with softness and tenderness.

You'll probably find that your fist wants to soften, do you notice that?

And now relax the 'fist' completely and rest your hand.

In exactly the same way we can train ourselves to take the breath to our pain or tension. The breath can soften and soothe tension which may help your experience of pain. We can learn to relax into the breath, rather than tensing the breath against pain or emotional discomfort. It can become a habit or "second nature" to us and help us with long term benefits.

DAILY LIFE PRACTICE

Notice the sensations of the breath in your body during your normal daily movements and activities. Each time you notice you're holding your breath against pain, practise breathing into this feeling with gentleness and tenderness, softening the breath and soothing the tension you may feel, even just a little.

Notice what you experience?

Many people find breathing techniques helpful alongside the other things they do to manage their pain on a day-to-day basis. Others find it less helpful, or that it varies.

The next few pages give more examples of breathing techniques. It is often easier to practice first with guidance. You may need to then have a go several times before knowing if it helps you.

RELAXED BREATHING

When we are anxious or threatened our breathing speeds up in order to get our body ready for danger. Relaxed breathing (sometimes called abdominal or diaphragmatic breathing) signals to the body that it is safe to relax. Relaxed breathing is *slower* and *deeper* than normal breathing, and it happens lower in the body (the belly rather than the chest).

HOW TO DO RELAXED BREATHING

- To practice make sure you are sitting or lying comfortably
- Close your eyes if you are comfortable doing so
- Try to breathe through our nose rather than your mouth
- Deliberately slow your breathing down. Breathe in to a count of 4, pause for a moment, then breathe out to a count of four
- Make sure that your breaths are *smooth, steady, and continuous* – not jerky
- Pay particular attention to your out-breath – make sure it is smooth and steady

'AM I DOING IT RIGHT? WHAT SHOULD I BE PAYING ATTENTION TO?'

- Relaxed breathing should be low down in the abdomen (belly) and not high in the chest. You can check this by putting one hand on your stomach and one on your chest. Try to keep the top hand still, your breathing should only move the bottom hand
- Focus your attention on your breath – some people find it helpful to count in their head to begin with ("*In...two...three...four...pause...Out...two...three...four...pause...*")

HOW LONG AND HOW OFTEN?

- Try breathing in a relaxed way for at least a few minutes at a time – it might take a few minutes for you to notice an effect. If you are comfortable, aim for 5-10 minutes
- Try to practice regularly – perhaps three times a day

VARIATIONS AND TROUBLESHOOTING

- Find a slow breathing rhythm that is comfortable for you. Counting to 4 isn't an absolute rule. Try 3 or 5. The important thing is that the breathing is slow and steady
- Some people find the sensation of relaxing to be unusual or uncomfortable at first, but this normally passes with practice. Do persist and keep practising

SQUARE BREATHING TECHNIQUE

A simple and effective breathing technique that can be used regularly to manage pain and / or stress is called 'square breathing'.

The first time you practice this technique it is better to do so with guidance. This information is a reminder of what to do. There is a diagram on the next page to go with the instructions below:

