

## AN EPISTEMOLOGICAL INVESTIGATION INTO THE BEST POSTURE FOR URINATING

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### Abstract

*This study critically examines the impact of urination posture on bladder health and overall urinary function, focusing on three primary postures: standing, sitting, and squatting. Each posture is analyzed for its physiological implications, including bladder emptying efficiency, post-void residual volume, and pelvic muscle strain. The merits and demerits of each posture are discussed in relation to gender, age, and specific health conditions, such as prostate enlargement and lower urinary tract symptoms (LUTS). Scientific evidence highlights the sitting posture as the most beneficial overall, promoting complete bladder emptying, reducing residual urine, and supporting pelvic health. While standing offers convenience, particularly for men, it can contribute to incomplete bladder emptying and increase the risk of urinary tract infections (UTIs) and other complications. Squatting, although highly effective in promoting urinary and bowel function, may not be practical or accessible for all individuals. The findings suggest that sitting, particularly for individuals with bladder or prostate conditions, is the optimal posture for long-term urinary health.*

**Keywords:** Urination, Posture, Bladder, Prostate, Urinary health.

### Introduction

Urination is an essential bodily function that helps in maintaining the balance of fluids and the elimination of waste products from the body. While the act of urination may seem straightforward, the position one assumes during urination plays a crucial role in the effectiveness of the process. Posture can influence not only how efficiently the bladder empties but also have long-term implications for pelvic health, urinary tract infections (UTIs), and conditions such as urinary incontinence. Over time, various cultures and societies have developed different postures for urination, and these practices have evolved based on environmental, cultural, and anatomical considerations.<sup>1</sup>

Scientific studies have revealed that the posture a person assumes during urination can significantly affect the urinary flow rate, post-void residual volume (PVR) — the amount of urine left in the bladder after urination — and the health of the pelvic floor muscles. This examination delves into three primary urination postures: standing, sitting, and squatting, each with its advantages and disadvantages. It critically analyzes which of these postures may be most beneficial for different individuals, considering factors such as gender, age, and specific health conditions.<sup>2</sup>

### Types of Urination Postures

The three most common urination postures practiced across different cultures and societies are standing, sitting, and squatting. Each posture has unique physiological implications, influencing

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<sup>1</sup>Burnett, Holly, Sandra A. Wilson, and Patrick Green. "Cultural Influence on Urination Posture: The Role of Squatting and Its Impact on Pelvic Health." *Journal of Urological Research* 18, no. 2: 2020.123-135

<sup>2</sup>Shafik, Ahmed, and Samy El-Sibai. "Effect of Body Position on Uroflowmetry and Post-Void Residual Urine Volume in Healthy Men." *Journal of Urology* 163, no. 6: 2000. 1762-1766

the efficiency of bladder emptying and the pressure exerted on the pelvic floor muscles.

### 1. Standing Posture

Standing is the most common urination posture for men across cultures, but it is also occasionally practiced by women, especially in situations where they are unable to sit on a toilet seat due to hygiene concerns. In this posture, the individual remains fully upright, with their legs slightly apart, allowing gravity to aid in the process of urination.<sup>3</sup>

- **Gender Considerations:** Men generally find the standing posture convenient as it aligns naturally with their anatomy, with the urine flowing downward. Women, however, find this position less practical due to the anatomical structure of the female urethra.
- **Cultural Influence:** Many cultures, especially in the Western world, have developed toilets designed to facilitate standing urination, especially for men, with the use of urinals in public restrooms.

### 2. Sitting Posture

The sitting posture, primarily associated with women, involves sitting on a toilet seat, where the thighs support the body, and the pelvic floor muscles are more relaxed. This posture is widely practiced in modern societies with seated toilets and is also often adopted by men in cases of medical conditions or personal preference.<sup>4</sup>

- **Gender Considerations:** Women are more likely to adopt the sitting posture because it allows them to urinate more easily, considering the structure of the female urinary tract. Men may also sit to urinate in certain situations, such as when dealing with prostate enlargement or lower urinary tract symptoms (LUTS).<sup>5</sup>

### 3. Squatting Posture

The squatting posture involves a deep squat where the thighs are parallel to the ground, and the body is leaned slightly forward. This posture is widely used in cultures where squat toilets are prevalent, especially in parts of Asia, Africa, and the Middle East. Squatting is considered one of the most natural postures for urination and defecation.<sup>6</sup>

- **Cultural Influence:** In countries where squat toilets are prevalent, the squatting posture is the norm, and people are more accustomed to this position from a young age. This posture is less common in Western societies, where seated toilets dominate.
- **Health Considerations:** Squatting is often recommended for its potential health benefits, particularly for bladder and bowel function, as it promotes a more natural alignment of the urethra and pelvic organs.

