

Natural prevention of prostatitis [Prostate inflammation] for 24 male subjects over 6 months

Abstract

After using the natural IPM transdermal cream for 6 months by 24 volunteer subjects, the improvement in the reduction of frequent urination during the day and at night was over 14% using both biofeedback and PSA testing. Using natural herbal formula to reduce BPH instead of using prescription medications with unpredictable and sometimes serious side effect is an innovative approach with promising successful management of BPH among men.

Conflict of interest disclosure: The author is not employed nor compensated by Glyco Bio Sciences the manufacture of the IPM matrix. The company provided the transdermal matrix at no charge to conduct the case study for 24 subjects at our clinic in Toronto, ON Canada. The author has no financial interest in the company.

Subject selection criteria: 24 healthy male subjects with mild to moderate enlarged prostate were selected to participate in this case study and signed an informed consent. Subjects with medical, psychiatric conditions and those with heavy medications were excluded from the study. Subjects were tested using bio feedback device before and after using the IPM transdermal matrix and a fasting 12 hours CBC blood test to measure PSA levels was obtained from each subject before and after 6 months at the completion of the case study.

Keywords: BPH, cancer cells, PSA, subjects, 5 α -reductase, prostate

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Abbreviations: BPH, benign prostatic hyperplasia; PSA, prostate-specific antigen; I-PSS, the international prostate symptom score; DHT, dihydrotestosterone; TURP, transurethral resection of the prostate

Objectives of the study

The main purpose of this research is to evaluate the efficacy of the IPM/HA Matrix with natural herbal ingredients to reduce the symptoms of enlarged prostate [BPH] in 24 subjects over 6 months.

Introduction, protocol and description of the research

The following natural herbal ingredients were encapsulated in HA gel and applied transdermally once every night before bed time:

- i. Turmeric/Curcumin 100mg: Curcumin, an active ingredient of the Indian spice Turmeric, has been shown to stop the formation of metastases in prostate cancer patients, researchers from LMU University in Munich, Germany, reported in the journal Carcinogenesis today.
- ii. Beta Sitosterol 100mg: Beta Sitosterol is a phytosterol, which means it is a phytochemical that occurs naturally in many plants. It can be found in avocado, pumpkin seeds and cashews – among many other places, including, of course, Saw Palmetto. In clinical trials, it has been strongly suggested that Beta Sitosterol can have an effect on promoting the free flow of urine in men suffering from benign prostatic hyperplasia (BPH); essentially, an enlarged prostate.
- iii. Saw Palmetto 75mg: Saw Palmetto is one of the best sources of

Beta Sitosterol. There is a large concentration of it found in the berries of this plant. It has been widely used throughout the ages to ease BPH symptoms and to prevent the onset of BPH.

- iv. Lycopene 50mg: Found in many vegetables—especially red tomatoes—Lycopene is a carotenoid that can be found in a number of vegetables, especially in red tomatoes. It is the most commonly-found carotenoid in the prostate glands serum and tissues. It has been linked to being an antioxidant, which means it destroys free radicals that are intending to cause harm to the body; in this case, a healthy prostate. It is also believed that Lycopene can promote effective communication between cells (gap-junctional), a process that can become lost as cells turn malignant.
- v. Pygeum Bark 30mg: From the bark of an African evergreen tree, this extract has been used for decades in European countries. While studies are inconclusive about the herb being capable of actually shrinking the prostate, they strongly suggest that it can be effective at easing the symptoms associated with BPH. It is widely used as an anti-inflammatory agent as well as an extract for all-around wellness. It has become considerably more popular in this treatment.
- vi. Quercetin 10mg: Quercetin is thought to be effective in easing the burning of Chronic Prostatitis. This is a problem that many men face and options are very limited. Even if a man desires prescription medication to alleviate the symptoms, the antibiotics are said to yield less-than-stellar results. Quercetin is a bioflavonoid that can be found in onions, black tea, red wine and apples.
- vii. Stinging Nettle 10mg: Stinging Nettle has had a variety of uses throughout history, as is the case with many herbal remedies. Muscle and joint pain, eczema and gout are just a few of its uses – and

of course, BPH. Especially when used in conjunction with Saw Palmetto, Stinging Nettle has shown great promise in easing urinary problems attributed to enlarged prostates, according to many studies.

