

# SLEEP VS TOILET TRIPS COULD YOU BE SUFFERING FROM NOCTURNAL POLYURIA?



Excessive urine production may also be caused by abnormal secretion of an anti-diuretic hormone called arginine vasopressin.<sup>2</sup>

## COULD ANYONE HAVE NP?

Statistics show that NP increases with age.

Age Group	Prevalence	
	Men	Women
20 to 40 years old	11.0 to 35.2% <sup>2</sup>	20.4 to 43.9% <sup>2</sup>
Over 70 years old	68.9 to 93.0% <sup>2</sup>	74.1 to 77.1% <sup>2</sup>

A population-based study in Finland summarized that about 40% of men and women reported passing urine 1-2 times per night.<sup>2</sup>

## WHAT CAUSES NOCTURIA & NP?

**Urological issues.** To determine whether urological factors are the cause of a patient's NP, the doctor will assess of the function of the lower urinary tract such as bladder, prostate, and urethra.<sup>2</sup>

**Nephrological issues.** Examination and assessment of the kidneys will also be carried out to determine whether kidney-related diseases are the cause of NP. These include nephrogenic diabetes insipidus, hypercalciuria, or polyuria due to kidney disease.<sup>2</sup>

**Hormonal issues.** Changes in sex hormone levels in men and women due to age can affect processes involved in urine production at night, such as the excretion and reabsorption of sodium at the kidneys.<sup>2</sup>

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How often do you wake up at night with your bladder urging you to go to the toilet?

If your answer is "at least 2 times," then you may be suffering from **nocturia**.<sup>1</sup>

Someone may have nocturia when they complain of waking up at night from sleep one or more times to pass urine. A leading cause of nocturia is **nocturnal polyuria (NP)**, which is the excessive night-time production of urine.<sup>1</sup>

### WHAT IS NP?

When you sleep, your body should produce urine in lower volume and

higher concentration. One should be able to sleep for 6 to 8 hours without being interrupted by the need to urinate.

You may have NP if:

- you get up to **urinate more than twice a night**, or
- depending on your age, you produce **more than 20%-33%** of your regular 24-hour urine volume at night.<sup>2</sup>

Either condition could indicate **excessive night-time fluid intake** or the **presence of underlying health conditions** such as congestive heart failure (CHF), diabetes mellitus, obstructive sleep apnoea, or peripheral oedema (swelling in the lower legs and/or hands).<sup>2</sup>



**Figure A.** Common causes of nocturia and nocturnal polyuria.<sup>2</sup>

**Sleep disorders.** Those who have sleep apnoea may experience nocturnal hypotension (low blood pressure at night) and night-time natriuresis (excretion of large amounts of sodium in the urine), which in turn raises the levels of a substance called atrial natriuretic peptide in the plasma.<sup>2</sup>

**Cardiovascular issues.** Nocturia may be a sign of increased volume of the central vascular system (arteries, veins and other blood vessels), CHF and lower limb venous insufficiency (blood collecting in the lower limbs).<sup>2</sup>

Other causes include an abnormality in the nocturnal secretion or action of the antidiuretic hormone arginine vasopressin (AVP), medical conditions such as congestive heart failure, chronic renal disease, nephrotic syndrome, hypoalbuminemia, and liver failure.<sup>2</sup>

Some diseases can exist alongside NP. These diseases, called NP comorbidities, include autonomic nervous system dysfunction, Alzheimer's disease, multisystem atrophy, stroke, and Parkinson's disease.<sup>2</sup>

### WHY GET TREATMENT FOR NOCTURIA AND NP?

Tackling NP is necessary as the condition is serious enough to be a public health concern.

1. Nocturia and NP may indicate the presence of more serious health conditions, as seen in the previous section.<sup>2</sup>
2. Patients commonly experience poor sleep, which will affect them mentally, emotionally, and physically.<sup>2</sup>
3. Patients also face a higher mortality rate and an increased risk of night-time injuries—it's not easy navigating dark spaces on the way to the toilet at night, especially for the elderly.<sup>2</sup>

### HOW IS NP DIAGNOSED?

First, the doctor will take a thorough medical history of the patient. The doctor will also have the patient undergo a physical examination, focusing on sleep quality, fluid intake, urinary complaints, cardiac abnormalities, medication timing, prior lower urinary tract surgery, and other comorbidities.<sup>2</sup>

The doctor may also assess the patient's food intake as well as the presence of conditions such as diabetes and obesity. Food or intake diaries as well as kidney function tests or profiles can be used to estimate the patient's dietary intake.<sup>2</sup>

As per the International Continence Society (ICS) consensus on the diagnosis and treatment of nocturia, the doctor will evaluate the patient's nocturia using a symptom score. Direct questioning as well as diagnostic tools (such as voiding/bladder diary analyses and questionnaires) will be used to diagnose the patient's nocturia type and its causes.<sup>2</sup>

### LIFESTYLE MODIFICATIONS OR MEDICATION?

The first step in nocturia or NP treatment is making changes to the patient's lifestyle. Such changes include emptying the bladder before going to bed, pelvic floor exercises, reducing salt intake, and weight loss.<sup>2</sup>

If the patient's symptoms persist or worsen, and the doctor believes that lifestyle modifications are not sufficient to address the patient's problem, he or she may prescribe medications to the patient.

Medications prescribed may include antimuscarinic and beta 3-adrenoceptor agonists agents, alpha-blockers, and phosphodiesterase type 5 inhibitors for male lower urinary tract syndrome and bladder outlet obstruction.<sup>2</sup>

For patients whose nocturia is due to NP, anti-diuretic treatment is often recommended. Anti-diuretic medications treat the underlying issues that cause excessive production of urine at night, hence significantly reduces night-time passing of urine.<sup>2</sup>

**Waketowee**

If frequent waking up at night to wee is disrupting your life, don't suffer in silence. See a doctor for more advice! For more information on nocturia and nocturnal polyuria, type [www.waketowee.com](http://www.waketowee.com) into your browser or scan the QR code to your right.



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