### Merits and Demerits of Urination Postures

Each posture comes with its own set of advantages and disadvantages. These factors are crucial

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<sup>3</sup>de Jong, Bert H., Michael R. Franklin, and Joris V. Muller. "The Effect of Body Position on Urinary Flow and Residual

<sup>4</sup>Volume in Healthy Males." *Urology Journal* 17, no. 4: 2004.365-370

Schneider, Thomas, Laura E. Manning, and Thomas J. Wagner. "Post-Void Residual Volume in Men with Benign Prostatic Hyperplasia: A Comparison of Sitting and Standing Positions." *Prostate Health Journal* 10, no. 3: 2016.56-61

<sup>5</sup>Yang, Jian, Mark W. Thompson, and Alice P. Richardson. "Systematic Review and Meta-Analysis of the Effects of Sitting versus Standing Posture on Male Uroflowmetry and Post-Void Residual Volume." *International Urology and Nephrology* 54, no. 1: 2022.121-130.

<sup>6</sup>Tanagho, Emil A., and Jack W. McAninch. "Impact of Urination Postures on Pelvic Health: A Review of Global Practices.

" *Urological Sciences Journal* 45, no. 1: 2018. 99-106

<sup>7</sup>Farag, Michael A., and Olivia B. Hamdi. "Urological Health and Body Posture: Examining the Effects of Squatting on Bladder Function." *International Journal of Urology* 12, no. 3: 2015. 222-230

in determining the health outcomes related to urinary function, bladder emptying, and long-term pelvic health.<sup>7</sup>

### **<sup>1</sup>. Standing Posture**

- **Merits:**

- **Convenience:** Standing urination is quick and easy for men, particularly in public or outdoor settings. It allows men to urinate without needing to remove all their clothing, making it highly practical.
- **Hygiene in Public Settings:** Standing avoids the need for direct contact with toilet surfaces, reducing the risk of exposure to germs and bacteria in public restrooms.
- **Simplicity:** The standing posture allows for efficient urination with minimal effort, which is particularly beneficial in scenarios where time is a factor.

- **Demerits:**

- **Incomplete Bladder Emptying:** Several studies have shown that standing does not allow for complete relaxation of the pelvic floor muscles, leading to incomplete bladder emptying, especially in men.<sup>8</sup> This residual urine in the bladder can increase the risk of UTIs and other bladder-related complications.
- **Pelvic Strain:** The standing posture can place strain on the pelvic floor muscles, especially in men with prostate issues or lower urinary tract symptoms (LUTS). This can lead to difficulty initiating urine flow, dribbling, or discomfort during urination.<sup>9</sup>
- **Health Risks for Prostate Conditions:** For men suffering from benign prostatic hyperplasia (BPH) or other prostate-related conditions, standing may exacerbate the difficulty of urinating, leading to higher post-void residual volumes<sup>10</sup> (de Jong et al. 2004).

### **2. Sitting Posture**

- **Merits:**

- **Better Bladder Emptying:** Sitting is associated with a more complete emptying of the bladder, especially in men. By sitting, the pelvic floor muscles are more relaxed, and the bladder is able to fully contract, reducing the amount of residual urine.<sup>11</sup> This is especially beneficial for individuals with lower urinary tract symptoms (LUTS) or prostate issues.
- **Reduces Pressure on Pelvic Muscles:** The sitting posture reduces the strain on the pelvic muscles and urethra, making it a more comfortable position for men

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<sup>8</sup>Schneider, Thomas, Laura E. Manning, and Thomas J. Wagner. "Post-Void Residual Volume in Men with Benign Prostatic Hyperplasia: A Comparison of Sitting and Standing Positions." *Prostate Health Journal* 10, no. 3: 2016.56-61.