- viii. MuiraPuama 10mg: MuiraPuama (*Ptychopetalumolacoides*) is often used as a potent male-enhancement extract. Sexual fatigue is often a side effect of both prostate problems and declining testosterone levels in men as they age.
- ix. Epimedium 10mg: Also known as “Horny Goat Weed,” Epimedium is thought to assist sexual function, especially concerning the libido and erection function. These can both diminish due to poor prostate function. Epimedium extract is one of the world’s most widely-used aphrodisiacs for these reasons. It may help men with sexual function by relaxing the smooth muscle of the penis and by stimulating the production of nitric oxide - a precursor to a man achieving an erection. By relaxing the smooth muscle, this may create an environment conducive to more blood flowing into the penile chambers; thus, promoting a stronger, firmer erection.
- x. Vitamin B6 10mg: Studies have suggested that this ever-important vitamin can also have an impact on the prostate cancer survival rate in men. Vitamin B6 can readily be found in many foods and multivitamins. Getting enough B Vitamins in our diets today can be challenging, yet it may be crucial to our all-around health particularly healthy prostate.
- xi. Vitamin E 10mg: Some studies have suggested that prostate cancer cells that have been exposed to Vitamin E have a much better chance of dying. Prostate cancer cells from what is called Prostate-Specific Antigen (PSA), which helps the disease progress. The studies suggest that exposure to Vitamin E can interfere with the creation of this PSA. Vitamin E is also known as an all-around antioxidant, similar to Lycopene. It may help destroy the free radicals that seek to harm to the body. Many studies also suggest that Vitamin E can help fight against heart disease, as well as some of the signs of aging.
- xii. Zinc Sulfate 5mg: Zinc is the second-most common trace mineral that can be found in the body, beaten only by iron. This is because zinc can be found in numerous foods. Few minerals are as important to the body as zinc. Not only is it an antioxidant, but it acts to prevent damage to human DNA. The prostate contains large zinc deposits to help it function on a high level. Should these levels drop, problems can ensue. Zinc also is thought to help with the health and production of semen.

Non Active Ingredients: coconut oil, shea butter, glyceryl stearate, pegs 100 stearate, phenoxyethanol and potassium sorbate. Several batches were manufactured to reach the desired cream’s consistency and viscosity. After 4 trials we were able to reach the final formula which was given to the subjects to be used once a day and applied on the scrotum before bed time.

Informed consent given to all participants

- i. Participation in this study will be at no cost to participants.
- ii. Subjects will apply the natural trans-dermal cream once a day on the area between the scrotum and anal area closest to the prostate for 6months.
- iii. Subjects will complete the wellness IQ at [www.academyofwell-](http://www.academyofwellness.com)

[ness.com](http://www.academyofwellness.com)¹ before and after the completion of the study. Fasting 12hours CBC blood test and PSA [ng/ml] will be done before and after the study. Biofeedback assessment will be performed and completed before and after the study to evaluate the efficacy of the formula. The Biofeedback Device provides an estimate of the health of the prostate: Red color=severe inflammation;⁴ yellow color=moderate;³ blue color=slight² and green color=normal.¹ The Biofeedback device provides also an estimate of the testosterone hormone, gonadotropin and male erection status which normally correlates with healthy prostate. The PSA Test results [<4 =normal; 4-6=slight; 6-8 moderate and >10 severe]ng/ml.

- iv. If changes are made to the study or new information becomes available, you will be informed.
- v. The study will be completed in 3months. The research data/samples will be retained and then destroyed after publications. Only initials will be used to comply with HIPPA regulations.