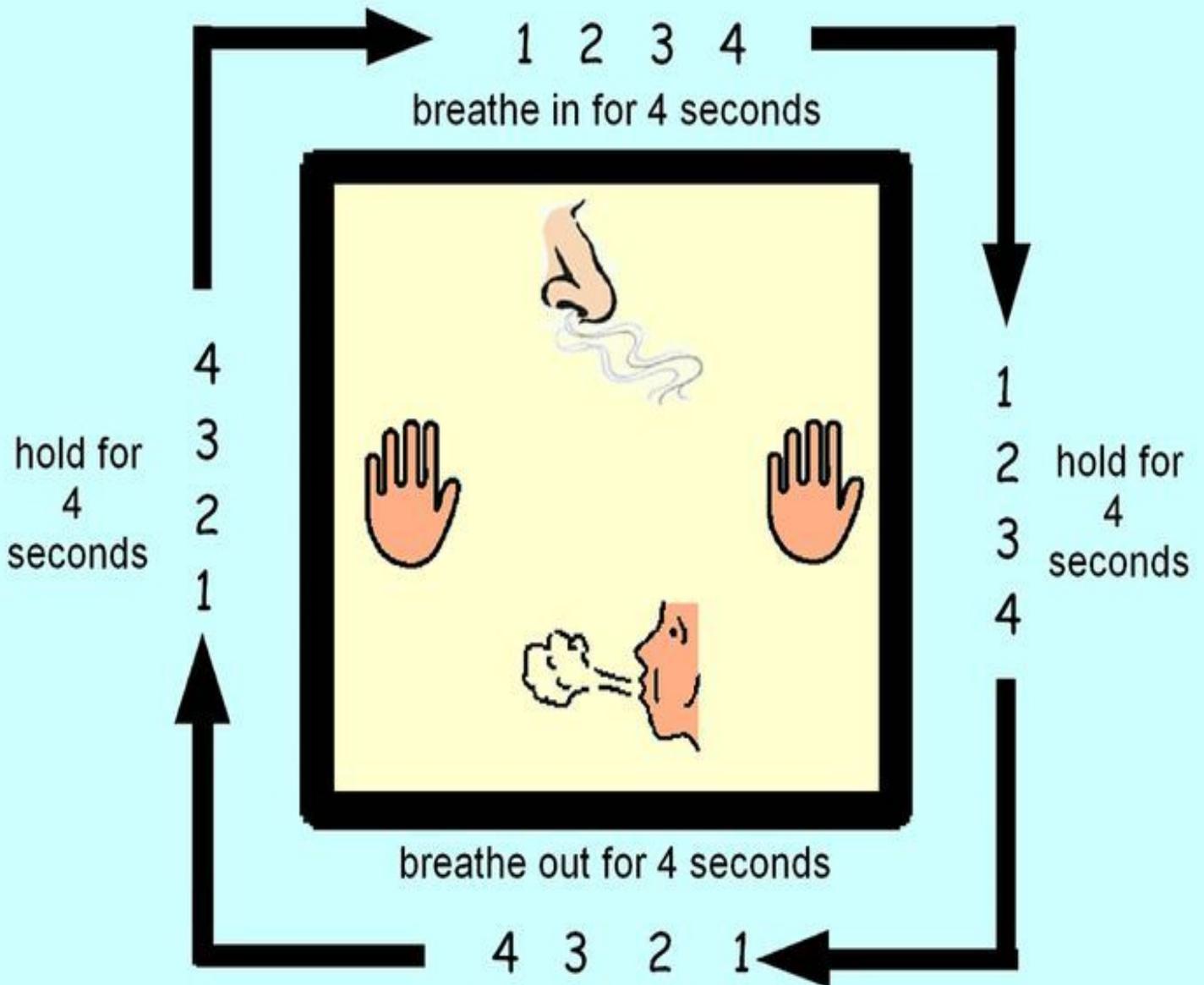
- Sit upright in a comfortable chair with your feet resting on flat on the floor and your hands resting in your lap. With practice this technique can be used when stood up or lying down.
- It can be helpful to find a place where you are unlikely to be disturbed. Once you are able to easily practice this technique, it can be done anywhere (apart from when driving, operating machinery or in the bath! As it may affect your concentration and make you feel sleepy).
- Start at the top left corner of the square and breathe in slowly through your nose, counting to 4 as you do so and let your eyes travel across the top of the square as you breathe in.
- Gently hold your breath for 4 seconds, moving your eyes across the side of the square as you do so.
- Open your mouth slightly and slowly exhale to a count of 4, moving your eyes across the bottom of the square.
- Gently hold the breath for another count of 4 whilst moving your eyes back up the square.
- Repeat the cycle by beginning another in breath.

You may find it helpful to focus on a square nearby or a rectangle, such as a window, cupboard door or the TV. Move your eyes around the shape in time with your breathing. Do not push yourself to do 4 seconds if 2 or 3 seconds is easier to start off with. Remember to have gentle breaths; breathing in and out whenever is comfortable for you in that moment. If you ever feel light-headed you are just breathing too deeply.

Another option is watching this u-tube video:

https://www.youtube.com/watch?v=FJzKtH_9I

SQUARE BREATHING



FINGER BREATHING

Finger breathing is another version of breathing technique. Firstly, have a read through and see what to do and then try giving it a go!

WHAT DO I DO?

Gently hold one hand in front of you, palm facing towards you with your arm supported for comfort. Using a finger from your other hand, trace up the outside length of your thumb while you breathe in. Pause at the top of your thumb and then using your finger trace it down the other side of your thumb while you breathe out. That's one breath.