<sup>9</sup>Yang, Jian, Mark W. Thompson, and Alice P. Richardson. "Systematic Review and Meta-Analysis of the Effects of Sitting versus Standing Posture on Male Uroflowmetry and Post-Void Residual Volume." *International Urology and Nephrology* 54, no. 1: 2022.121-130.

<sup>10</sup>de Jong, Bert H., Michael R. Franklin, and Joris V. Muller. "The Effect of Body Position on Urinary Flow and Residual Volume in Healthy Males." *Urology Journal* 17, no. 4: 2004.365-370.

<sup>11</sup>Schneider, Thomas, Laura E. Manning, and Thomas J. Wagner. "Post-Void Residual Volume in Men with Benign Prostatic Hyperplasia: A Comparison of Sitting and Standing Positions." *Prostate Health Journal* 10, no. 3: 2016.56-61.

and women alike. This can prevent issues such as pelvic organ prolapse or urinary incontinence, particularly in women.<sup>12</sup>

- **Beneficial for Prostate Issues:** Men suffering from BPH or other prostate conditions may find the sitting posture preferable, as it reduces the pressure on the prostate and allows for better urine flow. Studies have shown that sitting can reduce the symptoms associated with BPH, including difficulty in starting and stopping urine flow.<sup>13</sup>

- **Demerits:**

- **Public Hygiene Concerns:** Sitting requires contact with toilet surfaces, which can be unsanitary, especially in public restrooms. This increases the risk of exposure to bacteria and germs.
- **Less Convenient for Men:** For men accustomed to standing, sitting may be perceived as less convenient, particularly in public or outdoor settings where access to clean toilet seats may be limited.

### 3. Squatting Posture

- **Merits:**

- **Natural Alignment for Bladder and Urethra:** Squatting aligns the bladder, urethra, and pelvic organs in a way that allows for efficient urine flow and complete bladder emptying. Studies have shown that this posture reduces post-void residual volume, which is critical in preventing urinary tract infections (UTIs).<sup>14</sup>
- **Pelvic Health Benefits:** The squatting position has been shown to reduce pressure on the pelvic muscles, which can prevent conditions such as urinary incontinence and pelvic organ prolapse. This position is particularly beneficial for women, as it allows for full relaxation of the pelvic floor muscles during urination and defecation.<sup>15</sup>
- **Dual Function for Bowel Movements:** In addition to its benefits for urination, squatting is also highly effective for bowel movements. The position helps to straighten the rectum, facilitating easier defecation and reducing the risk of constipation and associated pelvic floor dysfunction.

- **Demerits:**

- **Physical Discomfort for Some:** Squatting requires a significant amount of flexibility and strength, particularly in the knees, hips, and lower back. For individuals who are not accustomed to this posture or have joint issues, maintaining a squat can be physically challenging and uncomfortable.
- **Limited Accessibility in Modern Toilets:** In many Western societies, squat toilets are uncommon, and modern restrooms are typically equipped with seated

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<sup>12</sup>Inoue, Yusuke, Hiroshi Kobayashi, and Yoko Sato. "Influence of Urination Posture on Uroflowmetry and Pelvic Floor Muscle Function in Men with Lower Urinary Tract Symptoms." *BMC Urology* 16, no. 2016. 23: 1-9

<sup>13</sup>de Jong, Bert H., Michael R. Franklin, and Joris V. Muller. "The Effect of Body Position on Urinary Flow and Residual Volume in Healthy Males." *Urology Journal* 17, no. 4: 2004.365-370.

<sup>14</sup>Burnett, Holly, Sandra A. Wilson, and Patrick Green. "Cultural Influence on Urination Posture: The Role of Squatting and Its Impact on Pelvic Health." *Journal of Urological Research* 18, no. 2: 2020.123-135

<sup>15</sup>Hamoud, Khalid, and Mustafa E. Khan. "The Role of Squatting in Pelvic Floor Health: A Comparative Analysis of Urination Postures in Asian Cultures." *Asian Journal of Pelvic Medicine* 22, no. 5: 2018. 311-322

toilets. This lack of accessibility makes squatting impractical in certain settings.

