Enlarged Prostate

BENIGN PROSTATIC HYPERPLASIA (BPH)
You may know little about your prostate. Like many men, you may be prompted to learn about it only because the way you urinate has changed. Or perhaps you have heard that men over 50 are more likely to have “prostate trouble” than are younger men.

The purpose of this booklet is to shed light on a particular prostate disease: noncancerous enlargement of the prostate. Called benign prostatic hyperplasia (BPH), this disease often begins after age 50. If you are a man in this age group, the information in this booklet may help to improve the quality of your life.

test your knowledge about

1. The main function of the prostate is to:
   a. produce sperm
   b. produce fluid in which sperm travel
   c. store urine

2. BPH is:
   a. a noncancerous enlargement of the prostate gland
   b. a form of cancer
   c. an infection

3. BPH is most common in:
   a. men between the ages of 20 and 40 years
   b. men between the ages of 40 and 60 years
   c. men 60 years and older

4. BPH most commonly causes:
   a. urinary symptoms
   b. sexual difficulties
   c. death
After a man passes the age of 40, and especially after the age of 60, the prostate may become a source of problems. There are two good reasons to become informed about your prostate and prostate diseases.

1: Sometimes prostate problems can cause bothersome symptoms. These are not a necessary part of getting older, and you do not have to put up with them. When properly diagnosed and treated, most symptoms can be improved.

2: Prostate cancer, which is usually curable when caught early, produces no symptoms in its early stages. Early prostate cancer can only be detected by a regular prostate checkup.

5. BPH needs treatment when:
   a. the first signs of urinary difficulty develop
   b. the doctor finds an enlarged prostate
   c. symptoms are bothersome and reduce the quality of your life

6. Compared to surgery, medical treatment for BPH is:
   a. as effective, but higher risk
   b. as effective, but lower risk
   c. less effective, but lower risk

7. A yearly prostate checkup is recommended:
   a. to detect early, curable prostate cancer
   b. to detect BPH
   c. both of the above

Answers on page 12.

There also is a glossary of terms you may not be familiar with at the end of this booklet.
WHAT IS THE PROSTATE?

The prostate is a small gland that is part of the male reproductive system. A normal, healthy prostate is about the size and shape of a walnut. Its position in the body is just between the bladder and the base of the penis. The urethra—the tube that carries urine from the bladder and semen out through the penis—runs through the center of the prostate. The function of the prostate is to produce some of the seminal fluid that nourishes and carries sperm from the testicles and out of the penis during ejaculation. Because of its position, an enlarged prostate can squeeze the urethra, causing urinary problems.

WHY ARE PROSTATE CHECKUPS IMPORTANT?

As a man gets older, especially after age 50, it is important to be screened to identify any abnormalities. Signs of prostate problems can include difficulties urinating, sexual problems or pain. If a man has symptoms that are bothersome, he should talk to his doctor.

WHAT IS BPH?

BPH is a noncancerous (benign) growth of the cells within the prostate gland. BPH is common in older men. By age 60, more than half of men have BPH. By age 85, about 90 percent of men have BPH, but
only 30 percent of men will be bothered by their symptoms.

BPH affects the inside part of the prostate first. Enlargement frequently causes a gradual squeezing of the urethra where it runs through the prostate. Sometimes this causes difficulty in urinating or other urinary problems. BPH generally does not interfere with sexual functioning.

BPH is not cancer nor does it lead to cancer. However, it is possible for a man to have both BPH and prostate cancer.

_BPH: Enlarged prostate squeezes urethra and bladder wall is thickened_  
*Side interior view of the male pelvis*
WHAT ARE THE SYMPTOMS OF BPH?

Many men with BPH may have no significant symptoms. However, symptoms begin by interfering with urinary function. Some characteristic symptoms can include:

- a weak or slower urinary stream
- a sense your bladder is not empty
- a delay in starting urination
- frequent urination
- urinary urgency
- awakening frequently at night to urinate
- a urinary stream that starts and stops
- the need to strain to urinate

These symptoms are caused by the way in which BPH affects the urethra and, later on, the bladder. In the early phase of prostate enlargement, the bladder muscle is able to force urine through the narrowed urethra by contracting more forcefully. Over time, the bladder muscle gradually becomes stronger, thicker and overly sensitive, causing a need to urinate frequently.

In some cases, as prostate enlargement progresses and the urethra is squeezed more tightly, the bladder cannot overcome the problems created by the greatly narrowed urethra. When this happens, the bladder cannot empty completely.

If a urinary tract infection develops, there may also be burning or pain during urination. In a small
percentage of men, blockage from BPH may lead to repeated urinary tract infections, sudden and complete inability to urinate at all (acute urinary retention), or gradual bladder and/or kidney damage. Fortunately, kidney damage from BPH is quite rare.

In order to help determine the severity of your symptoms refer to the BPH symptom score index developed by the American Urological Association on page 10.

**HOW IS BPH DIAGNOSED?**

Your doctor will ask you questions (or have you fill out a questionnaire) about your medical history and about any symptoms you are having, particularly problems with urination. The description you provide of your symptoms is one of the most important parts of the evaluation for BPH.

Your urine will be examined under a microscope to detect blood in the urine or an infection in your urinary tract or prostate.