Access to research information

- i. Principal investigator will have access to the data collected.
- ii. All participants will be informed of the results of the research and the publication.
- iii. You may refuse to participate or may withdraw at any time for any reason by providing written notice and return samples received. If the participant withdraws his data will be removed from the collection undertaken in this research project
- iv. If future research projects are anticipated, there is a need to seek the participants’ consent to allow their data to be used for future research projects, by inserting this question on the consent form: Do you agree for your samples to be used for future research?
- v. Yes No

Potential harm, injuries, discomforts or inconvenience

There is no known harm associated with participation in this study. All herbal ingredients and the matrix do not harm the body in any way.

Potential Benefits

The participants might benefit directly from participating in this study, the potential benefits includes reduction/prevention of enlarged prostate and increased libido.

Confidentiality

Confidentiality will be respected and no information that discloses the identity of the participant will be released or published without consent.

Participation

Participation in research is voluntary. If you choose to participate in this study you may withdraw at any time ([Appendix 1](#)).

Literature review

The prostate is a walnut-sized gland that forms part of the male reproductive system. The gland is made of two lobes, or regions, enclosed by an outer layer of tissue. The prostate is located in front of the rectum and just below the bladder, where urine is stored. The

prostate also surrounds the urethra, the canal through which urine passes out of the body.² Benign prostatic hypertrophy (BPH) is a non-cancerous enlargement of the prostate gland, commonly found in men over the age of 50. Trouble passing urine or pain when passing urine. A burning or stinging feeling when passing urine. Strong, frequent urge to pass urine, even when there is only a small amount of urine.^{3,4} Following proper healthy lifestyle choices as outlined at www.academyofwellness.com Wellness IQ has been shown to be the best solution for enlarged prostate instead of depending on medications or surgery. Avoiding refined sugar and flour, dairy products, refined foods, fried foods, junk foods, hydrogenated oils, alcohol (particularly beer) and caffeine are considered healthy lifestyle choices to avoid BPH as well as prostate cancer.⁵

- i. About 1 in 6 males will be diagnosed with prostate cancer during his lifetime.^{6,7}
- ii. Prostate cancer is the second leading cause of cancer death in Canadian and American men, behind only lung cancer.^{8,9}
- iii. The likelihood of developing enlarged prostate increases with age.^{9,10}
- iv. Half of all men in their 50s, 60 percent of men older than 60 and 80 percent in their 80s, have some symptoms of BPH¹¹ (Figure 1) (Figure 2).

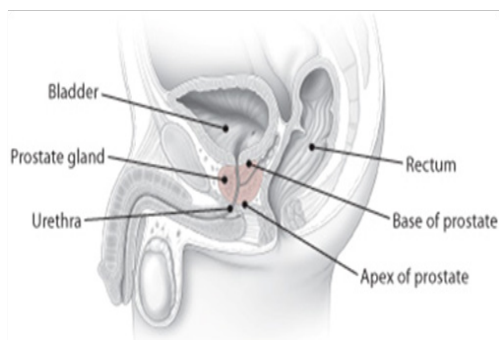


Figure 1 Location of the prostate gland.

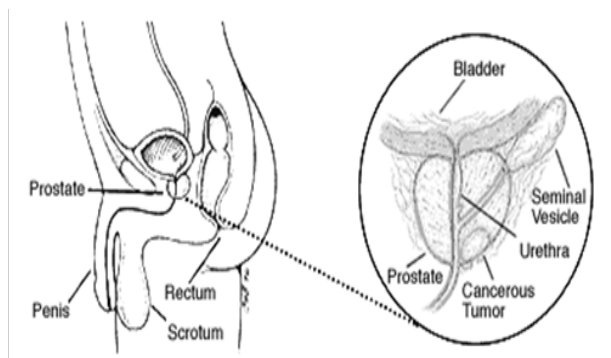


Figure 2 Comparing normal prostate vs enlarged prostate [BPH].