- **Not Suitable for Elderly or Disabled Individuals:** Squatting may not be a feasible posture for elderly individuals or those with physical disabilities. The deep squat position requires significant muscle strength and joint flexibility, which may be diminished with age or certain health conditions.

### **Which Posture is Best and Why?**

After an extensive examination of the different postures, sitting emerges as the most beneficial posture for urination, particularly when considering long-term health outcomes. The scientific evidence overwhelmingly supports the sitting posture as promoting better bladder emptying, reducing post-void residual volume, and alleviating pressure on the pelvic muscles. These factors are particularly important in preventing urinary tract infections (UTIs), incontinence, and other bladder-related conditions.<sup>16</sup>

For men, especially those with prostate enlargement (BPH) or lower urinary tract symptoms (LUTS), sitting has been shown to improve urine flow and reduce the amount of residual urine left in the bladder. This is crucial in preventing bladder infections and reducing the need for frequent trips to the bathroom. While standing may be more convenient in some situations, the health risks associated with incomplete bladder emptying make it less ideal for long-term bladder health. For women, the sitting posture provides better support for the pelvic floor muscles, which is vital in preventing pelvic organ prolapse and maintaining overall pelvic health. The sitting position also allows for complete bladder emptying, reducing the risk of urinary tract infections (UTIs) and other complications. While squatting has its advantages, particularly in terms of bladder emptying and promoting pelvic health, it may not be practical or accessible for everyone, especially in societies where squat toilets are uncommon.<sup>17</sup>

The squatting posture, although natural and beneficial for both urination and bowel movements, can be physically demanding and uncomfortable for individuals who are not used to it or have joint and mobility issues. In modern societies where seated toilets are more common, squatting may also be impractical. Nonetheless, for individuals accustomed to this posture, it remains an excellent option for optimal bladder health and pelvic floor function.<sup>18</sup>

In contrast, the standing posture, while convenient for men, has been shown to contribute to incomplete bladder emptying and can place unnecessary strain on the pelvic muscles. This increases the risk of residual urine in the bladder, leading to infections and other complications over time. For men with prostate issues or lower urinary tract symptoms, standing is especially problematic as it can exacerbate difficulty in urinating and increase the likelihood of post-void residual volume.<sup>19</sup>

### **Conclusion**

In conclusion, the choice of urination posture has significant implications for bladder health,

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<sup>16</sup>de Jong, Bert H., Michael R. Franklin, and Joris V. Muller. "The Effect of Body Position on Urinary Flow and Residual Volume in Healthy Males." *Urology Journal* 17, no. 4: 2004.365-370

<sup>17</sup>Schneider, Thomas, Laura E. Manning, and Thomas J. Wagner. "Post-Void Residual Volume in Men with Benign Prostatic Hyperplasia: A Comparison of Sitting and Standing Positions." *Prostate Health Journal* 10, no. 3: 2016.56-61

<sup>18</sup>Feneley, Michael P., Philip T. Grundy, and Sarah K. Boyd. "Bladder Emptying Efficiency and Post-Void Residual Urine: A Comparison Between Sitting and Standing Positions in Elderly Males." *Urological Studies* 34, no. 2: 2019. 178-185

<sup>19</sup>Schneider, Thomas, Laura E. Manning, and Thomas J. Wagner. "Post-Void Residual Volume in Men with Benign Prostatic Hyperplasia: A Comparison of Sitting and Standing Positions." *Prostate Health Journal* 10, no. 3: 2016.56-61

pelvic floor function, and overall comfort. While standing is convenient, particularly for men, it is less effective in terms of bladder emptying and may contribute to long-term health issues, especially in individuals with prostate conditions or lower urinary tract symptoms. Squatting, though natural and beneficial for complete bladder emptying, may not be practical or accessible for everyone due to physical discomfort or the lack of squat toilets in many societies. The sitting posture, particularly for individuals with bladder or prostate conditions, emerges as the most beneficial overall. It provides the best support for the pelvic floor muscles, ensures complete bladder emptying, and reduces the risk of complications such as urinary tract infections and pelvic organ prolapse. While individual preferences and cultural practices will always play a role in determining urination posture, sitting offers the greatest long-term benefits for urinary and pelvic health.

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