

Propranolol

Propranolol is widely used, however, the evidence for use in anxiety is slim and the risks underestimated. Propranolol is toxic in overdose, deterioration can be rapid and occur before medical assistance is available. **NICE does not recommend propranolol** for [generalised anxiety disorder and panic disorder in adults \(CG113\)](#), there other safer and more effective options.

A Healthcare Safety Investigation Branch (HSIB) report was issued in March 2019 it highlighted the risks of propranolol overdose.

Key Points:

- Between 2012 and 2017 there has been a 33% increase in the number of patients reported to have died due to propranolol overdose, with 52 people recorded as having died due to propranolol overdose in 2017.
- Propranolol is licenced in the UK to treat medical conditions that include migraine, cardiovascular problems, and the physical effects of anxiety.
- Propranolol only works on the physiological symptoms of anxiety and therefore should only be used for those symptoms in the short term e.g., exam stress or fear of flying.
- When taken in large quantities, propranolol can act rapidly to significantly decrease the heart rate and blood pressure whilst simultaneously impacting on the body's ability to process sodium, leading to seizures, confusion, or coma. In such cases urgent emergency medical intervention is required.
- There is currently a shortage of glucagon which is the first line treatment for beta blocker overdose.

The full report can be found at <https://www.hsib.org.uk/investigations-cases/potential-under-recognised-risk-harm-use-propranolol/>

There have been a number of fatalities locally the coroner's report below details the most recent.

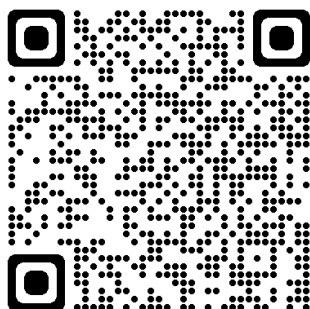
[Aoife McAdam: Prevention of future deaths report – Courts and Tribunals Judiciary](#)

Actions:

- Where propranolol is considered necessary only prescribe a short course and review regularly.
- Consider stopping propranolol. (Please do it gradually and bear in mind that propranolol may be prescribed for another indication e.g. migraine. If propranolol is being prescribed for another indication this should be discussed with the GP or other specialist before changing.)
- Patients should be encouraged to safely dispose of any propranolol tablets they are no longer using.
- Consider the quantity of propranolol prescribed on discharge especially for services users who are at risk of self-harm or suicide.

Please watch this podcast from Herefordshire and Worcestershire Health and Care NHS Trust, it is very informative and is applicable locally. In the podcast Juliet Shepherd, Lead Pharmacist for Mental Health in Herefordshire discusses the issue with a GP colleague, giving more details of the issues and advice on how prescribers can reduce the risks.

[Prescribing in anxiety \(vimeo.com\)](https://vimeo.com/708111111)



Further information about risks of propranolol in overdose can be found at [TOXBASE - poisons information database](#).

If you need any assistance, please contact your local pharmacy team for advice