The doctor will then perform a physical examination. The prostate is an internal organ so the physician cannot look at it directly. Because the prostate lies in front of the rectum, however, the doctor can feel it by inserting a gloved, lubricated finger into the rectum. This simple procedure is called a digital rectal examination (DRE).
This examination allows your doctor to estimate whether your prostate is enlarged or has lumps or other areas of abnormal texture. While this examination may produce some brief discomfort for you, it should cause neither damage nor significant pain. Because only the central core of the prostate tissue may be enlarged in BPH, patients can be bothered by BPH symptoms even when the prostate does not feel enlarged. Many men who have an enlarged prostate have no symptoms.
The digital rectal examination can detect not only BPH but also prostate cancer, one of the leading causes of cancer death in American men. For this reason, the American Urological Association recommends a yearly prostate screening for all men over age 50 who are expected to live at least 10 more years. This includes a DRE and a blood test for prostate-specific antigen (PSA). For men at higher risk for prostate cancer, African American men or men with a family history of prostate cancer, the tests should begin starting at age 45. Yearly checkups can help you avoid the potentially serious results of prostate disease.

WHEN TO SEE A SPECIALIST

Your doctor may treat your initial BPH symptoms. However, if your symptoms become more bothersome or if you have blood in your urine, neurologic disease, recurring urinary infections, bladder stones or the complete inability to urinate, you and your doctor may decide that your BPH symptoms should be treated by a urologist. A urologist is a doctor who specializes in diseases of the male and female urinary tracts and the male reproductive system. You should also be referred to a urologist if your symptoms do not respond to drug therapy or if your symptoms become more severe.

The urologist will review the severity of your symptoms by asking you questions about your medical history. You will also probably have another urinalysis and DRE screening.
Depending on your symptoms, additional tests may also be needed:

- A blood test can help detect kidney damage.
- Another blood test, the prostate-specific antigen (PSA) test, can help detect prostate cancer. Both BPH and prostate cancer, however, may cause an abnormal PSA result.
- A urine flow study, which measures the speed of the urine stream, can help determine the extent of urinary blockage.
- The amount of urine left in the bladder after urinating may be determined by additional tests.

The need for additional testing varies from patient to patient. Your doctor will recommend which, if any, additional tests are necessary.

**WHEN SHOULD BPH BE TREATED?**

BPH commonly requires treatment if the symptoms are severe enough to be bothersome or if the function of the urinary tract is seriously affected. An enlarged prostate alone is not sufficient reason to consider treatment. A man and his doctor should talk about the benefits and risks of treatment and whether some of the treatment options are limited by other medical conditions when a diagnosis of BPH is determined.

Adopting a healthy lifestyle and diet can be helpful in reducing symptoms in some men. Some modifications include decreasing total fluid intake,
If you have BPH but your symptoms are not bothersome, you and your doctor may decide on a course of “watchful waiting.” This means that you will be examined one or more times a year to make certain that you are not developing complications from BPH. Watchful waiting is not active treatment. In some cases, symptoms lessen without active treatment. If however, your symptoms become more bothersome over time, talk to your doctor to discuss other treatments.

WILL BPH AFFECT MY LIFESTYLE?

The good news is that you need not suffer from bothersome BPH symptoms. Such symptoms are not a necessary part of getting older. They can be treated, and the number of treatment choices is increasing every year. If you are bothered by urinary symptoms, see your doctor for a prostate checkup.

Most importantly: If you are over age 50 (45 for African Americans or men with a family history of prostate cancer), you should see your doctor for a yearly prostate checkup whether or not you have symptoms. Prostate cancer, the most serious prostate disease, is often symptomless in the early stages when it is most treatable.
## AUA BPH SYMPTOM SCORE INDEX

To use this symptom score: Circle one number in each line and add up all the circled numbers to get the total score. The total runs from 0 to 35 points with higher scores indicating more severe symptoms. Scores less than seven are considered mild and generally do not warrant treatment.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>Less than 1 time in 5</th>
<th>Less than half the time</th>
<th>About half the time</th>
<th>More than half the time</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Over the past month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Over the past month, how often have you had to urinate again less than two hours after you finished urinating?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Over the past month, how often have you stopped and started again several times when you urinated?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Over the past month, how often have you found it difficult to postpone urination?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Over the past month, how often have you had a weak urinary stream?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Over the past month, how often have you had to push or strain to begin urination?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Symptom Score**

GLOSSARY

benign prostatic hyperplasia (BPH): a noncancerous (benign) growth of the cells within the prostate gland.

bladder: organ that stores urine before it is discharged through the urethra.

cancer: an abnormal growth that can invade nearby organs and spread to other parts of the body; a cancer is also called a malignant tumor.

cystoscope: a thin, telescope-like instrument fitted with lenses and a light source; it allows the doctor to inspect the bladder in a procedure called cystoscopy.

digital rectal examination (DRE): insertion of a gloved, lubricated finger into the rectum to check for any abnormalities of the prostate.

ejaculation: release of semen from the penis during sexual climax.

frequency: the need to urinate more often than is normal.

kidneys: two large bean-shaped organs that remove waste from the blood.

prostate: a small gland, about the size of a walnut located between the bladder and the base of the penis; the prostate’s main function is to produce fluid that forms the semen.
prostate-specific antigen (PSA): a protein produced by the prostate gland; the PSA test, a blood test, is commonly used to screen for prostate cancer.

semen: fluid containing sperm and secretions from glands of the male reproductive tract.

urologist: a doctor who specializes in diseases of the male and female urinary tracts and the male reproductive system.

Answers to quiz:
1) b 2) a 3) c 4) a 5) c 6) c 7) a
The American Urological Association Foundation was established to support and promote research, patient/public education and advocacy to improve the prevention, detection, treatment and cure of urologic disease.

The American Urological Association Foundation provides this information based on current medical and scientific knowledge. This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please see your urologist or other health care provider regarding any health concerns and always consult a health care professional before you start or stop any treatments, including medications.

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