

MEDICAL TREATMENT OF BPH

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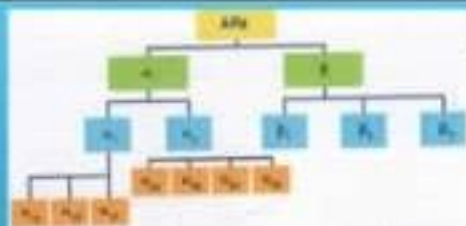


Fig. 14B.4. Adrenergic receptor (AR) nomenclature and subtypes.



Fig. 14B.5. Distribution of adrenergic receptors at the level of the prefrontal and limbic system. The red dots represent α₁ receptors, the blue dots represent α₂ receptors, and the black dots represent α₁β receptors.

TABLE 143.1 Classification of α -Adrenergic Blockers and Recommended Doses

CLASS OF α -BLOCKERS	AVAILABLE FORMULATION	RECOMMENDED DAILY DOSE	RECOMMENDED ADMINISTRATION
NONSELECTIVE			
Phenoxiphenazine	10-mg capsule	10 mg bid	No longer indicated for LUTS treatment
SELECTIVE			
Prazosin	0.5, 1, 2, 5-mg capsule	2 mg bid	No longer indicated for LUTS treatment
Tamsulosin	20-mg capsule	20 mg bid	No longer indicated for LUTS treatment
Terazosin	1, 2, 5, 10-mg capsule	5 or 10 mg qd	Initial dose is 1 mg at bedtime. The dose should be titrated up to 5 or 10 mg.
Sildenafil ER	1, 2, 4-mg capsule	2-8 mg qd	Initial dose is 2 mg at bedtime. The dose should be titrated up to 4 or 8 mg.
Sildenafil SR	4, 8-mg capsule	4 or 8 mg qd	Initial dose is 4 mg after breakfast; eventually increased to 8 mg.
UNSELECTIVE			
Alfuzosin ER*	10-mg capsule	10 mg qd	Initial dose is 10 mg with the same meal each day.
Terazosin	0.4, 0.8-mg capsule	0.4-0.8 mg qd	Initial dose is 0.4 mg with the same meal each day.
Stavudine	4, 8-mg capsule	8 mg qd	Initial dose is 8 mg with the same meal each day.
Naftopidil	25, 50-mg capsule	25-75 mg/day	Marketed only in Asian countries

*No further information available.

*Alfuzosin is considered a α -adrenoceptor agonist on the basis of the efficacy profile characterized by a preferential effect on the urogenital system.

Marketed only in Europe.

Marketed only in the United States.

LUTS, lower urinary tract symptoms; ER, extended-release; qd, once a day; bid, immediate-release; LUTS, lower urinary tract symptoms; SR, sustained-release; bid, twice a day.

TABLE 145.9 Androgen Manipulation: Classification of Pharmacologic Agents and Dosages

DRUGS	DOSEAGE	REFERENCE
GONADOTROPIN-RELEASING HORMONE ANALOGUES		
Leuprolide	5.75 mg IM monthly	Brundage et al., 1999 Kawano et al., 1999 Suzuki and Takeda, 1999
Histrelin acetate	400 mg SC qd	Tran et al., 1997
Cetrorelix	1 mg SC qd x loading dose Then dosage requires	Carroll et al., 1997 Gendron et al., 2009
PROGESTATIONAL AGENTS		
17 α -Hydroxyprogesterone	250 mg IM weekly	Mann et al., 1977
Megestrol	250 mg PO bid 40 mg PO tid	Kawano et al., 1979 Suzuki et al., 1979
ANTIANDROGENS		
Flutamide	100 mg tid 500 mg tid	Cohen et al., 1979 Dunn, 1989
Oxandrolone	200 mg IM weekly	Chen et al., 1999
Bicalutamide	50 mg qd	Enos and Tindler, 1999
Zincate	100-400 mg qd	Brundage et al., 1999
Enzalutamide acetate	50 mg qd	Fujimori et al., 2012
Warnings and Important Notes		
5α-REDUCTASE INHIBITORS		
Finasteride	5 mg qd. Treatment is recommended for at least 6 months	- PSA levels decrease by approximately 50% - Finasteride is not indicated for PCa prevention because of an increased risk for high-risk disease - Patients should be warned regarding risk for sexual dysfunction (depression)
Dutasteride	0.5 mg qd. Treatment is recommended for at least 6 months	- PSA levels decrease by approximately 50% - Dutasteride is not indicated for PCa prevention because of an increased risk for high-risk disease - Patients should be warned regarding risk for sexual dysfunction (depression)

IM, intramuscularly; POa, per oral; qd, once a day; bid, twice a day; tid, three times a day.



TABLE 145.12 Antimuscarinic Drugs for the Treatment of Lower Urinary Tract Symptoms

DRUG	AVAILABLE FORMULATION	RECOMMENDED DAILY DOSE
Darifenacin ER	7.5-, 15-mg capsule	1 × day
Fesoterodine ER	4-, 8-mg capsule	1 × day
Oxybutynin ER	5-, 10-, 15-mg ^a capsule	1 × day (up to 20 mg/day)
Oxybutynin IR	2.5-, 5-mg ^a capsule	3-4 × day (max 20 mg/day)
Propiverine ER (no US)	30-mg capsule	1 × day
Propiverine (no US)	15-mg capsule	2-3 × day
Solifenacin	5-, 10-mg capsule	1 × day
Tolterodine IR	1-, 2-mg capsule	2 × day
Tolterodine ER	2-mg ^a , 4-mg capsule	1 × day 1 × day
Trosium IR	20-mg capsule	2 × day
Trosium ER	60-mg capsule	1 × day

^aMarketed only in Europe.

Marketed only in the United States.

ER, Extended release; IR, immediate release.

significant; PFR, peak flow rate.

TABLE 145.19 Origin of Plant Extracts

SPECIES	COMMON NAME
<i>Serenoa repens</i> , <i>Sabal serrulata</i>	Saw palmetto berry, American dwarf palm
<i>Hypoxis rooperi</i>	South African star grass
<i>Pygeum africanum</i>	African plum tree
<i>Urtica dioica</i>	Stinging nettle
<i>Secale cereale</i>	Rye pollen
<i>Cucurbita pepo</i>	Pumpkin seed
<i>Opuntia</i>	Cactus flower
<i>Pinus</i>	Pine flower
<i>Picea</i>	Spruce



TABLE 145.21 Suggested Mechanisms of Actions of Plant Extracts*

Inhibition of 5α-reductase
Anti-inflammatory action
Interference with growth factors
Antiandrogenic effects
Estrogenic effects
Inhibition of aromatase
Decrease of sex hormone-binding globulin
Alteration of cholesterol metabolism
Action on α-adrenergic receptors
Free-radical scavenging
Alteration of lipid peroxidation
Modulation of prolactin-induced prostatic growth
Protection of bladder and detrusor function
Placebo effect

The most investigated mechanisms are highlighted in bold.