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Drug Treatment for LUTS in men with BPE

The underlined terms are listed in the glossary.

You have been diagnosed with benign prostatic enlargement (BPE) and your doctor recommends drug treatment. This treatment is advised when the symptoms are bothersome and affect your quality of life. This section describes different drug treatments, which you should discuss with your doctor. Together you can decide which approach is best for you.

Factors which influence this decision include:

- Your symptoms
- The size of your prostate
- Your medical history
- Drugs available in your country
- Your personal preferences and values

There are several groups of drugs to treat the symptoms caused by BPE:

- Herbal drugs
- Alpha-blockers

- 5alpha-reductase inhibitors (5ARIs)
- Muscarinic receptor antagonists (MRAs)
- Phosphodiesterase 5 inhibitors (PDE5Is)
- A combination of drugs

Each group of drugs works in a different way and can have different results and side effects.

Herbal drugs

Herbal drugs are made of plant extracts. Many types of roots, seeds, pollen, bark, or fruits can be used alone or in combination to make these drugs. The most widely used extracts in herbal drugs are taken from:

- Pumpkin seeds (*Cucurbita pepo*)
- South African star grass (*Hypoxis rooperi*)
- Bark of the African plum tree (*Pygeum africanum*)
- Rye pollen (*Secale cereal*)
- Berries of the American dwarf palm (*Serenoa repens*)
- Roots of the stinging nettle (*Urtica dioica*)

It is not entirely clear how these herbal drugs work to relieve symptoms caused by BPE. It is also not clear how efficient they are. The quality of herbal drugs can vary greatly. Because there are so many herbal drugs available, no specific recommendation about their use can be made. Inform your doctor during consultation if you take any herbal drugs to relieve your symptoms.

Side effects of herbal drugs are mild and many men do not experience any side effects at all. Gastro-intestinal discomfort (for instance bloating or constipation) is the most common complaint.

Alpha-blockers

Alpha-blockers are a group of drugs which improve the symptoms and the flow of urine by relaxing the smooth muscles of the prostate. This is the most commonly recommended group of drugs for men with BPE. Currently, five main types of alpha-blockers are used. They all achieve similar results but differ in their side effects:

- Alfuzosin
- Doxazosin
- Tamsulosin
- Terazosin
- Silodosin

Usually the drugs are fully effective within a couple of weeks, but some men will notice an improvement within hours or days after starting treatment. Alpha-blockers do not reduce the size of the prostate or prevent it from growing. Some men will eventually need surgery to relieve their symptoms.

Side effects of alpha-blockers are mild and most men do not experience any side effects, even if they use them for a long time. Men who have side effects report loss of strength (asthenia), dizziness, and slightly lower blood pressure (hypotension).

Alpha-blockers may also cause retrograde ejaculation. This is an uncommon side effect and it will disappear when the treatment is stopped.

Alpha-blockers may affect the muscles in your eyes. This side-effect is not harmful but if you are scheduled to have cataract surgery you should inform your surgeon about the treatment with alpha-blockers.

5alpha-reductase inhibitors

5alpha-reductase inhibitors (5ARIs) are a group of drugs which prevent the prostate from growing and may even shrink it. These drugs work better in prostates larger than 40 millilitres and are only prescribed when the prostate enlargement causes bothersome symptoms. 5ARIs will improve the symptoms 3 to 6 months after starting treatment. These drugs may reduce the risk of urinary retention and the need for surgery. 5ARIs take a long time to improve the symptoms, so they are only advised for treatment which lasts over a year.

There are 2 types of 5ARIs, and they achieve similar results:

- Dutasteride
- Finasteride

The side effects of these drugs are mainly related to sexual function. They may include reduced sexual drive, erectile dysfunction, and problems with ejaculation. About 1-2% of men experience breast enlargement or nipple tenderness. Side effects are not very common and disappear when the treatment is stopped. There may be a relation between the use of 5ARIs and high-risk prostate cancer. This is a controversial topic and it is the subject of discussion.

5ARIs are generally recommended for men with moderate or severe symptoms because of the possible side effects.

These drugs are most often used in combination with other types of drugs. Possible combinations of drugs are discussed later in this section.

Muscarinic receptor antagonists

Muscarinic receptor antagonists (MRAs) are a group of drugs which reduce the abnormal contractions of the bladder. These drugs are usually prescribed for the treatment of overactive bladder symptoms. They can also help men with urgency symptoms caused by BPE. They are generally not prescribed if the bladder does not empty completely and there is much urine left in the bladder after urination.

There are several types of MRAs:

- Darifenacin
- Fesoterodine
- Oxybutynin
- Propiverine
- Solifenacin
- Tolterodine
- Trospium chloride

Side effects of MRAs are usually mild. They may include dry mouth and eyes, constipation, difficulties urinating, symptoms of the common cold, blurred vision, and dizziness.

Phosphodiesterase 5 inhibitors

Phosphodiesterase 5 inhibitors (PDE5Is) are a group of drugs used for the treatment of erectile dysfunction. These drugs can also improve some symptoms caused by BPE. However, they are not officially registered as drugs for the treatment of BPE.

There are three types of PDE5Is:

- Sildenafil
- Tadalafil
- Vardenafil

Only tadalafil has been approved for the treatment of men with BPE. The cost is usually not covered by insurance companies or national health services.

Men with erectile dysfunction as well as BPE may benefit from treatment with PDE5Is.

PDE5Is can cause side effects such as headache, back pain, dizziness, and indigestion. PDE5Is are contraindicated in combination with several drugs, including the alpha-blockers doxazosin or terazosin. They are also contraindicated in men who have specific heart problems. Men who have problems with their blood pressure or who have kidney failure should also not take PDE5Is. If you experience loss of vision when taking PDE5Is, you should go to your doctor.

Make sure to discuss any of your concerns about the side effects or contraindications of PDE5Is with your doctor.

Combinations of drugs

Your doctor can also advise a combination of drugs. The most common combinations are:

- Alpha-blockers with 5ARIs
- Alpha-blockers with MRAs

The aim of such treatment is to combine the benefits of both drugs. When used together, these drugs can be more effective but they may cause side effects more often. The side effects of each drug are described earlier in this section. Combination treatment is generally recommended for men with moderate or severe symptoms.

Alpha-blockers with 5ARIs

The combination of alpha-blockers with 5ARIs is recommended if:

- The prostate is larger than 40 millilitres
- PSA values are 1.5 ng/ml or higher
- Your symptoms are severe
- You have slow flow of urine

This combination of drugs is only advised for long-term treatment.

Alpha-blockers with MRAs

The combination of alpha-blockers and MRAs is recommended if:

- You have storage symptoms (See Symptoms and Diagnosis of BPE)
- Your symptoms have not improved when taking one drug

This information was updated in September 2013.

This leaflet is part of EAU Patient Information on BPE. It contains general information about benign prostatic enlargement. If you have any specific questions about your individual medical situation you should consult your doctor or other professional healthcare provider.

This information was produced by the European Association of Urology (EAU) in collaboration with the EAU Section of Uro-Technology (ESUT), Europa Uomo, and the European Association of Urology Nurses (EAUN).

The content of this leaflet is in line with the EAU Guidelines.

You can find this and other information on urological diseases at our website: <http://patients.uroweb.org>

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