

Breathing and Relaxation for Pain Management

Simple Techniques to Calm Pain and Support Recovery

1 How Breathing Affects Pain

The way you breathe has a direct and measurable effect on how much pain you feel. When you are in pain or stressed, breathing tends to become shallow and fast — this activates the sympathetic nervous system (the body's 'fight-or-flight' response), raising cortisol levels, increasing muscle tension, and amplifying pain signals throughout the body.

In contrast, slow, deep diaphragmatic breathing activates the parasympathetic nervous system — the body's 'rest and recover' mode. This lowers heart rate, reduces cortisol, decreases muscle guarding, and helps calm the nervous system's pain response. Even a few minutes of deliberate breathing can shift your body out of a pain-amplifying state.

Breathing is the only part of your autonomic nervous system you can consciously control — and it directly affects how much pain you feel.

2 The Diaphragmatic Breathing Technique

Belly breathing — also called diaphragmatic breathing — is the foundation of all relaxation techniques. Practise this twice daily and use it any time pain feels heightened.

Step	What to Do
1	Sit or lie in a comfortable position. Place one hand on your chest and one hand on your belly.
2	Breathe in slowly through your nose for 4 counts — feel your belly rise, not your chest.
3	Hold gently for 1–2 counts.
4	Breathe out slowly through pursed lips for 6 counts — feel your belly gently fall.
5	Repeat for 5–10 breath cycles. Aim to practise 2–3 times daily.

3 Box Breathing for Flare-Ups

Box breathing is a structured technique used in military training and pain clinics to rapidly calm the nervous system. The pattern is simple: inhale for 4, hold for 4, exhale for 4, hold for 4. Each phase is equal, creating a steady, rhythmic cycle that interrupts the stress response within minutes.

Phase	Duration	What It Does
Inhale through nose	4 counts	Draws oxygen in; begins to slow heart rate.
Hold (lungs full)	4 counts	Allows oxygen exchange; creates a brief calming pause.
Exhale through mouth	4 counts	Activates the parasympathetic system; releases muscle tension.
Hold (lungs empty)	4 counts	Completes the cycle; deepens the relaxation response.

Use this technique before or after exercise, during a flare-up, or any time pain feels overwhelming. Four cycles (about 1 minute) is often enough to notice a difference.

4 Progressive Muscle Relaxation (PMR)

Progressive Muscle Relaxation (PMR) involves systematically tensing and then releasing specific muscle groups throughout the body. This process trains the nervous system to recognise — and reduce — excess muscle tension, which is a common contributor to ongoing pain. Even a simplified 5-minute version practised daily has been shown to produce measurable reductions in pain scores over time.

Body Area	Tense For	Then Release
Feet and calves	5–7 seconds	Let go completely — notice the warmth and heaviness.
Thighs and buttocks	5–7 seconds	Allow the muscles to soften fully.
Abdomen and lower back	5–7 seconds	Breathe out as you release — feel the tension drain away.
Hands, arms and shoulders	5–7 seconds	Drop your shoulders; unclench your hands.
Face and jaw	5–7 seconds	Relax your jaw and forehead — let your face go slack.

5 Key Takeaways

KEY TAKEAWAY 1

Your breath is a direct dial on your pain system. Slow, diaphragmatic breathing activates the body's 'rest and recover' mode, reducing cortisol, lowering muscle tension, and calming pain signals. It costs nothing, needs no equipment, and can be used anywhere — make it your first response to any flare-up.

KEY TAKEAWAY 2

Short and regular beats long and occasional. Five minutes of deliberate breathing or PMR twice a day produces more lasting change than a single 30-minute session once a week. Consistency builds new nervous system habits. Set a reminder and treat it like any other part of your rehabilitation programme.

KEY TAKEAWAY 3

Combine techniques for greater effect. Box breathing is ideal for acute flare-ups and pre-exercise calming. Diaphragmatic breathing is your daily foundation. PMR works best in the evening or after activity to release accumulated tension. Used together, they address breathing, nervous system regulation, and muscle tension — the three key pathways through which relaxation reduces pain.