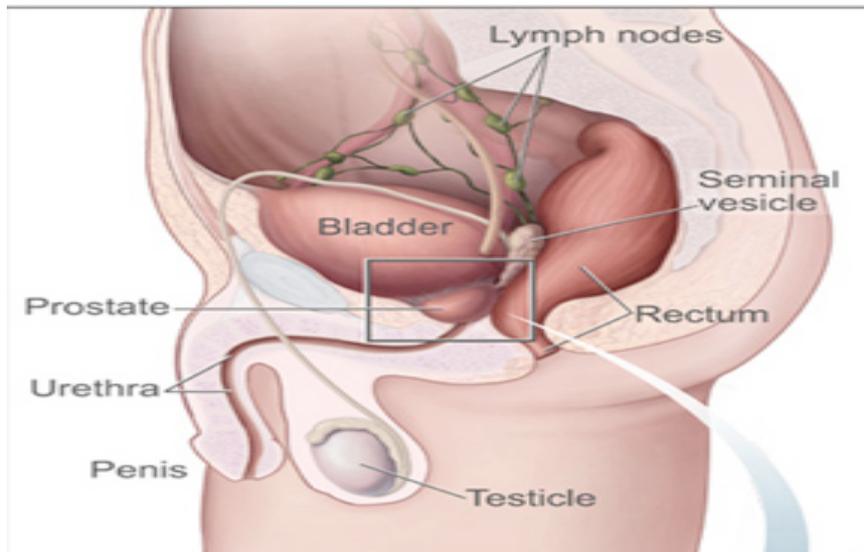


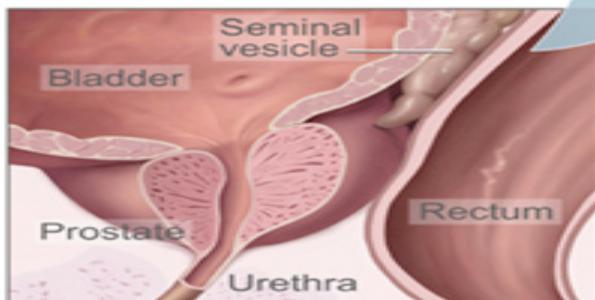
## BENIGN PROSTATIC HYPERPLASIA (BPH)

BPH is very common medical problem, affecting about one third of men over 50. Although it is not prostate cancer, the symptoms of BPH cannot be easily differentiated from that due to prostate cancer.

The prostate is a gland about the size of a walnut that is only present in men. It is located just below the bladder and surrounds the urethra- the tube through which urine flows from the bladder and out through the penis. The gland is divided into three zones, peripheral, transitional and central. In Benign Prostatic Hyperplasia (BPH), there is an overgrowth of cells in the central portion of the prostate. This constricts the urethra, reduces the flow of urine and makes it difficult for the patient to empty his bladder.



This shows the prostate and nearby organs.



This shows the inside of the prostate, urethra, rectum, and bladder.

The most common treatments for BPH are drugs and surgery.

The medical therapy consists of two broad category of drugs i.e. Alpha-blockers, 5-alpha-reductase inhibitors.

Alpha-blockers are drugs that relax the muscles at the neck of the bladder and in the prostate, thereby reducing the pressure on the urethra and increasing the flow of urine. 5-alpha-reductase inhibitors work by inhibiting the production of a hormone called Dihydrotestosterone (DHT), which contributes to prostate enlargement.

Surgical options include transurethral resection of the prostate (TURP), in which endoscopic instrument is used to core out sections of the enlarged prostate. In transurethral incision of the prostate (TUIP), incisions are made in the neck of the bladder and the prostate, reducing the obstruction to the flow of urine. In an open prostatectomy an incision is made in the lower abdomen in order to remove the central part of the prostate.

Researchers and urologists all over the world are actively investigating drugs and treatments, developing novel therapies and conducting ongoing research into new treatments and minimally invasive procedures. The following are summaries of recent and current research projects in benign prostatic hyperplasia.

### **The development and expansion of minimally invasive therapies for benign prostatic hyperplasia.**

Minimally invasive technologies to treat patients with symptomatic BPH, including heat-based treatments such as transurethral microwave thermotherapy, interstitial devices such as interstitial laser coagulation and transurethral needle ablation, high-intensity focused ultrasound, and water-induced thermotherapy. Addition research on these therapies, as a novel combination therapy for adenocarcinoma of the prostate could lead to important improvements in treatment of BPH.

There is an ongoing research in the established BPH treatment modalities to improve safety, efficacy, and patient comfort.

The Laser therapies of the current era such as the Holmium Laser Ablation or enucleation offers a safe and minimally therapy for permanent relief of urinary tract obstruction due to benign adenomatous prostate. [Desktop/Patient info WEB /Laser write up 2.doc](#),

