

Module 19

Male Endocrine

Video 5

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Key Herbs for BPH

- Saw Palmetto
- Nettle root
- Crataeva



Image: By Miguel Vieira (Saw Palmetto) [CC-BY 2.0] (<https://commons.wikimedia.org/licenses/by/2.0/>), via Flickr
Image: By Vatsap Hoang (Crataeva) [CC-BY 2.0] (<https://commons.wikimedia.org/licenses/by/2.0/>), via Flickr

Serenoa repens



Image: By Miguel Vieira (Saw Palmetto) [CC-BY 2.0] (<https://commons.wikimedia.org/licenses/by/2.0/>), via Flickr

Saw Palmetto

- Male tonic, anti-inflammatory, antiedema, spasmolytic, androgen-decreasing effects (inhibits 5 α -reductase, blocks androgen binding, antiandrogenic)
 - Not a strong 5 α -reductase inhibitor though, as evidenced by study showing lack of significant influence over prostate volume or PSA
 - Likely only moderate action against type II intraprostatic 5 α -reductase
 - Valuable as PSA is a screening test for prostate cancer and 5 α -reductase inhibitors can reduce PSA, i.e. Saw Palmetto can be used safely without masking prostate cancer detection
- Possible prolactin-lowering and estrogen modulating activity

Bone K, Mills S. Principles and Practice of Phytotherapy. Edinburgh: Churchill Livingstone, p. 804-815

Saw Palmetto for BPH

- Cochrane Collaboration systematic review and meta-analysis (2009) concluded Saw Palmetto no better than placebo in BPH
- Inclusion of a large study that used a different quality product (sourced from the US rather than Europe) skewed the results¹
- Earlier systematic reviews (14 trials with 4,280 patients) came to positive conclusions for Saw Palmetto in BPH, using the same data without that particular study included
 - ↓ Nocturia
 - ↓ I-PSS
 - ↑ Flow rate

Bone K, Mills S. Principals and Practice of Phytotherapy. Edinborough: Churchill Livingstone, p. 804-815

Saw Palmetto for BPH

- Long-term therapy (15 years) of 320mg Saw Palmetto extract daily (n=30) in BPH demonstrates absence of progression, measured by:
 - Prostate volume
 - Urination rate
 - Residual urine volume
 - I-PSS and Quality of Life (QoL) scale measurements

Vinarov AZ, Spivak LG, Platonova DV, et al. Urologia Journal. 2018 May 1:0391560318772466. [Epub ahead of print]

Saw Palmetto and Bacterial Prostatitis

- Bacterial prostatitis (BP) is 5-10% of all prostatitis cases
- Chronic bacterial prostatitis (CBP) Type II less common and normally treated with antibiotics
- RCT (n=210), current CBP (>3 months)
 - Group A: antibiotic treatment (21 days)
 - Group B: antibiotic (21 days) plus a product with Saw Palmetto (320mg), arbutin (from Bearberry) (100mg) and a probiotic (30 days)
- Recurrence at 2 months in Group A: 21%; Group B: 7.8% of patients
- Group B statistically significant improvement in symptoms and serum PSA

Busetto GM, Giovannone R, Ferro M, et al. BMC urology. 2014 Dec;14(1):53.


Urtica dioica





Nettle Root


- Only herbal action is antiprostatic
- RCTs indicate effectiveness for BPH¹
 - ↓ I-PSS
 - ↓ Post-void residual volume
 - ↓ Urinary tract infections
- Anti-prostatic effect likely due to:
 - sex hormone binding globulin (SHBG), aromatase inhibition
 - epidermal growth factor and prostate steroid membrane receptor
 - unlikely that 5 α -reductase or androgen receptors are involved



Chrubasik JE, Roufogalis BD, Wagner H, et al. Phytomedicine. 2007 Aug 6;14(7-8):568-79.

Nettle Root


- RDBPCT with cross-over (n=558) in LUTS due to BPH over 6 months²
- Nettle root extract dosed at 120 mg, 3 times daily
- Significant improvements in LUTS with Nettle Root (P<0.001)
 - I-PSS 19.8 → 11.8 (P=0.02) compared to placebo 19.2 → 17.7
 - Flow rate improved 3.4 mL/s (P<0.05)
 - Post-void residual volume 73 → 36 mL (P<0.05)
 - Prostate volume 40.1 → 36.3 cc (P<0.001)
- No changes detected in serum PSA or testosterone
- 18-month follow up only showed improvements in Nettle group



Safarinejad MR. Journal of herbal pharmacotherapy. 2005 Jan 1;5(4):1-1.