With the next breath – Trace up the side of the next finger while you breathe in, pause at the top, and then trace down the other side of that finger while you breathe out. That's now two breaths in total.

Keep going, tracing along each finger as you count each breath. When you get to the end of the last finger, come back up that finger and do it in reverse.

This technique gives you something for your eyes to focus on and a physical activity for your hands, as well as focusing on counting and your breathing. This combination can also be a useful distraction technique.

If you wish to relax your finger and hands, you could rest your hand on your lap and try just moving your eyes around the shape of your thumb and fingers in time with your breathing.

Another option is shown in this u-tube video: <https://www.youtube.com/watch?v=3RG3J3nFGL0>

Summary of breathing techniques

- Breathing techniques are a pain self-management strategy.
- It may be helpful alongside the other things you do to manage pain on a day-to-day basis.
- We are continually breathing - so it can be easy to practice.
- Breath awareness can help to soften tension and feel more comfortable.
- Remember the example of making a fist and noticing if you are holding your breath? And then breathing into the "fist" to soften the tension.
- Try taking your breath to the pain and using the breath to soften and soothe tension.
- Remember to be kind and gentle towards yourself – however your practice and training may be going.

Apps/Websites that may be useful:



CALM: CALM includes guided meditations and Sleep Stories to help you reduce anxiety, lower stress and sleep better.



HEADSPACE: Live a healthier, happier, well-rested life in just a few minutes a day with the Headspace app.



INSIGHT TIMER: Guided meditations and talks led by the world's top meditation and mindfulness experts, neuroscientists, psychologists and teachers. Music tracks from world-renowned artists. Join

millions learning to meditate on insight timer to help calm the mind, reduce anxiety, manage stress, sleep deeply and improve happiness.

The picture below gives a summary of what to do:

TRACE ALL 5 FINGERS



Relaxation is anything that helps your body and mind relax. This may include everyday activities such as reading a good book, listening to music or spending time outdoors. It is not *what* you do but whether it helps your muscles and mind relax.

WHAT HAS RELAXATION GOT TO DO WITH MANAGING PAIN?

Including relaxing activities in your day can be helpful for everyone, not just those with pain. When we are in pain, our muscles automatically tense up around the area that hurts. When muscles tense up for a long time, they can become painful. This can lead to a cycle of pain and tension.

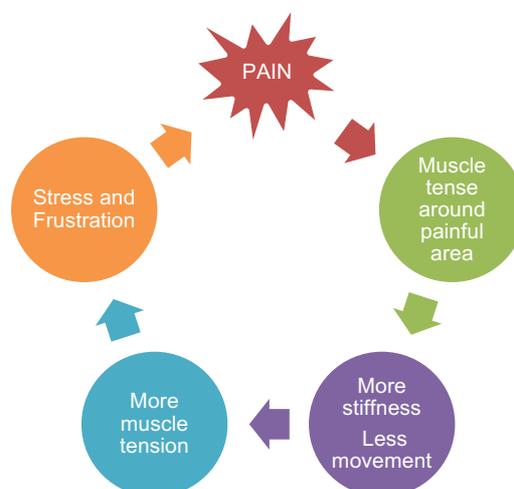
If you learn that something is painful (for example, walking) in the future your muscles may automatically become tense to try and protect you *before* you walk. This is completely normal, but over time can make pain feel worse. Sometimes it is not only the muscles near the pain that tense, but other muscles as well.

Frequent and prolonged muscle tension can have the following effects:

- It can cause aches, discomfort, pain and tiredness.
- Movements, such as walking or getting out of a chair, can become difficult and you may feel stiff and slow.
- It may start to feel “normal” – as you may become used to feeling tense.

WHY MAY LEARNING TO RELAX BE HELPFUL?

- Being more aware of increases in muscle tension may allow more choice in your response by relaxing body and mind.
- Softening muscle tightness and soothing the threat system may help your experience of pain.
- Making changes such as slowing down your heart rate and breathing may also benefit general physical health and well-being.
- Managing stress and helping you feel calmer.
- Relaxation may help some people to rest and sleep.
- Distracting you from pain.



