

# Relaxation

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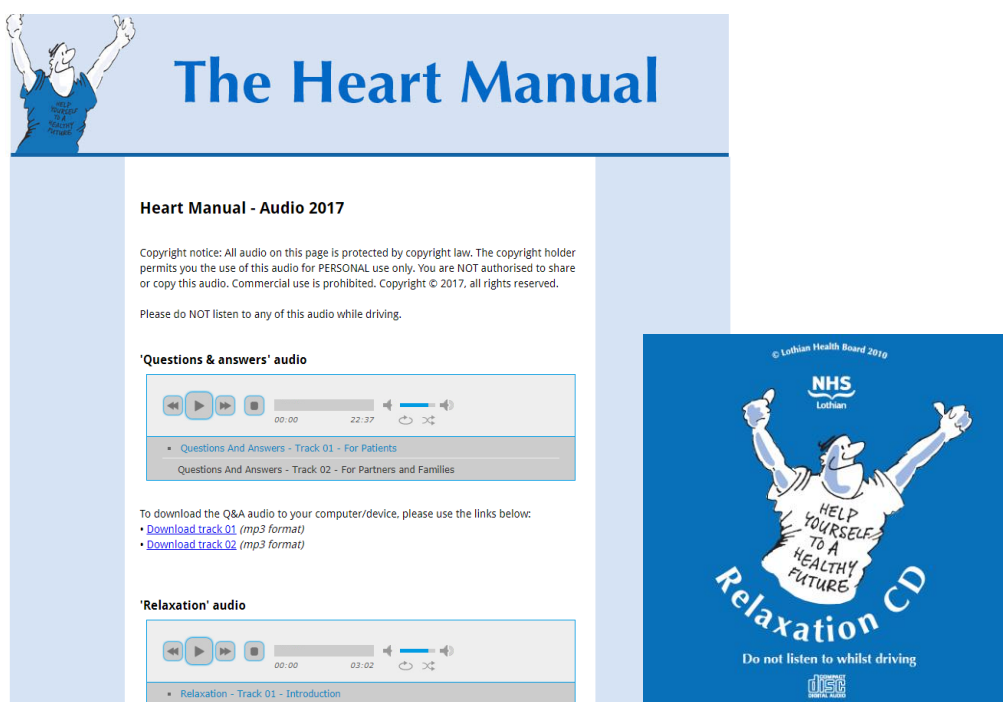
Breathing



## Relaxation

Relaxation is a well-established part of cardiac rehabilitation. It has also been an integral part of the Heart Manual programme since its introduction in the early 1990s. In a recent audit of patient feedback, relaxation was frequently reported as having a positive impact on their daily lives and proved advantageous for cardiac rehabilitation. Patients found that they adopted it easily into their daily routine and supported pacing and stress management. Using the Heart Manual relaxation programme resulted in positive outcomes including better sleep quality, diet and change in attitude towards life (Ranaldi, 2018).

The Heart Manual relaxation programme is available on CD and online, where it can be either streamed or downloaded for use on the patients' personal device (e.g. phone, tablet etc). This link can be found in the Heart Manual.



The image shows a screenshot of the 'The Heart Manual' website. At the top left is a cartoon character with arms raised, wearing a blue t-shirt. The main title 'The Heart Manual' is in large blue letters. Below this, there is a section titled 'Heart Manual - Audio 2017'. A copyright notice states: 'Copyright notice: All audio on this page is protected by copyright law. The copyright holder permits you the use of this audio for PERSONAL use only. You are NOT authorised to share or copy this audio. Commercial use is prohibited. Copyright © 2017, all rights reserved.' A warning says 'Please do NOT listen to any of this audio while driving.' There are two audio player sections. The first is for 'Questions & answers' audio, with a track list: 'Questions And Answers - Track 01 - For Patients' and 'Questions And Answers - Track 02 - For Partners and Families'. Below it are download links for 'Download track 01 (mp3 format)' and 'Download track 02 (mp3 format)'. The second audio player is for 'Relaxation' audio, with a track list: 'Relaxation - Track 01 - Introduction'. To the right is the CD cover for 'Relaxation CD', featuring the same cartoon character with arms raised, wearing a white t-shirt that says 'HELP YOURSELF TO A HEALTHY FUTURE'. The cover also includes '© Lothian Health Board 2010', 'NHS Lothian', and the warning 'Do not listen to whilst driving'.

