



PART I - BENIGN PROSTATIC HYPERPLASIA AND ASSOCIATED LOWER URINARY TRACT SYMPTOMS

Benign prostatic hyperplasia (BPH) with lower urinary tract symptoms (LUTS) is the bane among aging men. BPH is a histologic diagnosis (i.e., microscopic examination of cells and tissues) referring to a noncancerous enlargement of the prostate gland caused by a proliferation of smooth muscle and epithelial cells located within the transition zone of the prostate.



LUTS as it pertains to men refer to a group of storage, voiding and post micturition symptoms involving the bladder, urinary sphincter, urethra and the prostate.

BPH causes LUTS and in combination (BPH/LUTS) and has been clearly demonstrated to significantly diminish health-related quality of life. For example, 70% of men diagnosed with BPH/LUTS suffer from erectile dysfunction (ED), which for more than a few men is a significant diminishment in the health-related quality of their lives.

Not every man clinically diagnosed with BPH develops LUTS and not every man clinically diagnosed with LUTS suffers from BPH. Nevertheless, most men clinically diagnosed with LUTS suffer from BPH and vice versa, making BPH and LUTS intricately and nearly invariably interconnected. BPH/LUTS is used below to signify BPH and LUTS occurring simultaneously together with BPH causing LUTS.

Anatomy and Function of the Prostate

The prostate is a walnut-sized gland of the male reproductive system and is the largest male accessory gland. It lies directly in front of the rectum and right below the bladder. The prostate surrounds the urethra, a tube that connects with the bladder, runs through the center of the prostate and allows urine to flow out of the body. Because of its location, the urethra is heavily implicated in BPH. A prostate of normal size is approximately 25 grams, which is about the size of a walnut. An enlarged prostate can increase to a size that is more than three times the normal size and weigh over 80 grams. Size matters when it comes to the prostate. The larger the prostate becomes the more compression it puts on the urethra, thereby, interfering with the flow urine through it.

Functionally speaking, the primary job of the prostate is to help create semen, contributing 20-30% of fluid constituting total semen volume. Another important function of the prostate is hormone metabolism. Specifically, the enzyme, 5-alpha reductase found within the prostate convert testosterone into dihydrotestosterone (DHT). While it is necessary for the prostate to develop and function normally beginning in utero and into adulthood, DHT has a deleterious effect on the prostate (see Part II).

Prevalence of BPH, LUTS and BPH/LUTS

The prevalence of BPH, LUTS and BPH/LUTS is strongly correlated with age. Specifically, the prevalence of BPH ranges from 8% in men in their 50s to approximately 90% of men who live beyond 80 years old. The prevalence of LUTS in aging men in one population-based study was reported to be 56% in men who were between 50–79 years old, 70% in men who were between 80–89 years of age and 90% in men who were 90 years of age or older. This linear trend of the prevalence of LUTS increasing with advancing is supported by other population-based studies. Given that both BPH and LUTS increase with age, it is not surprising that prevalence of BPH/LUTS is highly associated with age where BPH/LUTS develops in approximately 8% of men between 31-40 years of age and dramatically rising to 90% in men who are 90 years old.

While not typically fatal either alone or together, BPH and LUTS are serious medical conditions with serious adverse health consequences caused by a constellation of complications associated with BPH/LUTS undermining men's physiological and psycho-emotional well-being.

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Seriousness of BPH and LUTS



Complications associated with BPH include:

- Renal insufficiency
- Renal failure
- Acute urinary retention
- Blood in the urine
- Urinary tract infections
- Damage to the bladder
- Damage to kidneys
- Bladder stones

Complications associated with LUTS caused by BPH can be categorized into voiding urinary symptoms, bladder storage symptoms and post-micturition (i.e., involuntary loss of urine immediately after passing urine/voiding).

Voiding urinary symptoms for LUTS include:

- Hesitancy (straining to initiate micturition, thereby, delaying onset of voiding despite wanting to urinate)
- Straining during voiding of urine
- Slow urinary stream
- Weak urine stream
- Splitting or spraying of urinary stream
- Intermittent urinary stream (stopping and starting or urinary stream)
- Terminal dribbling (flow of urine dribbles slowly towards the end of urination instead of ending quickly)
- Pain in varying degrees during urination

Bladder storage symptoms:

- Compelling urgency to urinate
- Frequently needing to urinate during the day
- Nocturia—needing to urinate during sleep cycle
- Retention of urine
- Incontinence

Post-micturition symptoms:

- Feeling of not fully emptying the bladder
- Post-micturition dribbling (dribbling of urine after voiding has stopped)

Summary

Given its prevalence and all the of various symptoms associated with BPH/LUTS, the frequently held belief that the BPH/LUTS complex or BPH and LUTS independent of one another are simply innocuous and inconvenient medical disorders that develop as a natural consequence of aging is misinformed, if not misguided, which can cause aging men to make poor judgements and choices about how to prevent and treat BPH/LUTS. It would be prudent for aging men not to underestimate the deleterious and debilitating effects of BPH/LUTS.

Further, it is also advisable that men understand that certain nonmodifiable and modifiable risk factors increase their chances of getting BPH/LUTS and learn what those risk factors are so they can better prevent BPH/LUTS and moderate their quality-of-life altering effects. Hence, in Part II-Benign Prostatic Hyperplasia and Associated Lower Urinary Tract Symptoms: A Threat to Men's Health-Related Quality of Life attention will be given nonmodifiable and modifiable risk factors what men can do to help prevent, manage and moderate their effects in the case of the modifiable risk factors and control them in the case of nonmodifiable risk factors. Also, it will also be shown how taking Strauss Naturals' Prostate Support Drops, Bladder Support Drops, Kidney Support Drops and Heart Drops is an especially well-suited and effective botanical intervention for BPH/LUTS.

References available upon request. © Copyright 2023 Strauss Naturals Ltd. All Rights Reserved.

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