EMOTIONAL STATES AND MUSCLE TENSION

Muscle tension is also increased by emotional states such as worrying, frustration and stress. This is part of our automatic threat response. Our brain triggers automatic responses, for example, our heart and breathing rates speed up, blood pressure and circulation to the muscles increase and muscles tense up.

Stress and tension are both normal but can affect the physical and emotional experience of pain. (See section on Stress for more information).

HOW DO I LEARN TO RELAX?

Below are some ideas to help apply relaxation within your daily life.

Take a break

Relaxation doesn't have to take lots of time.

Simply stepping back for a few minutes or taking time out from your normal routines and thoughts can give you space and distance to feel calmer:

- Read a book or a magazine, even if it's only for a few minutes.
- Have a bath or apply warmth/cold to soothe areas of your body
- Watch a film/TV, play with a pet or try out a new recipe.

Focus on your breathing

Learning to breathe more deeply can help you feel calmer. (See the section on "breathing techniques" for more guidance).

Spend time in nature

Time outside and in green spaces can be great for your physical and mental health. (See the section on "mindfulness" for guided mindful moment).

- Take a walk in the countryside or through a local park.
- Spend some time in a garden.
- You may find outdoor activities within your local area, to suit whatever level of mobility you have.

Do a tech check

Technology can be great for helping you feel connected, but if you're using it a lot then it can add to making you feel busy and stressed. Taking a break (even a short one) may help you relax.

- Try turning your phone off for an hour or so.
- Have time off from the TV or an evening where you don't check emails or social networks.

Active relaxation

Relaxation doesn't have to mean sitting still – gentle exercise can help you relax too.

- Try the qui-gong mindful-movements. You could add your breath by breathing out on the movement.
- Take a walk, going at your own pace (See the "pacing" activity section for further guidance).

- Perhaps look for a class you'd like to try, such as Qui-gong, Pilates or gentle stretching (there are also virtual classes online or via apps).

Get creative

Getting in touch with your artistic side can help you feel calmer and more relaxed.

- Perhaps try painting, drawing, making crafts, playing a musical instrument, dancing, baking or sewing?
- Don't worry too much about the finished product – just focus on enjoying yourself.

Listen to music

Music can be relaxing, connecting you to your emotions and distract you.

- Listen to your favourite songs. Really listen to the music. Can you pick out different instruments? Can you hear a drum beat or a certain rhythm?

Picture yourself somewhere calm or relaxing

Even if you can't physically get away, you can imagine somewhere you feel calm.

- Think of somewhere relaxing and peaceful, perhaps a memory of somewhere you've been, or a place you have imagined.
- Close your eyes and think about the details of this place. What does it look like? What colours and shapes can you see? Can you hear any sounds? Is it warm or cool? Let your mind drift and your body relax.

GUIDED RELAXATION

This is when you make time to practice the skill of relaxation. It is a self-management strategy to soothe your body and mind's automatic threat response to everyday stresses, worries and pain. You can also learn to slow down your breathing and other physical responses.

Remember...

Never practice relaxation techniques whilst driving or operating machinery and also be careful if in the bath!

Relaxation is often first practiced with guidance. The information below is to help you to continue this technique yourself on a day-to-day basis and maintain benefits.

Give yourself a chance to relax

To begin with, it may be easier to choose a time when you are less likely to be disturbed. Switch off your phone or put it on silent mode before you begin. If other people are in the house, perhaps ask them to give you some undisturbed time to relax (or invite them to join you). With practice, you may find it is possible to relax in a variety of places, even with other distractions – for example, in the pain clinic waiting room or when travelling as a passenger. Although relaxation can be very helpful in managing pain and other stresses, to begin with choose times when your pain is at a more manageable level and you are not unusually tired, tense or stressed.

Find a comfortable position

It can be hard to make yourself comfortable when in pain, most people find it helps either to lie down or sit in a position where they feel most comfortable and supported. Some suggestions to try:

If you are lying down:

- Rest your arms by your sides or gently rest the palms of your hands on your tummy.
- Support your head, neck and knees with pillows or cushions.
- Don't lie on anything too squashy or hard as you may tense more muscles.

If you are sitting:

- Have your legs uncrossed with both feet flat on the ground. If you prefer to have your legs resting on a stool, keep your legs uncrossed.
- Sit with your body, legs and hips in line with each other as much as possible.
- Support your back and your head.
- Rest your hands and arms in your lap or on the arms of the chair or perhaps rest them on a pillow.

