

Rumination syndrome

Information and advice for patients

GI Physiology

What is rumination syndrome?

Rumination syndrome is a condition where recently eaten food comes back up. This is different from vomiting because it usually happens easily and without feeling sick or uncomfortable beforehand.

What causes it?

It happens because the muscles in your tummy tighten without you meaning to. This pushes food back up from your stomach into your food pipe and then into your 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.

This process happens without you meaning to do it, and usually without feeling sick or any warning it is going to happen. However, it is a learned behaviour, known as a habit and is usually due to unpleasant digestive sensations.

How is it diagnosed?

Doctors diagnose rumination syndrome by reviewing your symptoms, your medical history, and results from a test called High Resolution Oesophageal Manometry. This test involves inserting a thin tube through your nose into your stomach. This tube has pressure sensors which can measure the muscle movements in your food pipe and stomach.

How is it treated?

Biofeedback is a highly effective form of treatment for rumination syndrome and belching disorders. It involves undergoing High Resolution Oesophageal Manometry to detect how the stomach muscles move. It helps because you will be able to see it happening. We will show you breathing exercises and techniques to help retrain your stomach muscles and reduce rumination.

Breathing exercises

Breathing is an automatic process we rarely notice or consider. It can occur involuntarily, without having to think about it, or voluntarily, where you alter the depth and speed of your breathing by choice.

There are two types of breathing:

- Chest breathing
- Diaphragmatic (belly) breathing

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, and digestion, and is natural in babies and children. The diaphragm is a large, dome-shaped muscle at the top of your stomach.

Diaphragmatic Breathing is a powerful technique to calm the stomach muscles and prevent rumination. It teaches you to breathe slowly from your stomach not your chest. Practicing this during and after meals helps the stomach muscles responsible for rumination, to remain relaxed so they do not contract and cause rumination. It also helps to reduce stress and anxiety.

How do I do diaphragmatic (belly) 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.
- 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 Diaphragmatic (belly) breathing. If your hand on your chest moves, then this is chest breathing.

Step 2

To perform a diaphragmatic (belly) 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.

Step 3

Let your stomach fall back down as you breathe out through pursed lips (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 when standing upright.

When should I do diaphragmatic (belly) breathing?

This breathing technique should be performed:

- When you feel your trigger for rumination
- Midway through your meals
- After a meal
- 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 diaphragm (belly) and you may even feel tired which is normal. It is also normal for this to feel unnatural to start with, but it will become much easier as you continue to practice. It will become second nature with time. As you may have seen whilst having biofeedback in the department, you use this breathing technique to suppress the contractions and regurgitation or vomiting episodes.

Distraction techniques

Distraction techniques may also be helpful in suppressing rumination by giving you something else to concentrate on. The breathing exercises above are one example of a distraction technique as you are concentrating on your breathing and not your digestive symptoms. Other techniques you can do in addition to the breathing include:

- Reading a book
- Sitting with your mouth open (or slightly ajar if in public)
- Counting things around you
- Counting backwards
- Holding your tongue to the roof of your mouth

These are just examples. It can be anything that occupies your thoughts and works for you, so it is worth experimenting.

What else can I do to help manage my symptoms?

The following measures may help to reduce the unpleasant digestive symptoms which may be causing your rumination. They are also good for digestive health:

- Cut down on caffeine (coffee, tea, energy drinks).
- Avoid fizzy drinks.
- Limit alcohol.
- Reduce fatty or spicy foods.
- Eat less chocolate.
- Avoid fried or battered foods.

- Cut back on pastry-based foods.
- Limit rich or heavy foods.
- Avoid eating too late in the evening.
- Chew thoroughly and eat slowly to avoid swallowing air.
- Eat smaller amounts often.

Biofeedback and retraining take time – they are not a quick fix. It will need effort from you, so try to stay committed.

If you regurgitate or vomit, do not worry – this is not a failure. Simply start the breathing exercises again and keep going.

Contact Us

If you have any questions about your treatment, please do not hesitate to contact the GI Physiology Department.

Telephone: 0121 507 2490 Monday to Friday between 8am and 4pm

Further information

This YouTube video explains how to practice diaphragmatic breathing

<https://youtu.be/N9SfhUXOXnU?si=uueU4CUsvrbHog5M>

(Web link accessed 22 December 2025)

Sources used for the information in this leaflet

Sasegbon, A., Hasan, S. S., Disney, B. R., & Vasant, D. H. (2022). Rumination syndrome: pathophysiology, diagnosis and practical management. *Frontline gastroenterology*, 13(5), 440–446. <https://doi.org/10.1136/flgastro-2021-101856>

Images: Oxford University Hospitals NHS Foundation Trust (2024) *Upper GI biofeedback*.

Available at: <https://www.ouh.nhs.uk/media/r02dnike/92775biofeedback.pdf> (Accessed on 09 January 2026)

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A Teaching Trust of The University of Birmingham

Incorporating the Midland Metropolitan University Hospital, City Health Campus, Sandwell Health Campus and Rowley Regis Hospital.

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M8779

Issue Date: January 2026

Review Date: January 2029