

Physical Fitness & Sexual Health Applications of Black Ginger Extract

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In my previous article "[Polyamines & Polymethoxyflavones for Reducing Body Fat](#)" published on LinkedIn, I introduced the value of Black Ginger (*Kaempferia parviflora*) extract, a traditional herbal medicine of Thailand, with a focus on its fat reduction properties as demonstrated in human clinical research^{1 2}. In this article, I'm going to share the human clinical research demonstrating the efficacy of Black Ginger extract on promoting physical fitness and supporting sexual health in men. But first, let's briefly review the active constituents of Black Ginger.

THE ACTIVE COMPONENTS OF BLACK GINGER

The primary active constituents of Black Ginger are its naturally occurring methoxyflavones, collectively referred to as polymethoxyflavones (PMF). One major methoxyflavone is 5,7-dimethoxyflavone³, which has been identified as an active component in some human⁴ and animal⁵ research. In other research^{6 7 8}, it is the totality of the PMF that has been found to provide specific activity. Now let's look at the research on Black Ginger for physical fitness.

PHYSICAL FITNESS

Three studies have demonstrated the physical fitness enhancing effects of Black Ginger extracts. These include studies in healthy adults, adolescents, and soccer players.

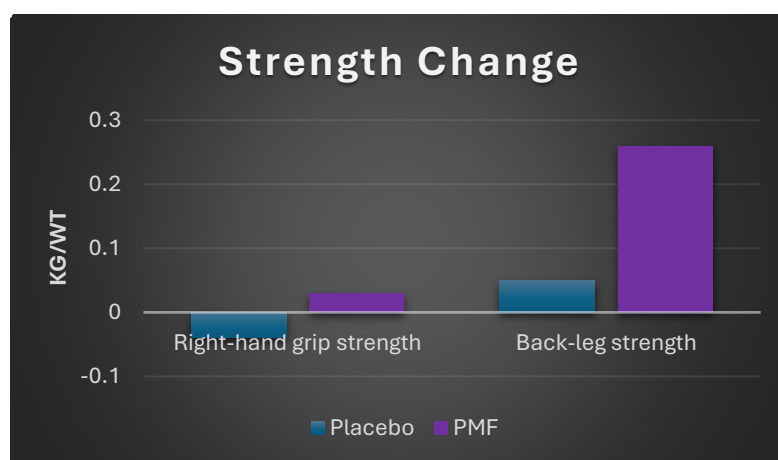
Physical fitness in healthy adults

This 12-week, 3-arm randomized, double-blind, placebo-controlled, parallel group study⁹ examined the effect of two functional drinks containing Black Ginger Extract (BGE) or placebo on the physical fitness of healthy adult male and female volunteers (19-60 years old). The two BGE drinks yielded 3.57 mg PMF and 7.14 mg PMF per serving per 80 mL, respectively. Results were that subjects who consumed both doses of the drink had significantly increased VO₂ max (i.e., an indicator of cardiovascular fitness and aerobic endurance; $p < 0.05$) at 6 weeks. Subjects consuming the higher dose displayed improved performance in both the timed shuttle run test and 5 min distance run ($p < 0.05$) at 12 weeks. At 6 weeks, subjects who consumed both doses of the drink significantly increased the activities of the antioxidant enzymes SOD and catalase compared to the placebo group ($p < 0.05$). The significant reduction in the MDA level (i.e., an oxidative marker) after 6 weeks of consumption was observed only in the subjects who consumed the high dose of the drink compared to the placebo group ($p < 0.05$). When the consumption was prolonged to 8 weeks, it was found that the subjects who consumed the functional drink at both doses had a decreased MDA level compared to the placebo group ($p < 0.01$). At six weeks, both doses also significantly reduced serum lactate levels compared to the placebo group ($p < 0.05$). In conclusion, BGE can be

successfully used to improve cardiorespiratory fitness and physical performance by improving oxidative stress and lactate.

Physical fitness in adolescents

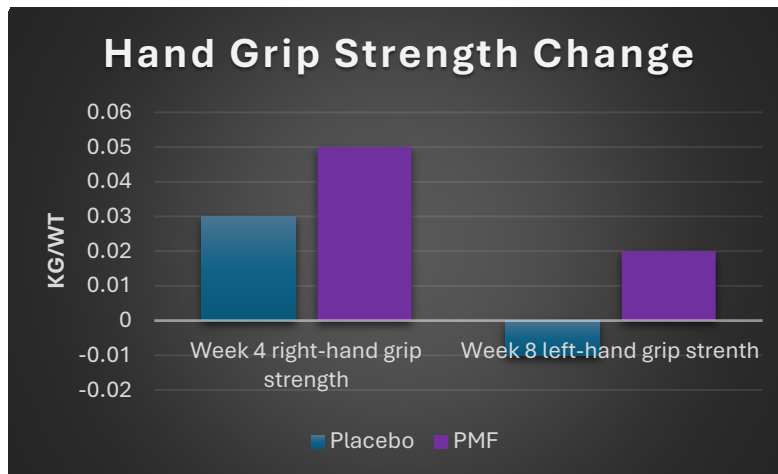
This 12-week, randomized, double-blind, placebo-controlled study¹⁰ investigated the effects of a standardized BGE (125.46 mg PMF/dose) or placebo on the physical fitness and heart rate variability (HRV) parameters in 194 adolescent sport school students. Results were that BGE significantly ($p < 0.05$) increased the right-hand grip strength, the back-leg strength and maximal oxygen consumption (VO_2 max) and decreased the time used for 50-meter sprint test without changing the sit-and-reach test and the 40-yard technical test. For HRV parameters, BGE significantly ($p < 0.05$) increased physiological resilience against stress, improved parasympathetic nervous system impact on heart rate and improved parasympathetic nervous system increase on the heart via the vagus nerve, without changing low frequency (LF) norm and LF/HF ratio. The



increase in stress resistance and decrease in stress index were found in the BGE-treated group, without changing the autonomic nervous system (ANS) activity and balance. Blood biochemical analysis showed normal values of all participants. This data indicates the safety and positive effects of BGE on muscle strength, endurance and speed.