Closing your eyes

It can help to close your eyes – this reduces distractions that you can see around you and can help you focus on relaxation. If it feels uncomfortable having your eyes closed, instead keep them open and try gently focusing on a spot in front of you.

What to do

To begin with you may find it helpful to practice using a recording with guided instructions, perhaps try the recordings provided?

With time and practice you may find that you can relax just as well without guided recordings as you begin to guide yourself. You can practice guiding yourself by focusing on each body part in turn, and “soften” any tightness or tension. If you have more time, you could go through small body parts (for example, working your way up from your toes into your feet, ankles, lower legs, knees, upper legs, bottom, stomach, lower back, chest, upper back, shoulders, neck head, face, relaxing your jaw and eyes and then gently down your arms all the way to your fingertips).

You could also try a shorter practice by focusing on larger body parts instead (for example feet, legs, tummy, chest, back and slowly up into the rest of your body).

Some people find giving themselves suggestions can also help – for example “my arm feels warm, gently heavy and relaxed”. There are some more simple instructions at the end of this section.

Some general tips

- Relaxation is a skill that becomes easier with regular practice.
- Do not expect results straight away – it can take a while to allow a body that is used to holding tension to relax.
- If you need to cough, sneeze, scratch or change position while you are relaxing, please do so.
- Relaxation can help you manage your pain; it won't get rid of your pain.
- Relaxation is just one of the pain management strategies which combined with the others may help you cope and increase your feeling of well-being.
- Many things can affect your experience of relaxation – try not to get disheartened if you find there are times when it is less helpful.

I can't relax – what should I do?

There are lots of reasons why people can't relax which may include:

- **Trying too hard** – when learning to relax, many people really focus and try hard to relax. However, “trying hard” often means getting tense in order to achieve it and often leads to a non-relaxed state. Instead, see if you can gradually *allow* your body and mind to relax. Remember relaxing is a gradual process and it takes practice to simply go with the flow of the technique.
- **Difficulties concentrating** – many people find keeping focused difficult. This can be due to pain, medication or lack of sleep. It is normal for your mind to wander, especially when you are trying stay focused on the same thing for a while. Instead of thinking about it too much, when you notice your focus has changed, simply and gently bring it back to your relaxation practice. You may also find it helps to start with just a few minutes practice and build up slowly.
- **Not feeling entitled to relax** – some people say it is hard to set aside time for themselves to relax when they feel they do not do enough to justify it. If this is the case for you, perhaps write down the thoughts you notice about setting aside time for you, and then use some of the ideas in the “thoughts handout” to help with these.
- **Finding the feelings of relaxing uncomfortable or frightening** – if you are used to a lot of tension, you may find the light or floaty feelings of relaxation quite difficult. Try practicing for shorter periods of time to begin with so you just start to relax – you can build up slowly over time. If you wish to feel more grounded, try taking your attention to points of your body that are in contact with the surface supporting you. Some people enjoy the floaty light feeling or experience a gentle heaviness. Remember there is no right or wrong.
- **Believing it is a waste of time** – some people don't see any value in relaxing, which will make it hard to focus. Doing something because you've been told to is rarely successful. Jot down the pros and cons of relaxing (honestly!). Does this change anything? If not, maybe leave it for now, but come back to it in a few months and see if your view has changed.
- **Being too tired** – although some people use relaxation as a way to help them drift to sleep, if you always practice when tired, you may find you always fall asleep rather than experiencing a relaxed but awake state. That is fine if it suits you. If you want to relax at different times of day, you will also need to practice when more awake. You could also try relaxing for shorter periods of time, perhaps setting a gentle alarm for 10 minutes or try keeping your eyes open and softly focus on a spot in front of you.

In Summary...

Making space in your life for relaxation is one of the self-management strategies to help live well with pain. The sections on other self-management strategies, such as mindfulness, breathing techniques, pacing and movements have more suggestions.

If you're finding things very hard right now and the tips on this page don't feel possible, it is ok to ask for help. See our pages on seeking help which includes support for your mental health.

Setting time aside to relax is very important to unwind. Everybody has their own way of doing this, and one person's relaxation may be different from someone else's. Aim to develop a range of activities and ways of spending your time that allows you to relax and pace your daily life. Perhaps write some of these ideas down if it helps?