The prostate gland, about the size of a walnut, produces fluid that forms part of the semen that is ejaculated during sexual activity. The prostate is located adjacent to the rectum and just below the bladder and wraps around the upper part of the urethra, which carries urine from the bladder out of the body.^{12,13} This location creates challenges in both diagnosis and treatment. During a digital rectal exam, for example, a doctor is able to feel only the back portion of the prostate. If cancer has developed in the apex, base, or deep inside the prostate,

it may not be palpable. Surgeons and radiation oncologists also face challenges in eradicating a tumor without causing lasting damage to surrounding organs and structures. When removing a tumor from the breast or colon, a surgeon is able to remove enough surrounding tissue to ensure “clean margins,” meaning that all the cancer has been removed. But when treating prostate cancer, a comparable amount of tissue cannot be removed surgically or targeted.

It takes a skilled surgeon and radiation oncologist to eradicate diseased tissue without harming portions of the rectum, bladder and penis, thereby minimizing the likelihood of complications.^{8,9,14} Prostate problems may seem the province of older men, but in fact, this small gland can begin to get bigger before a man turns 30. This natural (and non-cancerous) enlargement is called benign prostatic hyperplasia (BPH). It is most likely the result of hormonal changes that cause prostate cells to increase in number and size. As the prostate enlarges, it starts to press against the urethra and the bladder.^{4,15}

Symptoms of BPH

Less than half of all men with BPH have the following symptoms:¹⁶

- i. Dribbling at the end of urinating
- ii. Inability to urinate (urinary retention)
- iii. Incomplete emptying of the bladder
- iv. Incontinence
- v. The need to urinate two or more times a night
- vi. Pain with urination or bloody urine (may indicate infection)
- vii. Difficulty starting urinary stream
- viii. Strong and sudden urge to urinate
- ix. Weak urine stream

Although 50% to 60% of men with BPH never develop symptoms, others find that this condition makes life miserable.¹⁷

Getting help

If you think you may have BPH, see your doctor. An exam and medical history can help confirm the diagnosis. Expect to be asked questions about your urinary flow and how long you’ve had symptoms. Your doctor may also ask you to complete a questionnaire to help evaluate the severity of your BPH. Blood tests can help rule out other causes for your symptoms, like an infection, untreated diabetes, or prostate cancer.¹⁸

Treating BPH

If you aren’t bothered by BPH, you and your doctor may want to simply keep an eye on your symptoms. When BPH starts to interfere with your quality of life, the first step is usually a combination of lifestyle changes and medication.¹⁹

Tips for relieving BPH symptoms

- i. Some men who are nervous and tense urinate more frequently. Regular exercise, relaxation techniques and other strategies can reduce stress.
- ii. When you feel the urge to urinate, try not to hold it. Go when you have the chance and when you go, empty your bladder completely.

iii. Some medications contribute to problems urinating. Review all your prescription and over-the-counter medicines, as well as any dietary supplements you take, with your doctor. She or he may be able to adjust dosages or substitute another medication that has fewer urinary side-effects.

Avoid drinking fluids in the evening, particularly caffeinated and alcoholic beverages.²⁰

Although PSA testing can help catch prostate cancer at an early stage, having an elevated PSA (generally considered more than 4ng/ml) doesn't necessarily mean that a man has cancer. Noncancerous conditions, including benign prostatic hyperplasia (BPH), or an enlarged prostate and prostatitis, can raise PSA levels. In fact, studies have shown that about 70% to 80% of men with an elevated PSA who have a biopsy do not have cancer. However, many men undergo an ultrasound and prostate biopsy, to be certain.^{8,20}

Conversely, the PSA test doesn't detect all cancers. About 20% of men who have cancer also have a normal PSA (less than 4ng/ml), so the test may give some men a false sense of security. For this reason, some experts take a man's age into account when considering a PSA level. And most doctors observe how a man's PSA level changes over time, a measure called PSA velocity, rather than using it as a one-time indicator. PSA scores tend to rise more rapidly in men with cancer than in those with BPH, for example. The emotional impact of cancer can be devastating - there's no question of that. But you owe it to yourself to do whatever you need in order to remain calm and take things one step at a time. There is no one-size-fits-all treatment for early-stage prostate cancer. Even the experts do not agree about which men with such cancers should be treated, which treatment method is best - or whether, for some tumors, any treatment is even necessary.

