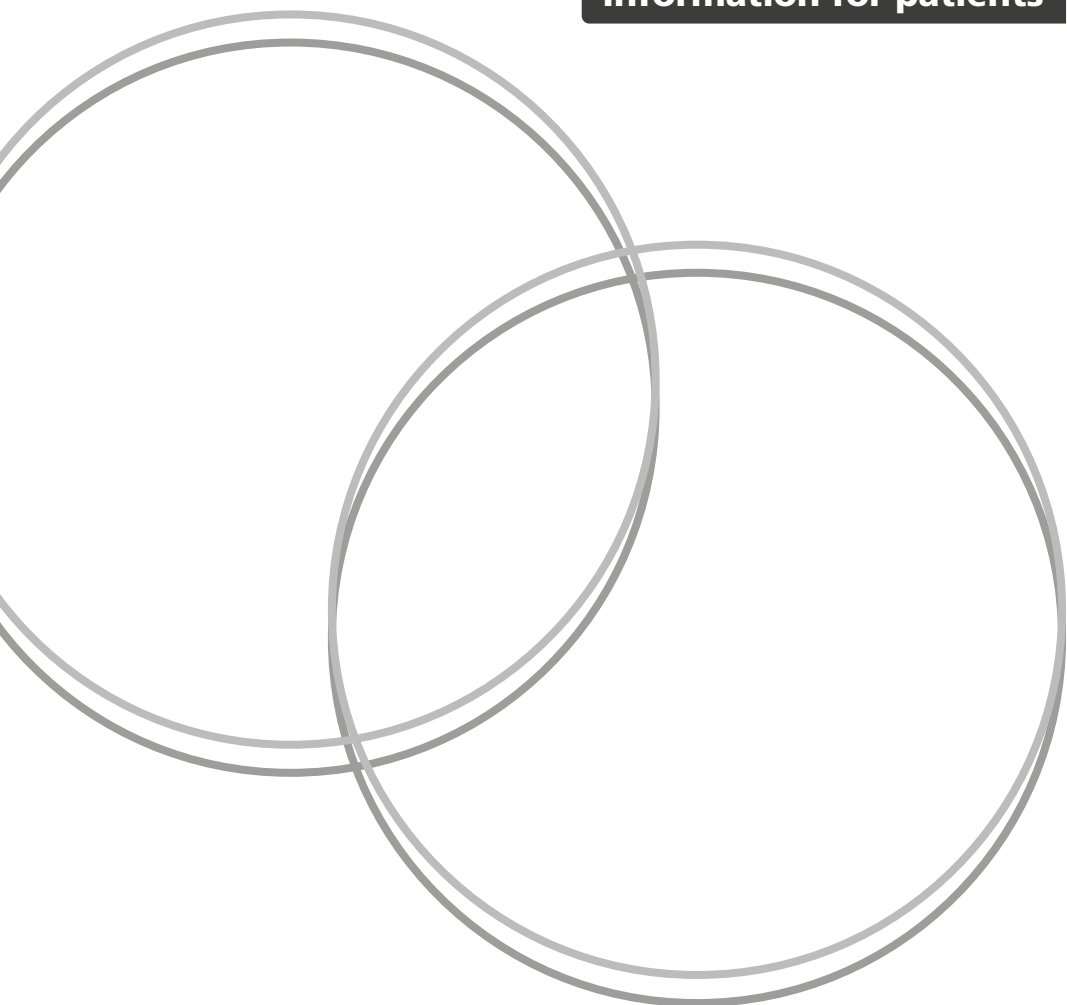




Oxford University Hospitals
NHS Foundation Trust

Upper GI Biofeedback

Information for patients



We have developed this booklet to go alongside the advice you were given during your upper GI biofeedback procedure.

The aims of this booklet are:

- To support you so you can maintain the biofeedback therapy at home.
- To answer any questions, you may have.
- To provide useful resources.

Please keep this booklet safe so you can refer to the information when necessary.

What is rumination syndrome?

Rumination syndrome is a condition where food regularly comes back into your mouth either during or shortly after eating. This may appear like vomiting but will often be unconscious and feel effortless. You may actually feel sick (nauseous) when this happens. Sometimes rumination can happen whilst you are stressed or anxious and can be accompanied by other symptoms like persistent burping/belching.

The rumination is caused by the unintentional contraction (tightening) of the tummy muscles and the diaphragm (muscle that separates the tummy and chest) which force the stomach contents up and out of the oesophagus (food pipe) and into the mouth.

Often it will taste pleasant, as it did when first eaten, and you may find that you either swallow it back down or spit it out.

Although you are not doing this deliberately and were probably not aware of it, much research suggests that this is a learned behaviour (or 'habit') which starts from an unpleasant sensation during digestion.

What does the biofeedback involve?

Biofeedback is a form of treatment for rumination syndrome that may also be effective in behavioural belching disorders. It might involve a physiology test which shows that your abdomen (tummy) muscles are contracting which is what causes rumination.

Biofeedback helps because you will be able to see what is happening, and we will go through some breathing exercises and techniques which can help you to retrain the muscles and to suppress the rumination.

The following breathing technique described below you can help you to improve your symptoms:

Diaphragmatic breathing

Breathing is a natural process which we are unaware of most of the time. It can happen involuntarily (without having to think about it or actively do anything or voluntarily (where you can alter the depth and speed of your breathing by choice).

There are two types of breathing:

- Chest breathing.
- Diaphragmatic breathing (from your tummy area).

