

General anaesthetics and pholcodine in cough medicines

If you need a general anaesthetic for an operation or procedure, you are usually given a combination of different medicines. One of the medicines may be a neuromuscular blocking agent (or NMBA for short), which are used to facilitate surgery in around half of operations/procedures in the UK.

NMBAs can sometimes cause [anaphylaxis](#) (the most serious type of allergic reaction). In the UK, anaphylaxis to NMBAs is very rare. Fewer than 1 out of every 10,000 people who have a general anaesthetic have anaphylaxis to the NMBA.

Some studies have suggested that an ingredient used in some cough medicines might increase the risk of having anaphylaxis when you receive NMBAs. This ingredient is called pholcodine.

What is pholcodine?

Pholcodine has been used in cough syrups and lozenges since the 1950s. Until 14th March 2023, you could buy them in the UK over the counter, or your doctor could prescribe them – although pholcodine was not recommended in young children due to the risk of side effects.

The evidence that pholcodine works to help soothe dry coughs is not very good. Home remedies like a hot drink with honey may be just as helpful.

On 14th March 2023, the UK's Medicines and Healthcare Products Regulatory Agency (MHRA) recommended that all medicines containing pholcodine should be withdrawn, due to the concerns over a link between pholcodine and risk of anaphylaxis to NMBAs.

Click here for a [list of pholcodine-containing medicines](#) that were available in the UK.

What is the link between pholcodine and anaphylaxis to NMBAs?

A study done in 2005 found that people in Norway used a lot more cough medicines containing pholcodine than those in Sweden. They also had higher rates of anaphylaxis to NMBAs (at least twice the rate in the UK). Because of that study, pholcodine was withdrawn in Norway. Since then, anaphylaxis to NMBAs in Norway has fallen by about 30%, but there have also been changes in how frequently NMBAs are used.

More recent studies from France and Australia have shown that anaphylaxis to NMBAs happens more often in people who had taken pholcodine in the year before their anaesthetic. However, most people who had used pholcodine were fine and did not have anaphylaxis to their general anaesthetic. Importantly, just as many cases of anaphylaxis happened in the people who had not taken pholcodine.

The French study suggests that even when people have taken pholcodine, anaphylaxis to NMBAs is still rare.

What countries have withdrawn pholcodine?

In December 2022, the European Medicines Agency (EMA) recommended that all medicines containing pholcodine should be withdrawn. This decision needs to be ratified by the European Commission before it happens.

In February 2023, the Therapeutic Goods Administration (TGA) in Australia announced that all medicines containing pholcodine will no longer be sold or prescribed and will be removed from pharmacies, and the same recommendation was made in the UK by the Medicines and Healthcare Products Regulatory Agency (MHRA) on 14th March 2023.

Should I worry if I need a general anaesthetic?

Remember that anaphylaxis to NMBAs is very rare.

There are no reliable tests that can be done to predict whether you are at higher risk of anaphylaxis to an anaesthetic if you have used pholcodine before. There is no benefit to you or your anaesthetist in asking whether you might have taken pholcodine-containing cough medicines before. If you need an NMBA, it's important that you have it, since your surgery or procedure may not be possible without it. Even if you have used pholcodine-containing cough medicines before, the risk of anaphylaxis remains extremely small.

Anaesthetists are experts in managing anaphylaxis during anaesthesia. They follow national guidelines to support quick and effective treatment in an emergency.

If you have had an allergic reaction of any kind to an anaesthetic before, you **must** tell your doctors and anaesthetist. Do this as early as possible if you need to have another operation or procedure, so that you can be referred for investigation to help identify which anaesthetic drug might have caused the reaction.



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If you have any other allergies this does **not** put you at higher risk of an allergic reaction to general anaesthetics. This includes anaphylaxis to foods or to non-foods such as antibiotics or insect stings.

Key messages

- anaphylaxis to NMBAs is very rare.
- the evidence that pholcodine helps with coughing is not very good.
- there is some evidence that pholcodine might increase the risk of allergic reactions to NMBAs, but anaphylaxis would still be a rare event.
- several countries are stopping the use of pholcodine in medicines as a precaution.
- in the UK, pholcodine-containing cough and cold medicines were withdrawn as a precautionary measure as of 14th March 2023.

Feedback

Please help us to improve our information resources by sending us your feedback at: -

<https://www.anaphylaxis.org.uk/information-resources-feedback/>

Sources

All the information we produce is evidence-based or follows expert opinion and is checked by our clinical and research reviewers. If you wish to know the sources we used in producing any of our information products, please contact info@anaphylaxis.org.uk and we will gladly supply details.

Reviewer

The content of this factsheet has been peer-reviewed by Dr Paul Turner, Reader in Paediatric Allergy and Clinical Immunology at the National Heart & Lung Institute, Imperial College, London, and Dr Louise Savic, Consultant Anaesthetist and Lead for Anaesthetic Allergy at Leeds Teaching Hospitals NHS Trust.

Disclosures

We are not aware of any conflicts of interest in relation to the review of this factsheet.

Disclaimer

The information provided in this factsheet is given in good faith. Every effort is taken to ensure accuracy. All patients are different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

About Anaphylaxis UK

Anaphylaxis UK is the only UK-wide charity solely focused on supporting people at risk of serious, life-threatening allergic reactions. We provide information and support to people living with allergies through our free national helpline and local support groups. We also campaign and fundraise to achieve our ultimate aim, to create a safer environment for all people at risk of serious allergies. Visit our website www.anaphylaxis.org.uk and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.