Physical fitness in soccer players

This 12-week, randomized, double-blind, placebo-controlled trial¹¹ examined the effect of placebo and BGE at a dose yielding 13.5 mg PMF on the physical fitness of 60 soccer players. Baseline data were collected including tests of physical performance performed every 4 weeks throughout the 12-week study period. Results were that treatment with BGE significantly increased right-hand grip strength at weeks 4, 8, and 12. The left-hand grip strength was significantly increased at week 8. In conclusion, supplementation with BGE 12 weeks may significantly enhance some physical fitness components in soccer players. Now let's take a look at BGE's effect on sexual health.



SEXUAL HEALTH

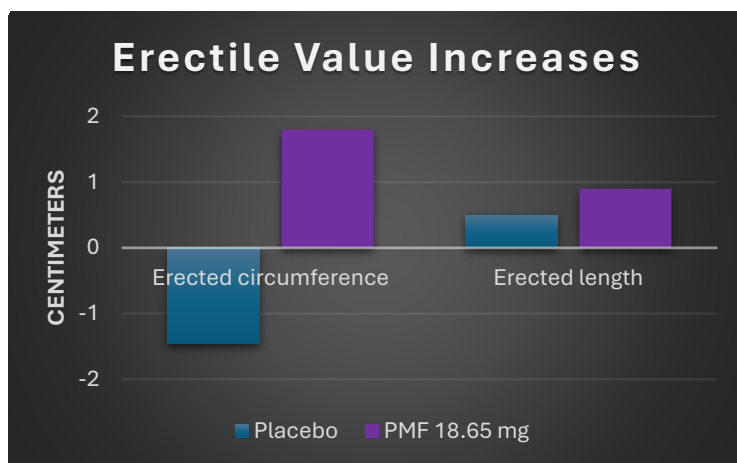
Sexual health positively correlates with overall wellbeing. Existing therapeutics to enhance male sexual health are limited by factors that include responsiveness, adherence and adverse effects. As the population ages, safe and effective interventions that preserve male sexual function are needed. Research suggests that various preparations of BGE may be able to help promote erectile function.

BGE pilot study on ED

The aim of this open-label, one-arm, pilot study¹² was to examine the effects of BGE on erectile function in 13 generally healthy middle-aged and older men (50-68 years) with self-reported mild erectile dysfunction, who were not using prescription treatments. Participants took BGE daily (yielding 5 mg 5,7-dimethoxyflavone) for 30 days. Evaluations were conducted at baseline and on the final study assessment. Results were that supplementation with BGE resulted in statistically significant improvements in erectile function, intercourse satisfaction and total scores on the International Index of Erectile Function (IIEF) questionnaire. BGE was well tolerated and exhibited an excellent safety profile. In conclusion, BGE may improve erectile function in healthy middle-aged and older men.

BGE double-blind, placebo-controlled, randomized trial on ED

This 8-week, double-blind, placebo-controlled, randomized trial¹³ investigated the effect of supplementation with two doses of BGE (yielding about 5.18 mg PMF and 18.65 mg PMF) or placebo on erectile response of 45 healthy male elderly volunteers. The erectile function tests were assessed after single administration, 1 and 2 months of treatment, and included the response latency time to visual erotic stimuli, size and length of penis both in flaccid and erection states. Results were that BGE at a dose providing 18.65 mg PMF/day exhibited a significant enhanced all parameters after 1 and 2 months of treatment. Moreover, the penile length at erection states and the response latency to sexual erotic stimuli showed significant changes during the delay period. In conclusion, this study clearly demonstrates that BGE has potential for the treatment of aged related male erectile dysfunction.



INTRODUCING ACTIZ!NG™

ACTIZ!NG™ is a high-quality BGE containing a relatively high potency of polymethoxyflavones (PMFs) (36%) and 5,7-dimethoxyflavone (5,7-DMF)(20%)That means that only:

- 33.3 mg would be needed to provide the 12 mg clinically tested dose of PMF for fat loss,
- 9.92-19.83 mg needed to provide the 3.57-7.14 mg PMF for physical fitness in adults,
- 37.5 mg needed to provide the 13.5 mg PMF for athletes,
- 25 mg needed to provide the 5 mg 5,7-dimethoxyflavone for erectile function and intercourse satisfaction, and
- 51.8 mg needed to provide the 18.65 mg PMF for increased erectile circumference and length.

Compare this to other BGE materials where the total PMF content is only about 5%, requiring significantly higher doses.

CONCLUSION

As indicated in my [previous article](#), BGE has fat reduction properties as demonstrated in human clinical research. In addition, human clinical research has also demonstrated that BGE offers physical fitness and sexual health benefits. ACTIZ!NG™ is a high-quality BGE containing a relatively high potency of (PMFs) (36%) and 5,7-DMF (20%), so a much lower input of the material is needed to yield clinically relevant doses of PMFs and 5,7-DMF.

Nutraland USA offers clean, plant-based and sustainable branded ingredients supported by science. Our nutraceuticals are good for you, and good for the planet. For more information about how you can use ACTIZ!NG™ in your dietary supplements, contact gene.bruno@nutrallandusa.com; 949-988-7615.

Note: The information presented in this article is for educational purposes only. It does not constitute recommendations for structure/function claims.

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