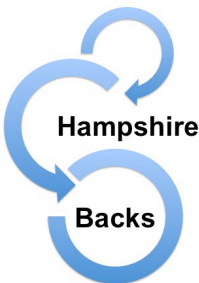


Stress and Pain:

Your guide to switching on the relaxation response

As a part of getting ready for surgery, treatments and reducing pain

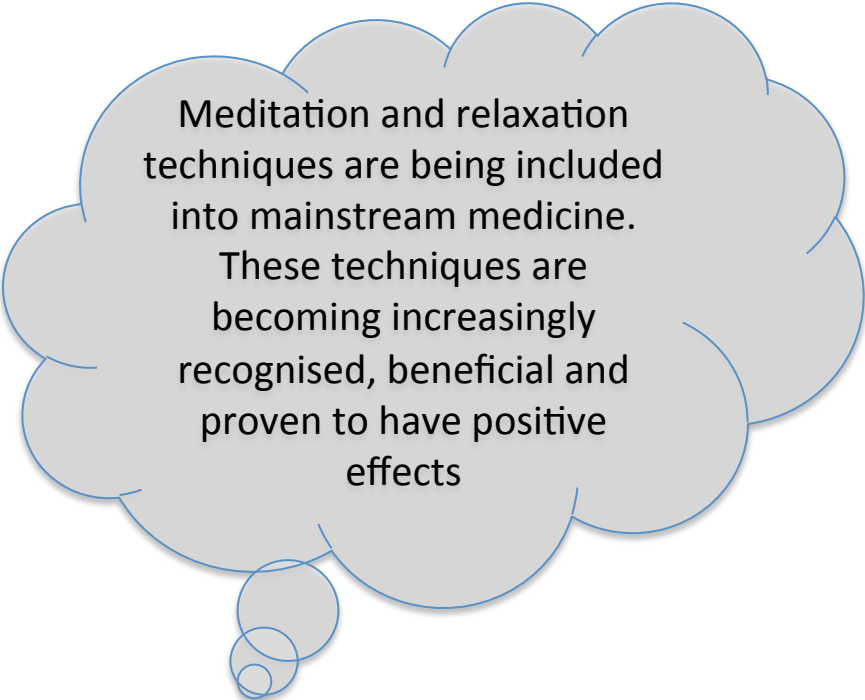


Why is this important?

Whether you are having surgery or you are in a lot of pain, there are always great benefits you can receive from reducing the body's stress response and eliciting the relaxation response.

As humans, we have a highly evolved nervous system with high levels of intelligence. We are social creatures who often act based on emotions but we also spend a lot of time worrying and imagining a bad outcome. Therefore it is possible that we turn on the stress response in our bodies purely through thinking about something.

Cognitive behavioural therapy (CBT) is well known for its benefits in treating chronic pain and altering beliefs and thought patterns. Thus, if we can achieve less pain and good results with an intervention that mainly focuses on the mind, it more than highlights the role of the mind in the individual pain experience. We must not forget about the proven physical therapies but the combination of both physical and mental interventions is most likely to give the best results. Therapies that look at the whole person include relaxation, mindfulness training and meditation. They have proven effects reaching far beyond reduced stress and anxiety.



Meditation and relaxation techniques are being included into mainstream medicine.

These techniques are becoming increasingly recognised, beneficial and proven to have positive effects

What happens when we stress

- If we worry or feel stressed, our body turns on the same mechanism causing physiological responses similar to those of animals
- We do not resolve conflict in the same way-we don't fight or flee when we encounter stress
- the normal stress response kicks off a cascade of hormonal and other bodily changes that activates or depresses certain body functions and systems
- If a person is **chronically mentally stressed**, it will compromise health
- Therefore you need strategies and tools to reduce this unhelpful response and to turn on the “relaxation response”
- Stress-reducing strategies are becoming widely used and are effective in treating pain and stress
- There are numerous such techniques (meditation, mindfulness, relaxation) which will be explained
- We will look at the link between stress and pain, giving you the tools you need to switch on the relaxation response and speed up your recovery

Stress response vs. Relaxation response

THE STRESS RESPONSE

“Fight or flight”

Heart rate and blood pressure raises

Hormones released (adrenaline and glucocorticoids)

Muscles contract and tighten

Body prepares for danger

Switched off immune, digestive, growth and reproductive systems

Weakened immunity and fertility

Emotional distress

THE RELAXATION RESPONSE

Parasympathetic nervous system switches on-better digestion, memory, immunity

Body is free of danger in a state of rest, enjoyment and physical renewal

Heart slows and blood circulation flows to body's tissues, providing oxygen and nutrients

Good for fertility, body conserves resources it needs, reduced blood pressure

Higher levels of growth hormone and serotonin

Boosts immune system

Better healing

Feeling happier

Stress and pain

Stress is a normal response to stressful events and it is there to protect you, help you stay focused, alert or even save your life. So in some cases it can be helpful, such as meeting important deadlines and challenges. However it is only up to a certain point that the stress response is no longer helpful and can actually cause damage your health, mood, productivity, relationships and your quality of life. Prolonged exposure to stressful situations means that your body is constantly in emergency mode and it takes it toll. The good news is that you can learn to recognise the symptoms of your stress and learn how to switch it off and turn on the relaxation response.