At the same time, every doctor knows that some men who undergo treatment for early-stage prostate cancer and are considered "cured" on the basis of follow-up PSA tests, suffer relapse or "biochemical recurrence" (as measured by PSA levels) years later - indicating that the original cancer spread (metastasized) without being detected and has become active. What is going on? It is likely in these situations that individual cancer cells (micrometastases) shed from the tumor early on, but at levels too small to be detected by computed tomography or bone scans or by physical examination (see "Likelihood of progression," below). Such micrometastases cause no symptoms initially but may do so in future months to years, as they grow into tumors. Research is under way to find better methods of detecting micrometastases.^{9,21}

The IPSS score (International Prostate Symptom Score), recommended by the WHO, allows you to test your prostate. It quantifies symptoms in order to detect prostate troubles in time and allows your pharmacist to better advise you^{7,22} ([Appendix 2](#)).

About the I-PSS

The International Prostate Symptom Score (I-PSS) is based on the answers to seven questions concerning urinary symptoms and one question concerning quality of life. Each question concerning urinary symptoms allows the patient to choose one out of six answers indicating increasing severity of the particular symptom. The answers are assigned points from 0 to 5. The Total score can therefore range from 0 to 35 (asymptomatic to very symptomatic).¹⁶ The questions refer to the following urinary symptoms:

Questions Symptom

- i. Incomplete emptying
- ii. Frequency
- iii. Intermittency
- iv. Urgency
- v. Weak Streams
- vi. Straining
- vii. Nocturia

Question eight refers to the patient's perceived quality of life. The first seven questions of the I-PSS are identical to the questions appearing on the American Urological Association (AUA) Symptom Index which currently categorizes symptoms as Follows:

- i. Mild (symptom score less than or equal to 7)
- ii. Moderate (symptom score range 8-19)
- iii. Severe (symptom score range 20-35)

There are conflicting recommendations on whether men older than 50 should get a yearly PSA test. Recent studies have found that large numbers of men need a PSA screening to detect and survive prostate cancer. In fact, one study found a 15% higher death rate, when compared with the control group, even though PSA screening detected more prostate cancers.¹¹ Benign prostatic hypertrophy (BPH) refers to a condition in which the prostate gland has enlarged. The prostate gland normally increases in size as a man ages. It begins growing at about 30 years of age. When the gland is larger than expected for the size and age of the individual, it is given the term BPH. About 50 percent of men have evidence of BPH by age 50 and 75 percent have it by 80. BPH symptoms occur when the prostate gland enlarges to the point that a patient has difficulty urinating. Those symptoms can be urinary frequency, urgency (the compelling need to urinate), incontinence and nocturia (nighttime urination).²⁵

BPH also can manifest with symptoms such as having a weak urinary stream, hesitancy (difficulty initiating urination), intermittency (urine stream continually starts and stops) and leakage. Pain can occur if BPH becomes so severe that it blocks the outflow of urine. If BPH progresses, renal failure can ensue. There is no known cause of BPH, although Testosterone once was thought to be the culprit. However, similarly to prostate cancer, if that were the case, we could expect BPH to occur in young men. Dihydrotestosterone (DHT) is a metabolite of testosterone. It is synthesized in the prostate from testosterone by the action of an enzyme (5 α -reductase). There are medications that block 5 α -reductase that can result in shrinkage of the prostate gland. Finasteride (Proscar and Propecia) and dutasteride (Avodart) are 5 α -reductase inhibitors. These medications can provide some relief from BPH symptoms, but they must be taken for a very long time and are very expensive. Their side effects include a lowered libido.²⁶