Chest breathing is usually part of the fight or flight response and is associated with exercise and stress. As we become adults it can become usual for us to breathe in this way.

Diaphragmatic breathing is more commonly associated with relaxed processes such as sleep, digestion and is natural in babies and children.

It can provide a distraction technique in addition to helping muscles, specifically, the abdominal and diaphragmatic muscles responsible for rumination, to remain relaxed whilst also helping to reduce stress and anxiety.

How do I do diaphragmatic breathing?

To start with, find a quiet room where you can spend at least 15 minutes and follow the steps below:

- Lie flat on your back with your head supported by a comfortable pillow, and with your body and shoulders relaxed. Keep your mouth open throughout, if you find this difficult, please use the mouth guard provided.
- Bend your knees (support with a second pillow if needed) and have your feet slightly apart.
- Place one hand on your chest and the other one on your stomach just below the rib cage.

Step 1

Breathe in and out to determine whether you are chest breathing or doing diaphragmatic breathing. If your hand on your chest moves, then this is chest breathing.

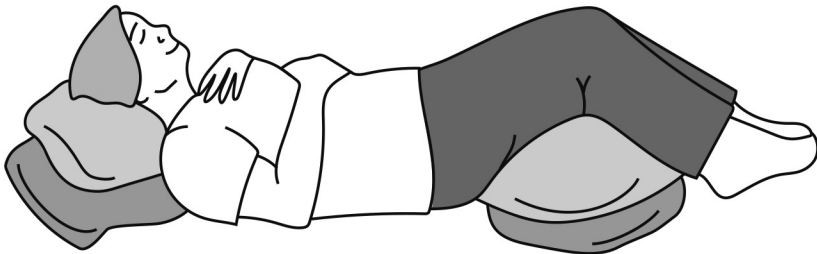


Image 1: Showing a person lying down with a hand on their tummy and the other hand on their chest.

Step 2

To perform a diaphragmatic breath, breathe in slowly and deeply through your nose (for around 3 seconds) so that your stomach pushes the lower hand outwards. The hand on your chest should remain still.

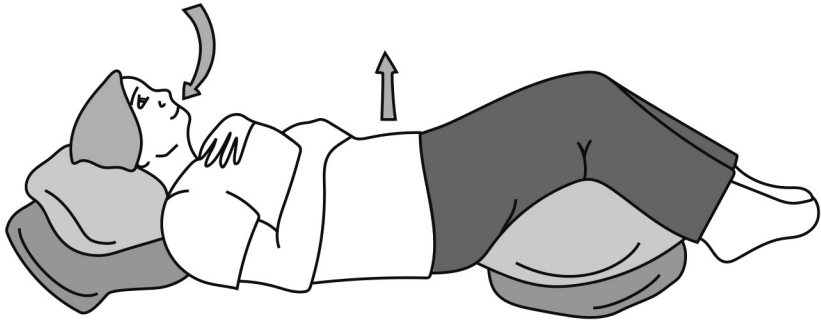


Image 2: Person lying in same position as image 1 with arrows showing breathing in through the mouth and their tummy moving outwards.

Step 3

Let your stomach fall back down as you breathe out (for around 3 seconds), keeping the hand on your chest still.

Step 4

Aim for around 6 to 8 slow deep breaths per minute.

Step 5

Once you have mastered the technique, it may become possible to do it whilst upright and during meals. There are useful smartphone applications (Biofeedback Meditation etc) that you can download free of charge. You can place your phone on your belly button and it detects the motion to confirm you are performing the technique correctly and at the correct rate.

When should I do abdominal (diaphragmatic) breathing?

This diaphragmatic breathing technique should be performed:

- During a meal when you feel an episode of regurgitation / vomiting occur.
- After a meal for three separate 5 minute periods (leaving 10 minutes in between periods).
- After each episode of regurgitation or vomiting.

At first it will feel like this takes effort as you re-learn how to breathe with your abdomen. It is also normal for this to feel unnatural initially, but it will become much easier as you continue to practice and will become second nature with time.

What else can I do to help manage my symptoms?

These measures may not directly suppress rumination, but may help to reduce the unpleasant digestive symptoms which may be leading to the behaviour:

- Reduce food and drink which may aggravate digestive problems such as caffeine, fizzy drinks, alcohol, spicy foods, chocolate and fatty foods (such as: battered and fried foods and pastry.)
- Avoid eating too late in the evening.
- Chew thoroughly and slowly and avoid chewing gum – to prevent ingesting air.
- Eat smaller portions but more regularly.

It may be helpful to keep a diary of when the rumination is worse, noting the types of food or situations you are in, so that you can learn which things to avoid.

It might also be helpful to avoid wearing clothes with tight waistbands as this can increase the pressure around your tummy.

It is important to remember biofeedback and re-training is not an overnight 'cure'. It will take time and commitment to following the advice to help you to overcome the condition.

Try not to become disheartened if you do vomit. Just begin the breathing exercises again and keep trying.

Who should I contact if I have any further questions or concerns?

If you have any questions about your treatment, we would be happy to help. Please call us on:

01865 235 879 / 01865 235 881

Resources

Diaphragmatic Breathing Exercise

<https://my.clevelandclinic.org/health/articles/9445-diaphragmatic-breathing>



Diaphragmatic Breathing Technique (YouTube)

<https://www.youtube.com/watch?v=0Ua9bOsZTYg>



Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust
www.ouh.nhs.uk/information

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