

## Benign Prostatic Hyperplasia (BPH) Disease

BPH is characterized by increased epithelial cells and stromal components of the lateral and middle glands of the prostate. It can lead to compression of the urethra and various urinary manifestations.



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### Mechanism and Characteristics

#### DHT-induced Growth Factors

[Dye Hydra Testes-stereo using Growth Factor fertilizer](#)

It is believed that DHT-induced growth factors may contribute to increased growth of the prostate. The mechanism for BPH is incompletely understood.

#### Common in Men > 50 Years Old

[Greater Than old \(50\) Cent](#)

BPH is more common with age, and usually occurs in men greater than age 50.

#### Smooth, Symmetric, Firm Enlargement

[Smoothie from Symmetrical and Firm prostate-plums](#)

Smooth, symmetric, firm enlargement of the prostate is found on digital rectal exam (DRE). This is in contrast to prostate cancer where the prostate is nodular and asymmetrically enlarged.

#### Affects Lateral and Middle (Periurethral) Gland

[Ladder and Middle Pear-U-wreath Glands](#)

The area of the prostate surrounding the urethra is affected in BPH. These are the lateral and middle lobes of the prostate gland.

#### Urethra Compression

[U-wreath urethra being Compressed](#)

Because the periurethral zone is affected, it can compress the urethra and lead to urinary symptoms.

### Symptoms and Complications

#### Increased Urinary Frequency

[Up-arrow Urine Frequency-wave](#)

Compression of the urethra can lead to increased urinary frequency in patients.

#### Nocturia

[Nocturnal-moon-urine](#)

Compression of the urethra can also lead to nocturia, which is the need to void at night.

#### Dysuria

[Urine-in-flames](#)

Patients often complain of pain on urination, or dysuria, due to compression of the urethra.

### **Urinary Tract Infection**

[Urinary-tract-on-fire](#)

Compression and obstruction of the urethra can be a nidus for infection.

### **Hydronephrosis**

[Water-in-kidney](#)

Complete obstruction of the urethra can in some instances lead to hydronephrosis and renal failure.