

MINIRIN MEDIA BACKGROUNDER

MINIRIN[®] (desmopressin) is a man-made (synthetic) form of vasopressin, a naturally occurring antidiuretic hormone which controls the balance of water levels in the body. MINIRIN replicates many of the Vasopressin's functions, binding to the V2 receptor. It also has a longer half-life.¹

During the night the body naturally releases vasopressin, reducing the volume of urine produced by increasing concentration levels. This allows the majority of people to sleep without overfilling their bladder. In the event that the body does not complete this process effectively, excess volumes of urine can be produced, in some cases prompting a need to wake in the night to go to the toilet or causing a person to wet the bed.¹

Desmopressin is similar in structure to natural vasopressin. It works by binding to the antidiuretic receptors in the kidneys, mimicking the effect of natural antidiuretic hormones. By doing this, desmopressin can prevent excessive amounts of water being filtered out of the blood, reducing the volume of urine produced during the night potentially allowing for more restful sleep¹.

The medicine has been available on prescription for over 35 years in different formulations. It has been available as an intranasal solution (since 1972), as an injectable solution (since 1981), in tablet form (since 1987), and, most recently, as an oral lyophilisate (since 2005).²

The antidiuretic properties of desmopressin have led to its use in a number of indications worldwide: *

- **CDI** (diabetes insipidus), an indication it has had since 1972 (the first indication for the drug), which it is now licensed for in over 100 countries around the world

- **Primary Nocturnal Enuresis**, (bedwetting), an indication it has had since 1976, which it is now licensed for in over 100 countries around the world.
- **Nocturia** (night time urination), an indication it has had since 2001, which it is now licensed for in over 80 countries around the world.

The efficacy of desmopressin in nocturia has been accepted in many countries, although it is not a licensed indication in the UK. The European Association of Urology (EAU) guidelines outline that desmopressin is well tolerated and results in significant improvements in the reduction of nocturnal voids, increasing undisturbed sleep.³

In bedwetting, studies have shown that long-term treatment with desmopressin is effective, well tolerated and can aid long term improvements in nocturnal dryness.^{4,5} In addition, UK NICE guidelines, which are based on a review of evidence, suggest that treatment with desmopressin should be considered if rapid onset and/or short-term improvement in bedwetting is the priority of treatment or if an alarm is inappropriate or undesirable.⁶

When desmopressin is prescribed, patients should be instructed to avoid high fluid intake when the medication is ingested, not to ingest a higher than recommended dose and to promptly discontinue the medication and seek assessment if headache, nausea or vomiting develops^{2, 7}

*Desmopressin licences and indications vary by country

This document is designed for use **proactively** with accredited healthcare journalists, and **reactively** in the event of any queries from consumer / consumer health journalists

¹ Nørgaard JP, Harris AS. A passion for Peptides. Published in 2011 by Ferring Pharmaceuticals. ISBN 978-87-994103-0-9

² Vande Walle J, Stockner M, Raes A, Norgaard JP. Desmopressin 30 Years in Clinical Use: A Safety Review. *Curr Drug Saf.* 2007 Sep;2(3):232-8.

³ Thüroff JW, Abrams P, Andersson KE, Artibani W, Chapple CR, Drake MJ, Hampel C, Neisius A, Schröder A, Tubaro A. EAU Guidelines on Urinary Incontinence. *Eur Urol* 2011;59: 387-400.

⁴ Lottmann H, Baydala L, Eggert P, Klein BM, Evans J, Norgaard JP. Long-term desmopressin response in primary nocturnal enuresis: open-label, multinational study. *Int J Clin Pract* 2009;63(1):35-45

⁵ Evans J, Malmsten B, Maddocks A, Popli HS, Lottmann H; on behalf of the UK study group. Randomized comparison of long-term desmopressin and alarm treatment for bedwetting. *J Pediatr Urol.* 2011 Feb;7(1):21-9. Epub 2010 Jun 25.

⁶ National Institute for Clinical Guidance, reference guide: Nocturnal Enuresis: The management of bedwetting in children and young people. Available at <http://www.nice.org.uk/nicemedia/live/13246/51382/51382.pdf> Date Accessed 19th August

⁷ Robson WL, Leung AK, Norgaard JP. The comparative safety of oral versus intranasal desmopressin for the treatment of children with nocturnal enuresis. *J Urol.* 2007 Jul;178(1):24-30.