Surgery sometimes is indicated for BPH. If symptoms become severe enough, a urologist may perform a TURP (transurethral resection of the prostate). A small catheter is placed in the urethra and the surgeon cuts away or lasers the excess tissue that is inhibiting urine outflow. Newer therapies include microwave thermotherapy and transurethral needle ablation (TUNA). These procedures can

be lifesaving for some men. Prostatitis, which is an inflammation of the prostate gland, gives the gland an enlarged and boggy feeling. Prostatitis can cause pain in the groin and the rectum, as well as difficulty urinating. Other symptoms include nocturia (nighttime urination), pain in the abdomen or lower back, testicular pain and painful ejaculations. Prostatitis obviously can make a man miserable.²⁷

The cause can be a bacterial infection of the prostate gland. Fever, chills, nausea, vomiting and malaise commonly are associated with prostatitis that results from a bacterial infection. However, bacterial infection of the prostate gland accounts for only 10 percent of the cases of prostatitis. Acute cases of bacterial prostatitis can be treated successfully with antibiotics. Bacterial prostatitis can develop into chronic bacterial prostatitis. In these cases, patients will have frequent bacterial infections. Over time, antibiotic therapy becomes less successful in chronic bacterial prostatitis.²⁸⁻³⁰

A consensus panel of 14 researchers and clinicians convened by the National Institutes of Health has endorsed active surveillance in place of immediate surgery or radiation therapy for patients with low risk prostate tumors. A principal concern addressed was that 90% of patients with localized prostate cancer deemed not aggressive at diagnosis and unlikely to become life threatening are aggressively treated with radiation or surgery. Treatment is accompanied by substantial short- and long-term side effects without evidence of clear benefits such as improved survival. The panel concluded that “It’s clear that many men would benefit from delaying treatment, but there is no consensus on what constitutes observational strategies and what criteria should be used to determine when treatment might ultimately be needed among closely-monitored men.” Considering the idea of active surveillance was put forward in some detail more than a decade ago both by Johns Hopkins and Sloan Kettering urologists, it is quite remarkable that the urology community has yet to get their act together and have enough data to reach a consensus on the details of active surveillance.^{22,31,32}

Results

Table 1 Summary of biofeedback & PSA results for 24 subjects over 6months

Subject	Biofeedback results	PSA results
Subject 1 [pre]	3	4.2
Subject 1 [post]	2	3.8
Subject 2 [pre]	2	3.1
Subject 2 [post]	1	2.2
Subject 3 [pre]	3	4
Subject 3 [post]	2	3
Subject 4 [pre]	3	2.1
Subject 4 [post]	2	3
Subject 5 [pre]	3	4.1
Subject 5 [post]	2	5.2
Subject 6 [pre]	3	4.3
Subject 6 [post]	2	4.1

Table Continued..

Subject 7 [pre]	3	4.1
Subject 7 [post]	2	3.7
Subject 8 [pre]	3	4.2
Subject 8 [post]	2	3.7
Subject 9 [pre]	4	4.4
Subject 9 [post]	3	3.6
Subject 10 [pre]	4	3.7
Subject 10 [post]	3	3.1
Subject 11 [pre]	4	4.5
Subject 11 [post]	3	3.2
Subject 12 [pre]	4	4.2
Subject 12 [post]	3	3.3
Subject 13 [pre]	5	7.8
Subject 13 [post]	3	5.2
Subject 14 [pre]	4	5.7
Subject 14 [post]	3	3.7
Subject 15 [pre]	3	5.8
Subject 15 [post]	3	5.5
Subject 16 [pre]	4	4.8
Subject 16 [post]	3	4.1
Subject 17 [pre]	3	3.8
Subject 17 [post]	2	3.1
Subject 18 [pre]	5	6.9
Subject 18 [post]	3	4.4
Subject 19 [pre]	4	3.1
Subject 19 [post]	3	2.8
Subject 20 [pre]	4	7.8
Subject 20 [post]	2	6.6
Subject 21 [pre]	3	6.6
Subject 21 [post]	2	3.7
Subject 22 [pre]	4	7.4
Subject 22 [post]	2	5.3
Subject 23 [pre]	3	5.6
Subject 23 [post]	2	4.1
Subject 24 [pre]	3	5.9
Subject 24 [post]	5	12.4
Subject 25 [pre]	4	8.8
Subject 25 [post]	3	4.5

[1=normal; 2=slight; 3=moderate and 4=severe][<4= normal; 4-6=slight; 6-8moderate and >10 severe].