The Heart Manual Relaxation Resources – Online (MI Edition) & CD cover (2019)

## Use and evidence of relaxation

A systematic review and meta-analysis on relaxation therapy for rehabilitation and prevention in ischaemic heart disease examined 27 studies (van Dixhoorn and White 2005). The benefits include:

- Physiological
  - Reduction in resting heart rate
  - Increased heart rate variability
  - Improved exercise tolerance
  - Increased high-density lipoprotein cholesterol
- Psychological
  - Reduction in anxiety and depression
- Cardiac effects – reduced frequency in the occurrence of
  - Angina pectoris
  - Arrhythmia
  - Exercise induced ischemia
- Social
  - Faster return to work

Cardiac events occurred less often, as well as cardiac mortality. These findings are impressive and support its continued use in cardiac rehabilitation. Neves et al (2009) found the relaxation has a positive effect on positive stress and hemodynamic variables (e.g., blood pressure) over and above that produced by cardiac rehabilitation alone. Another systematic review examining the effectiveness of relaxation on anxiety and depression among older adults in community and hospital settings supported its positive effects (Klainin-Yobus et al. 2015). More recently relaxation has been studied alongside mindfulness interventions that have increasingly been employed to support patients with depression. Relaxation appears to compare favourably with mindfulness but the study was of short duration so further research is need to assess the relative long terms effects (Costa and Barnhofer 2016).

The physiological effects of relaxation can be seen to be the opposite of the stress response. Relaxation can therefore promote physical effects including:

- Lowered blood pressure
- Muscle relaxation
- Warming of hands & feet
- Feeling calm or sleepy
- Feelings of heaviness in the limbs

There are a number of ways to achieve a relaxed state, one of which is breathing correctly which will be discussed in the next section. Another is using the relaxation resources employs a number of different techniques such as: imagery, where you may imagine yourself to be in a place where you have felt safe, warm and content; or progressive relaxation where you are guided to relax different parts of your body and learn to recognise the difference in feeling between a relaxed or tense muscular state. Individuals carry tension in their bodies in different ways. Some people tense their shoulders, others clench their jaw.

Often we are unaware of where or when we tense our bodies. The Heart Manual relaxation resources aim to first increase self-awareness of this bodily tension and then encourage relaxation in these areas.

As in learning to breathe correctly, practising relaxation may be difficult at first because individuals are learning to undo long-term habits that they may not have been aware of. Patients may be resistant to the idea of relaxation as it may be alien to the way they unwind. Others may take a dislike to the relaxation resources either because of a dislike of the music or the voice. These are issues that the facilitator can help address, because many patients share this initial reaction. Also there are a number of voices to choose from – both male and female. Almost half of Heart Manual patients will take to it immediately, others will take longer.

However, those who do not practise relaxation at all are in the minority. The message we give at the Heart Manual is that like good breathing, practice makes perfect. It is also important to emphasise that the evidence suggests that those who practise relaxation do better. Motivational interviewing techniques may also be useful in managing resistance to practising relaxation.

## There are a number of practical considerations for safe and successful relaxation

- **Protected time (no interruptions).** Try and set aside time each day when you are unlikely to be interrupted.
- **Choose a safe place.** A chair with arms or even on the floor is advised. You need to avoid falling in case you fall asleep.
- **Frequency of practice.** The best results are achieved when relaxation is practised at least once daily, ideally twice per day.
- **Practise when alert.** This will help you learn how to achieve relaxation when you most need it.
- **Encourage generalisation.** Once you are able to achieve a relaxed state, try and reach this at other times when you may be tense for a particular reason.
- **Use written prompts.** Include relaxation in your daily activity plan.
- **Do not use while driving.** Often people fall asleep when practising relaxation, so be careful not to be in charge of any machinery when you practise.
- **Take time to get up from relaxation.** Do not rush to stand up as you may become dizzy.
- **Panic reaction.** If this is due to a feeling of lack of control due to the physical sensation, keep your eyes open and avoid lying on the floor. Try to be slightly more upright.
- **Disturbing thoughts.** The process of relaxation may lead the patient to ruminate on disturbing experiences. In this case it may be better to use other techniques such as breathing exercises or distraction techniques.

