

Letter from the Industrial Physician



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Here's a summary of the diuretic effects of coffee and green tea.

When it gets cold, you tend to need to use the bathroom more often. Frequent urination when out and about or needing to go at night can be quite troublesome. Especially as we age, the frequency tends to increase, and nocturia is a common concern heard in outpatient clinics. There are several causes of nocturia (Table 1), and each requires appropriate management.

If you experience nocturia, the first step is to identify the cause and then implement management tailored to it. Additionally, limiting fluid intake before bedtime is important. This raises questions about how to consume coffee and green tea.

【Table 1】 Causes and Management of Nocturia

Classification	Primary Causes	Examination/Evaluation Methods
Nocturnal polyuria (excessive urine volume)	Excessive fluid intake before bedtime, heart failure, reduced renal function, decreased antidiuretic hormone secretion (elderly/sleep disorders), diabetes	Nocturnal voiding diary, weight/edema assessment, BNP, blood glucose, renal function
Reduced bladder capacity	Benign prostatic hyperplasia, overactive bladder, cystitis, radiation cystitis, interstitial cystitis	Residual urine measurement, uroflowmetry, ultrasound, urine culture
Sleep disorder type	Insomnia, depression, obstructive sleep apnea (OSA)	Medical history, sleep assessment, OSA screening
Drug-induced	Diuretics, calcium channel blockers, SSRIs, etc.	Medication review and adjustment

Both are essential for refreshing and taking breaks during work, but they contain caffeine, which can have a strong diuretic effect depending on the amount and timing of consumption. Caffeine increases blood concentration 30 to 60 minutes after ingestion, suppressing sodium reabsorption in the kidneys and increasing urine output. This diuretic effect lasts about 3 to 5 hours, often making you need to urinate more frequently around 1 hour after consumption.

【Table 2】 Caffeine Content Comparison Between Coffee and Green Tea

Beverage (per cup)	Caffeine Content	Diuretic Effect Characteristics
Coffee (150mL)	Approx. 80–120 mg	Quick onset, moderately strong effect
Green Tea (150mL)	Approx. 30–50 mg	Gentle onset, sustained effect

Caffeine's diuretic effect is temporary and gradually becomes less pronounced in regular consumers. Metabolism speed also varies by individual constitution and age. According to household expenditure surveys, hot coffee is consumed more in winter, while cold coffee

and green tea beverages are more popular in summer. As the colder season approaches, warm beverages are a good choice for promoting blood flow and relaxation. However, excessive intake before meetings, outings, or bedtime can cause frequent urination, so caution is needed.

In moderate amounts, caffeine offers beneficial effects like alertness, concentration, and mood improvement. By timing intake wisely, staying hydrated, and consuming caffeine effectively, you can maintain a comfortable daily life and work performance. For those troubled by nighttime frequent urination, green tea seems preferable to coffee before bed.