York and Scarborough Teaching Hospitals
NHS Foundation Trust

What is Entonox?

Information for patients, relatives and carers

ⓘ For more information, please contact your local plaster room or orthopaedic department

Contact details are on page 6 of this leaflet

What is Entonox?

Entonox is a medical gas used to relieve pain during certain orthopaedic procedures. It is a mixture of half nitrous oxide and half oxygen. The compressed gas is stored in cylinders and is fast acting providing pain relief during orthopaedic procedures such as:

- Fracture/dislocation reduction.
- Removal of K-Wires.
- Cast moulding.
- Suture/clip removal.
- Wound dressing.

Things to consider before use

If you wish to use Entonox during your procedure you must tell us about any medical conditions you have.

Entonox can cause a rise in intra-cranial pressure so should not be used if you have recent:

- Head injuries
- Injuries to the face and jaw.
- Suspected or known increased pressure on the brain.
- Eye surgery, involving gas bubble insertion.

Other examples where air may be trapped in the body and where Entonox should never be used are:

- Pneumothorax
- Abdominal distension
- Suspected intestinal obstruction.
- Bullous emphysema
- Middle ear procedures
- Following a recent dive (last 48 hours).

Other medications

Please tell staff if you are taking any of the following:

- Methotrexate - taking Entonox may have an effect on your blood cell count.
- Amiodarone, bleomycin or nitrofurantoin – there is a possibility of toxic effects to the lungs.

In cases of prolonged use (24 hours or more frequently than every four days), close clinical supervision and close monitoring of your blood levels are required as Entonox may affect the way your body uses vitamin B12 which may affect your blood cell count.

Driving and using machinery

You must wait at least 30 minutes after the use of Entonox before driving or using machinery. Please speak to your healthcare professional if other forms of pain relief have been used.

How to use Entonox

Entonox is self-administered. This means that you have to be able to hold the mouthpiece and inhale the gas. If this is not possible please speak to the healthcare professional performing the procedure.

We will make sure you are able to use the Entonox equipment. The supply will be properly set up and ready for you. The mouthpiece we give you has a demand valve. The demand valve ensures that gas is released for you only when you suck on the mouthpiece.

- It may take up to two to three minutes of inhalation before the gas takes effect. The effect will quickly wear off when you are not breathing in the gas.
- It is more effective if you keep a regular rhythm when breathing in and out.
- It is common to experience a dry mouth and throat when using Entonox.
- If you experience earache when using the gas please discontinue use and tell staff.

Common side effects:

- Dizziness
- Light-headedness
- Nausea
- Tingling
- Disorientation

Other side effects include:

- Ear problems due to increased pressure inside the ear.
- Tiredness
- Bowel enlargement due to trapped gas.

Rare side effects:

- Effects on nerve function (numbness and weakening).
- Breathing difficulties
- Addiction
- Notify your healthcare professional if you experience any of these side effects.

More information can be found on the
BOC healthcare website: www.bochealthcare.co.uk
(accessed November 2025)

Useful contact numbers:

York Hospital patients

York Plaster Room
Telephone: 01904 726523
Monday – Friday, 9am to 5pm
Bank holidays: Closed

York Orthopaedic Department
Telephone:
01904 726537

Scarborough Hospital patients

Scarborough Plaster Room
Telephone: 01723 342042
Monday – Thursday
8.30am to 5pm,
Friday 8.30am to 4.30pm
Bank holidays: Closed

Scarborough Orthopaedic Department
Telephone:
01723 368111

Bridlington Hospital patients

Bridlington Plaster Room
Telephone: 01262 423070
Tuesday: pm only
Thursday: pm only
Bank holidays: Closed

Bridlington Orthopaedic Department
Telephone:
01262 606666

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

Jo Bradley-Smith, Orthopaedic Practitioner Lead

Telephone: 01904 726523

Email: Joanne.bradley-smith@nhs.net

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website: www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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