Problems with relaxation should be followed up and discussed with the patient, as there may be underlying issues such as anxiety or abuse that may need to be addressed and referred on to a clinical psychologist.

The benefits of relaxation are not confined to those with a cardiac condition (Dunford and Thompson, 2010; Ritz et al. 2013; van der Veek et al. 2007; Jorm et al. 2008; Manzoni et al. 2008). At the Heart Manual we would encourage everybody close to the patient to use the relaxation resources. This includes friends or family, and of course the facilitator!

## Breathing

Abnormal breathing patterns are common among those who have chronic disease as well as those with chronic pain, those who are anxious, and those who have undergone operations or who talk a lot as part of their job.

Sighing, shuddering rhythm in breathing and stopping to take extra breaths when talking, are symptoms of hyperventilation which can bring about unwanted side effects.

These include:

- Chest pain
- Feeling weak
- Sudden dizziness or faintness
- Tingling feelings in the fingers or mouth
- Sudden feelings of fear
- Panic

## There are two main types of hyperventilation

- Breath holding
- Breathing with the chest instead of the diaphragm

## Breath Holding

Holding the breath is a natural part of the fight or flight mechanism. It can be triggered off by something simple such as:

- The phone ringing
- A sudden pain or twinge
- A memory of something upsetting
- Having to concentrate very hard on something

Physical effort can also set off breath holding:

- Lifting something
- Climbing stairs
- Pulling
- Pushing
- Gripping

Holding the breath like this:

- Makes the heart beat faster
- Increases blood pressure
- Increases the adrenaline in the blood

Breath holding becomes a habit; therefore, it is important to check that you are not holding your breath when carrying out common tasks such as lifting, driving in heavy traffic, walking in a hurry, lifting bins or dialling a phone number. Also when doing the daily exercises, don't forget to breathe!

## Breathing with the chest instead of the diaphragm

Another problem is breathing with the upper chest rather than the diaphragm muscle. Many people do this without realising it.

As babies and young children we breathe effortlessly and in the correct way. However as we get older we may develop different habits of breathing as a reaction to stress or pain. When stressed or in pain we tend to breathe with our chest rather than the stomach; this is part of the flight or fight mechanism which is designed to help us cope in an emergency. The problems begin when we breathe as if we are in a permanent state of emergency.

### **Try this for yourself and others**

**A little test:** Close your eyes. Place your hands on your stomach and chest and try and breathe normally, not too deeply. What is happening to your stomach as you breathe in?

If your stomach goes out slightly on the 'in' breath, and in on the 'out' breath, you are breathing correctly. This is called diaphragmatic breathing; the diaphragm is pushed down as we breathe and this pushes the stomach out slightly.

If you find that your chest is rising when you breathe in and your stomach is also sinking, you are breathing in the wrong way.

It is a good idea to encourage the patient to try this little test. It is often a surprise to discover that something you feel is natural and do all the time may be wrong.

Practising breathing is the first step to good relaxation. Therefore it is necessary to practice. You may find that you need to close your eyes at first and place your hand over the stomach to check that you are breathing correctly. This should be done for a few minutes as often as possible each day. At first you may feel uncoordinated and it can be frustrating, however getting annoyed with yourself will make the breathing more erratic. As with relaxation it does get easier, and with practice, correct breathing will once more be an automatic activity.

It is also a good idea to check often that you are not breath holding. This can be done whatever you are doing.



## Teaching diaphragmatic or abdominal breathing



Place one hand on your chest and the other on your abdomen. When you take a deep breath in (through the nose) the hand on your abdomen should rise higher than the one on the chest. This helps the diaphragm to pull air into the base of the lungs.



Pause for a moment and exhale slowly through your mouth, feeling your hand on your abdomen move in and the hand on your chest move in and down.

N.B. it is important to tell your patient if practising diaphragmatic breathing produces chest pain or dizziness, to stop immediately and let you know.

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