

# Support for Healthy Prostate Function

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

## Prostate Physiology

The prostate gland is part of both the male reproductive and urinary systems. A key function of prostate glandular tissue is to produce fluid that supports the growth and movement of sperm. Prostatic fluid makes up about 30% of semen and is rich in citric acid, acid phosphatase, prostate-specific antigen (PSA), enzymes, and zinc. Prostate glandular tissue consists of a collection of follicles that drain fluid into ducts and then the urethra as it passes through the prostate.

The prostate is under hormonal influence and regulation via the enzyme 5-alpha reductase, which is found in the prostate gland and responsible for the conversion of testosterone to dihydrotestosterone (DHT). DHT can bind androgen receptors and upregulate cytokines, growth factors, secretory proteins, and enzymes like PSA — a serine protease uniquely produced and secreted by prostate tissue. It is also a common biomarker used in clinical practice.

With age, the prostate often becomes enlarged due to hyperplasic changes driven by DHT. This enlargement can cause pressure and narrowing of the urethra, leading to urinary symptoms that include prolonged micturition, difficulty initiating a stream, incomplete voiding, urinary urgency, frequency, and nocturia. Estimates suggest that over half of men aged 50 and older have hyperplasic changes.

Lifestyle and nutritional interventions can support the healthy structure and function of prostate cells and support metabolic and endocrine system physiology, including key factors that influence prostate health.

## Supportive Lifestyle Practices

- Support healthy body composition in male patients. Prostate conditions have been linked to obesity through several mechanisms such as increased estrogen-to-androgen ratio, inflammation, oxidative stress, and insulin dysregulation.<sup>1</sup> Central obesity is considered a modifiable risk factor for prostate disease.
- Recommend daily exercise for its beneficial effects on metabolic health, immune function, cellular repair pathways, and prostate health. Thirty minutes of exercise per day for 6 days a week was shown to have an inhibitory effect on the growth of androgen-dependent prostate cells.<sup>2,3</sup>

### Whole Foods Nutritional Recommendations

- Recommend foods rich in lycopene such as tomatoes, watermelon, cranberries, and grapes. Lycopene is found in high concentrations in the prostate gland and may contribute to beneficial changes in cellular proliferation, modulation of local androgen signaling, inhibition of inflammation, and decreased oxidative stress.<sup>4</sup>
- Recommend regular consumption of cruciferous vegetables like Brussels sprouts, broccoli, cabbage, and cauliflower. Multiple studies have shown that consumption of these vegetables benefits prostate health in a dose-dependent manner.<sup>5</sup> It is theorized that metabolites of the phytochemical glucosinolate—including sulforaphane and indole-3-carbinol modify the expression of biotransformation enzymes and inhibit the growth of neoplastic cells.<sup>5</sup>
- Encourage the consumption of foods rich in zinc a key nutrient that accumulates in prostate epithelial cells and helps stabilize DNA-containing chromatin in sperm cells. The prostate gland contains the highest levels of zinc among all soft tissues in the body and low serum levels of zinc are associated with an increased risk of prostate cellular changes.<sup>6</sup> Zinc-rich foods include pumpkin seeds, meat, dairy, and seafood, especially oysters.

The product recommendations and information provided are based solely on research performed by Standard Process Inc. concerning its products and formulations. Health care practitioners should provide their own professional judgment concerning product recommendations based on a clinical examination of their patient/client. Standard Process is not responsible for patient care decisions or recommendations by health care practitioners based on this information.

For Health Care Practitioner use only.



### **Prostate PMG**<sup>®</sup>

Suggested Use: 1 tablet, 3 times per day on an empty stomach

Prostate PMG<sup>®</sup> contains bovine prostate PMG<sup>™</sup> extract, a proprietary Protomorphogen<sup>™</sup> blend.

• PMGs contain a unique profile of nucleotides and peptides from bovine prostate.



#### Zinc Chelate<sup>™</sup>

Suggested Use: 1 tablet per day

Zinc Chelate<sup>™</sup> is an easily absorbed zinc supplement in tablet form.

- Supports male hormonal health\*
- Supports a healthy immune system\*



#### **ProstaCo**

Suggested Use: 1 capsule 3 times daily

ProstaCo contains Saw Palmetto, Nettle Root and Crataeva in a Pumpkin Seed oil base. These herbs have been traditionally used in herbal preparations to:

- Support healthy urinary tract and prostate gland function\*
- Support healthy bladder function\*



### UriCo Phytosynergist<sup>®</sup>

Suggested Use: Dilute 5 mL (approx. 1 teaspoon) in water or juice 3 times daily

UriCo Phytosynergist<sup>®</sup> contains Couch Grass, Echinacea, Licorice and Buchu. These herbs have been traditionally used in herbal preparations to:

- · Support healthy mucous membranes within the urinary tract\*
- Support healthy urinary tract function\*
- Maintain healthy urinary tract tissue\*

### Assessment of Prostate Health

• Lab studies: prostate-specific antigen (PSA), % free PSA, comprehensive metabolic panel (CMP), fasting insulin, hormone panel, C-reactive protein (CRP)

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• Physical exam: palpation, digital rectal exam

- In Office/Physical Exam
- Body composition analysis
- Consider imaging of the prostate
- Consider risk factors such as age, ethnicity, genetics, family history

#### **REFERENCES** -

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\*These statements have not been evaluated by the Food and Drug Administration These products are not intended to diagnose, treat, cure, or prevent any disease.