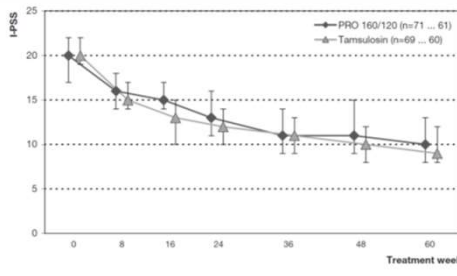
Saw Palmetto & Nettle Root: LUTS

- RDBPCT (n=140) elderly men with LUTS due to BPH, over 60 weeks¹
- Group A: 160mg Saw Palmetto + 120mg Nettle Root, twice daily
 - Initial I-PSS score 20 +/- 4
- Group B: 1 x 0.4mg tamsulosin (α_{1a} adrenergic receptor antagonist)
 - Initial I-PSS score 21 +/- 4
- Both groups imilarly reduced I-PSS score (↓ 9 points median)
- 32.4% of Group A were responders
- 27.9% of Group B were responders




1. Engelmann U, Walther C, Bondarenko B, et al. Arzneimittelforschung. 2006 Mar;56(03):222-9.

Saw Palmetto & Nettle Root: LUTS



Treatment week	PHO 160/120 (n=71 ... 61)	Tamsulosin (n=69 ... 60)
0	20	21
8	16	15
16	15	14
24	13	12
36	11	10
48	10	9
60	9	8



1. Engelmann U, Walther C, Bondarenko B, et al. Arzneimittelforschung. 2006 Mar;56(03):222-9.

Crataeva nurvala






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Crataeva nurvala


- Traditionally used for inflammatory diseases of the urinary tract¹
- Antilithic, bladder tonic, anti-inflammatory
- RDBPCT of Crataeva with Horsetail and Evergreen Linderia in LUTS (n=150) over 8 weeks²
 - Urinary day frequency and nocturia significantly reduced
 - Urgency and total incontinence also improved
- 30 patients with hypotonic bladder due to BPH were given a decoction of Crataeva: marked improvement in: frequency, incontinence, pain, retention. Urine flow improved as well as an increase in bladder tone¹


1. Bone K. A Clinical Guide to Blending Liquid Herbs. Churchill Livingstone, St. Louis, 2003, pp. 170.

2. Schoendorfer N, Sharp N, Seipel T, et al. BMC complementary and alternative medicine. 2018 Dec;18(1):42.



Pumpkin Seed






Pumpkin Seed (*Cucurbita pepo*) & BPH

- $\Delta 5$ -, $\Delta 7$ - and $\Delta 8$ -sterols ($\Delta 7$ -sterols predominantly), considered to be the key active constituents of pumpkin seed in the treatment of BPH¹
 - $\Delta 7$ -sterols significantly decrease DHT in BPH²
- Carotenoids, linoleic & oleic fatty acids, liposoluble vitamins play a role^{1,2}
- Tonic effect on bladder, relaxation of sphincter at neck of bladder²
- All clinical studies reviewed in 2016 (6), demonstrated improvements with I-PSS, uroflowmetry parameters and quality of life¹

1. Damiano R, Cai T, Fornara P, et al. Archivio Italiano di Urologia e Andrologia. 2016 Jul 4;88(2):136-43.

2. Pagano E, Laudato M, Grillo M, Capasso R. Phytotherapy research. 2014 Jul 1;28(7):949-55.



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Tribulus for BPH

- Trial of 50-80 year-olds with moderate to severe BPH (n=30), 3 months¹
 - Herbal combination of *Tribulus terrestris*, *Caesalpinia bonducella*, *Areca catechu*, *Asparagus racemosus* and *Acacia nilotica*
 - Rapid onset of action, improving disease progression and quality of life
- DBRCT of >50-year-olds with BPH (n=46), over 12 weeks plus follow up²
 - Tribulus leaf (with Curry Leaf, *Murraya koenigii*) against tamsulosin
 - Significant lowering of I-PSS demonstrated in both groups

1. Sahu M, Kumar V. JAMA. 2001;4:43-5.
2. Sengupta G, Hazra A, Kundu A, Ghosh A. Clinical therapeutics. 2011 Dec 1;33(12):1943-52.

Prostate Herbs : Dosage Guide

Herb	Dry Herb Equiv. Range (mg)	Extract ratio	Extract Range (mg)
Nettle root	1,998	6:1	333
Saw Palmetto	3,210	10:1	321
Crataeva stem bark	2,700	10:1	270
Pumpkin seed oil			240

Daily Dosage range

Herbal Therapy for BPH

Core Herbal Therapy

- Saw Palmetto, Nettle root, Crataeva, pumpkin seed (3)


Additional support

- Cramp bark, Corydalis, Wild Yam, Ginger (3-4) to relax smooth muscle
- Tribulus (3) for added BPH support and where LOH is an issue
- Gotu Kola, Ginkgo, Grapeseed (2-4) to reduce fibrosis
- Cranberry, Uva Ursi, Buchu, Crataeva (3-4) for prostatitis and urinary tract infection along with immune herbs Echinacea and Andrographis

Urination Technique for BPH

- Systematic review and meta-analysis of 11 studies of men with LUTS
 - Sitting position for urination linked with improved urodynamic profile
 - Significantly ↓ post-void residual urine with sitting position (25 mL)
 - ↑ maximum urinary flow rate (Qmax)
 - ↓ voiding time (TQ) in sitting position (not to statistical significance)
- No differences for healthy men

de Jong Y, Pinckaers JH, ten Brinck RM et al. PloS one. 2014 Jul 22;9(7):e101320.



Tasks: Module 19, Video 5

- Read *Principles & Practice of Phytotherapy*,
 - Monograph: Saw Palmetto pp. 804-815 (relevant sections)