Through relaxation techniques, you can calm the excited nerves, relax tensed-up muscles and reduce the hormonal response. With enough motivation and practice, one can learn to elicit a relaxation response in the body through specific mental exercises which will create peace and rest, much needed for the body and the mind to regain its balance for effective healing, coping and well-being.

Many people who live with constant or frequent pain have tried multiple (mainly physical) treatments but with no long-lasting benefit. On the other hand, stress-reducing therapies offer a holistic approach looking at the mind, emotions and the body as well as increasing people's self-control and self-efficacy.

How to achieve relaxation and switch off stress??

There are various specific methods to achieve a sense of deep relaxation. Some of these include yoga, meditation and repetitive prayer. For the best outcome, they need to be practised regularly for about 15 minutes once or twice a day. Most people find that this can be easily done in the morning or evening before going to sleep.

1. **Guided visualisation:** Sit or lie comfortably, close your eyes and imagine a soothing waterfall or a relaxing light shining on you and spreading throughout your whole body. With this, you feel more and more relaxation as the tension is washed away from your body and your mind. Try to make your visualisation as real as possible, imagining all the sounds, smells and vivid colours.
2. **Guided body scan:** This method is best performed lying down on the back with eyes closed. Imagine spreading sensation of softness and relaxation from head to toe. Notice how your whole body feels, if there is tension, anxiety or calmness and relaxation. Focus on the areas that feel tense and imagine the tension going away.
3. **Diaphragmatic breathing:** Sitting comfortably, simply focus on your breath. Inhale deeply, being aware of how your chest rises and then exhale, focusing on letting go of all the tension. If thoughts come into your mind, try not to pay attention to them and return back to your breathing.
4. **Repetition of a self-chosen word:** Sitting or lying in a comfortable position with eyes closed, mentally repeat a chosen word or phrase such as “Om”. Identify a word that works best for you and one who makes you feel calm and focused on the present moment.

Mindfulness

Mindfulness is gaining more popularity and is often used in pain clinics. It has roots in Buddhist practices and we learn how to live in the moment, observing without judgement the present and letting go of the past or future in the mind. Mindfulness is an important component of many established treatments such as yoga, massage, reflexology etc. There is scientific evidence for these techniques and you would be surprised at the increasing numbers of people practising it. This effect results in both physical and psychological benefits as well as improved health attitudes and behaviours.

Benefits:

- **Serotonin** is a natural hormone essential for normal brain activity and boosting mood and energy. Medications for mood disorders include serotonin. Meditation is a natural way to boost serotonin.
- **Endorphins** are neurotransmitters created naturally by the body to alleviate pain and they are responsible for feelings of pleasure and a sense of well-being. Endorphins can lower blood pressure and fight cancer. Mindfulness meditation and exercise raise endorphins.
- Can control pain by breaking anxious and depressive thought patterns and giving control
- Lowers blood pressure, boosts immune function and can stop binge eating
- Helps with other physical and psychological problems (psoriasis, sleep trouble, anxiety, depression)
- Mindfulness is about focusing on your breath, another calming sensation or image. The idea is to observe what is going through your mind but letting go of all the thoughts and emotions without making judgements.
- Some studies suggested that mindfulness training increases brain connectivity and increases “processing” neurons of grey matter which govern memory, self-awareness, compassion and decreased “amygdala” which deal with fear and stress.

Deep relaxation

Relaxation works similarly to mindfulness but it is important to point out that it is **deep relaxation** that activates the parasympathetic nervous system. Deep relaxation isn't about relaxing on the sofa with a cup of tea but it is a state of deep relaxation where your mind switches off and tension is released from the body. This effect will be achieved by learning a specific technique such as meditation or guided imagery and not by forcing yourself to relax.

New research from Harvard Medical School showed that deep relaxation methods such as yoga or meditation activate “disease-fighting genes”. Specifically this involved disorders including pain, infertility, high blood pressure and rheumatoid arthritis. These changes occurred as a result of the “relaxation effect”. Our genes have been shown to be responsive to behaviour, mood and environment as well as being able to switch on and off. These changes can occur even when the people who have never practised relaxation start this process.

These benefits of the relaxation effect were increased with regular practice and the more they practised, the greater their chances of staying healthy, free of arthritis, joint pain, stronger immunity, healthier hormone levels and lower blood pressure. This shows how important a person's state of mind really is, especially in terms of the mind-body connection and it demonstrates the interaction between the physical, psychological and genetic factors.

Health benefits of deep relaxation

1. *Lowers blood pressure*
2. Increased immunity
3. Increased fertility
4. Emotional balance
5. Relieves IBS
6. Anti-inflammatory
7. Calmness

Other ways to relax

- There is no single method that works best for each individual
- It is best if you find a method that works for you
- It doesn't have to be a technique described here
- Other great ways to get the relaxing effect is through yoga, pilates, playing team sports, running or generally any exercise that you enjoy
- Gardening, cooking, cleaning or fishing can also be great ways to relax
- Do what works for you and see how you feel

More info at: www.hampshirebacks.co.uk

