# Emergency Department Patient Information Sheets

Worcestershire Acute Hospitals NHS Trust

# Penthrox® for Procedures and Pain Relief in Children and Young People

## What is Penthrox®

Penthrox® (methoxyflurane) is a strong medicine for pain that you breathe in using an inhaler. People sometimes call it the "green whistle." It helps a lot with painful injuries or when you have a procedure done that might hurt.
This medicine is like some used by doctors when they put people to sleep for operations, but it's not as strong. In the UK, it is approved for use in adults and children 6 years and over.


## Good things about Penthrox®

- It works quickly but doesn't last very long.
- The child can control the inhaler themselves.
- It means children don't need needles or injections for strong pain medicine.

## What you need to know before your child is given Penthrox®

The majority of patients can use Penthrox® and a doctor or nurse will ensure that it is safe for your child before prescribing it.

Penthrox® should not be used if:

- Your child is allergic or has had a bad reaction to any anaesthetic given through a mask.
- Your child or family has a history of malignant hyperthermia. This is a condition where a very high fever occurs after being given an anaesthetic.
- Your child has serious kidney or liver problems.
- Your child has significant heart or circulatory problems.
- Your child has recently taken or is taking certain medications such as strong painkillers and some types of antibiotics, anticonvulsants, antivirals and sedative antihistamines. Please inform your doctor about any regular or recent medication and they will advise accordingly.

## Helping your child to use Penthrox®

Before use, a nurse or doctor will show your child how to use the device correctly. Penthrox® is self-administered which means your child will have control of when to use it. It is simple to use with the mouthpiece held in between the teeth and the lips closed around it. Your child will be asked to breathe normally in and out through their mouth. It is important that your child breathes out through the mouthpiece as this collects any exhaled drug vapour rather than it being released into the air. It usually takes 6-10 breaths before the medicine starts working.

Penthrox® has a strong fruity taste and smell. The first few breaths often taste very strong and can cause patients to cough, but the coughing sensation settles after the first few breaths.
Once Penthrox® has started working, your child can breathe it in from time to time when they feel they need more pain relief. When used like this, an inhaler will typically last around an hour. If we need to carry out a painful procedure (such as; applying a cast, dressing a burn or treating a fracture or dislocation) we may ask your child to use the inhaler continuously for a short period of time in order to provide strong pain relief whilst we perform the procedure. When used like this an inhaler will typically last around 20 minutes. Pain relief will continue for several minutes after stopping Penthrox®.

## What are the possible side effects?

The most likely side effects can include:

Dizziness

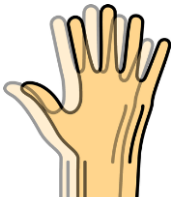
Dry Mouth

Sleepy

Sickness

Headache

Tingling Skin



Double Vision

Flushed Skin

These side effects normally wear off within a few minutes of stopping use. If your child becomes drowsy, they will be unable to hold the mouthpiece to their mouth stopping them from inhaling the vapour and therefore allowing the drowsiness to resolve. If your child becomes drowsy or unresponsive, please alert a member of staff.

Serious side effects are very rare but can include allergic reactions or problems with the liver and kidneys. Return to hospital and bring this sheet with you if your child becomes unwell in the days or weeks following Penthrox®, particularly if any of the following:

- Loss of appetite
- Too much/too little urine
- Vomiting
- Swelling legs / feet
- Yellowing of skin
- Pain below right ribs
- Dark urine
- Pale pooh

## How to use Penthrox®

**1.** Your healthcare professional will prepare the Penthrox® inhaler and place the wrist loop over your wrist.

**2**. Breathe in through the mouthpiece of the inhaler to obtain pain relief. Your healthcare professional will show you how if you are unsure. Get yourself used to the fruity smell of the medicine by inhaling gently for the first few breaths. Breathe out through the inhaler. After the first few breaths, breathe normally through the inhaler.

**3.** If you need stronger pain relief, cover the dilutor hole (on the transparent chamber with charcoal) with your finger during use. Your healthcare professional will show you where the hole is.

**4.** You do not need to breathe in and out of the inhaler all of the time. Your healthcare professional will encourage you to take breaks from the inhaler as this will make the pain relief last longer.

**5.** Continue using your inhaler until your healthcare professional tells you to stop, or when you have inhaled the maximum recommended dose.

Ack
https://www.piernetwork.org/guidelines-penthrox.html accessed 13.07.2026; Mersey and West Lancashire Teaching Hospitals NHS Trust , https://sthk.merseywestlancs.nhs.uk/media/.leaflets/685aca38b5bb66.66616938.pdf accessed 13.07.2026; Royal Manchester Children's Hospital, https://mft.nhs.uk/app/uploads/sites/8/2026/03/Penthrox-leaflet.pdf accessed 13.07.2026

**If you need further advice, please contact the Emergency Department – details below**

**Patient Experience**

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

**Feedback**

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

**Patient Advice and Liaison Service (PALS)**

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

**How to contact PALS:**

**Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net**

**Opening times:**

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.

## For additional medical advice, if your symptoms or condition worsens:

Contact your GP

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| NHS 111: | Telephone 111 |
| Get help with your symptoms, NHS111: | https://111.nhs.uk/ |
| Information to help you manage your health: | www.nhs.uk |

In an emergency telephone 999

Emergency Department (A&E)
Alexandra Hospital
Woodrow Drive
Redditch B98 7UB

Tel: 01527 512030

Minor Injury Unit
Kidderminster Hospital
Bewdley Road
Kidderminster DY11 6RJ

Tel: 01562 513039

Emergency Department (A&E)
Worcestershire Royal Hospital
Charles Hastings Way
Worcester WR5 1DD

Tel: 01905 760743