Discussion

- i. Subject 1[LJ] Mid-sixties. Mild prostate enlargement. Slight improvement after using the formula in both biofeedback and PSA tests.
- ii. Subject 2[YR] Mid-forties. Slight prostate enlargement. No symptoms of frequent urination. Good improvement after using the formula in both biofeedback and PSA tests.
- iii. Subject 3[MS] Late-fifties. Slight prostate enlargement. Little symptom of frequent urination. Slight improvement after using the formula for 6months.
- iv. Subject 4[OK] Mid-seventies. Moderate prostate enlargement which did not improve after 3months of using the formula. Perhaps a longer time frame is needed due to advance age and increase frequent urination at night.
- v. Subject 5[FO] Late-fifties. Mild prostate enlargement which improved after 6months of using the formula with less frequency and urgency to urinate.
- vi. Subject 6[MC] Late-sixties. Moderate enlarged prostate which improved after 6months of using the formula.
- vii. Subject 7[MA] Early-sixties. Moderate prostate enlargement with a slight improvement in the frequency of urination at night after 6months of using the formula.
- viii. Subject 8[AG] Late sixties. Moderate prostate enlargement with a slight improvement in symptoms of frequent urination at night after 6months of using the formula.
- ix. Subject 9[BR] Mid-sixties. Moderate prostate enlargement with a moderate improvement in symptoms of frequent urination during the day and at night after 6months of using the formula.
- x. Subject 10[DA] Mid-sixties. Melanoma survivor with a mild prostate enlargement. Moderate improvement in the frequency of urination during the day and at night.
- xi. Subject 11[BC] Late –sixties. Mild enlargement of the prostate and a mild improvement after using the formula for 6months.
- xii. Subject 12[AL] Late-sixties. Mild enlargement of the prostate and a moderate improvement in the frequency of urination after using the formula for 6months.
- xiii. Subject 13[MD] Mid-fifties. Mild to moderate BPH/ noticed improvement after 6months.
- xiv. Subject 14[CS] Early sixties. Mild BPH/reported improvement after 6 month with less frequent trips to the bathroom at night.
- xv. Subject 15[TM] Late sixties. Moderate BPH/improvement in symptoms after 6months.
- xvi. Subject 16[RT] Early forty. Mild BPH/noticed dramatic improvement in strong urine flow and improved erection.
- xvii. Subject 17[WT] Late fifties. Moderate BPH. Improvement in 6months.
- xviii. Subject 18[DH] Early fifty. Mild BPH. Symptoms improved dramatically after 6months.
- xix. Subject 19[FM] Late sixties. Moderate BPH when starting. Mild symptoms after 6months.
- xx. Subjects 20[LW] Early seventy. Severe BPH at the start. Significant improvement after 6months with dramatic results.
- xxi. Subject 21[AV] late sixty. Moderate BPH at the beginning and no symptoms after 6months.
- xxii. Subject 22[JL] Late sixty. Severe BPH at the beginning. Little symptoms after 6months.
- xxiii. Subject 23[GH] Early forty. Moderate BPH and improvement at the end.
- xxiv. Subject 24[JD] Late fifty. Moderate BPH and good improvement at the end of 6months.

The correlation between the biofeedback results and PSA results were very high and it may be used in the future in conjunction with blood tests, biopsy and ultra sound. In a recent study at Freiburg University in Germany have shown a reduction in free radicals that leads to BPH with 12 weeks in 24 tested subjects.³³ The duration of the study of 12months should be extended to 24months in future studies since it takes longer time to measure improvement in subjects with moderate to severe prostate enlargements. We recommend increasing the sample size to 48 subjects over one year in future studies to elucidate the efficacy of the natural herbal formula in reducing prostate enlargement.

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None.

Conflict of interest

The author declares no conflict of interest.

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