



G115® *Panax ginseng*

For energy & immunity

This table provides a summary of the research showing the efficacy and tolerability of *Panax ginseng* C.A Meyer (G115®) for supporting immunity, energy production and physical endurance.

Publication	Study Design	Participants	Intervention	Outcomes	Clinical Relevance
Forgo I, et al. On the question of influencing the performance of top sportsmen by means of biologically active substances. <i>Aerztl Prax.</i> 1981;33(44):1784-1786.	Open, comparison study.	20 male adult athletes (18-31 years).	G115® 200mg daily for 9 weeks.	Maximum oxygen uptake capacity was measured on the bicycle ergometer, as a parameter of energy turnover, and serum lactate level at increasing workload. Heart rate and blood chemistry were used as indicators of pharmacological effects. An improvement in performance was seen before and after treatment. This was supported by highly significant increases in oxygen capacity, and reductions in lactate values ($p < 0.001$), suggesting a shift in the provision of energy in favour of aerobic metabolism. When determining the anaerobic threshold, highly significant differences were established in the 2nd and 3rd minutes following completion of the ergometer test ($p < 0.001$). The significant changes in heart rate over the 9 weeks showed an increase in capability and a shortening of the recuperation phase ($p < 0.001$).	Efficacy study – physical performance G115® significantly increased oxygen uptake capacity, with lactate and heart-rate values significantly lowered. A shorter recovery phase following workload was seen, thus corresponding to an improved physical performance.
Forgo I, et al. The duration of effect of the standardised ginseng extract G115 in healthy competitive athletes. <i>Notab Med.</i> 1985;15(9):636-640.	Placebo-controlled double-blind, study.	28 male adult athletes (20-30 years).	G115® 1 capsule twice a day, or placebo for 9 weeks.	After 9 weeks of G115® treatment, oxygen uptake increased by 17% ($p < 0.01$) and heart rate decreased by 10% ($p < 0.001$) as compared to placebo, and they remained significant for 3 weeks after end of treatment. Forced expiratory 1-second volume (FEV1) values showed a significant increase ($p < 0.01$), which remained significant even 7 weeks after end of treatment ($p < 0.05$). Forced vital capacity (FVC) values increased significantly ($p < 0.05$) and reached the greatest difference 3 weeks after end of treatment ($p < 0.001$). Reaction time response with G115® treatment was significantly reduced as compared to the placebo group ($p < 0.01$) after 9 weeks. Differences between the reaction times of the two groups remained significant through week 3 after end of treatment.	Efficacy study – physical performance G115® had long-term beneficial effects on metabolic parameters, such as oxygen uptake, heart rate, and pulmonary functions. Oxygen uptake was enhanced after G115® treatment and the effect was still present 6 weeks after stopping the treatment.



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Scaglione F, et al. Immunomodulatory effects of two extracts of <i>Panax ginseng</i> C.A. Meyer. Drugs Exp Clin Res. 1990;16(10):537-42.	Randomised, double-blind, placebo-controlled study.	60 healthy adults (18-50 years).	Subjects were assigned to three groups (20 in each): (a) aqueous ginseng extract (b) placebo (c) G115® 100mg. Delivery was every 12 hours for 8 weeks.	Immune parameters at week 4 and 8 were measured as chemotaxis of PMNs, phagocytosis index, phagocytosis fraction, intracellular killing, total lymphocytes, T helper subset, suppressor cells subset, blastogenesis of circulating lymphocytes, natural killer-cell activity. Chemotaxis was enhanced at end of week 4 in aqueous and G115® groups ($p < 0.05$). This increase was more marked at end of week 8 ($p < 0.001$) with G115®. The phagocytosis Index (PHI) and phagocytosis fraction (PHF) was enhanced in the G115® group by 4 weeks ($p < 0.001$). Intracellular killing and total lymphocytes (T3) was increased in both ginseng groups by 4 weeks ($P < 0.05$), with a higher increase by week 8 ($p < 0.05$ and $p < 0.001$, respectively). T4 subset increased at week 4 with G115®. A stimulation of blastogenesis induced by mitogen LPS appeared at the 4th week ($p < 0.001$) in the G115® group only.	Efficacy study - immune Except for the parameters intracellular killing and suppressor cells all immune parameters significantly increased in both ginseng groups. G115® showed more marked improvements in all parameters except for lymphocytes. A stimulation of the blastogenesis induced by the mitogen LPS was highly significant only in the G115® group. G115® extract was more active than the aqueous extract and influenced positively a higher number of immune cell subsets (including phagocytosis stimulation and natural killer cell activity).
Scaglione F, et al. Efficacy and safety of the standardized Ginseng extract G115 for potentiating vaccination against the influenza syndrome and protection against the common cold. Drugs Exp Clin Res. 1996;22 (2):65-72.	Randomised, double-blind, placebo-controlled study.	227 adults (mean age 48 years).	G115® 200mg, or placebo, daily for 12 weeks. At week 4 subjects also received an anti-influenza polyvalent vaccination.	The frequency of influenza or common cold between week 4 and 12 consisted of 42 cases in the placebo group and only 15 cases in the G115® group, the difference being statistically highly significant ($p < 0.001$). Antibody titres rose by week 8 to an average of 171 units in the placebo group and to 272 units in the G115® group ($p < 0.001$). Natural killer cell (NK) activity levels at week 8 and 12 were nearly twice as high in the G115® group as compared to the placebo group ($p < 0.0001$). Laboratory values of 24 safety parameters showed no significant differences between the end and the beginning of the 12-week study in either of the groups.	Efficacy study - immune The proportion of volunteers who caught influenza or a cold was significantly lower in the G115® group. The antibody titre increased after vaccination and the natural killer activity levels were significantly higher after the 8th and the 12th week of treatment with G115®. G115® is able to improve the immune response in vivo in humans and can offer additional protection against influenza and common cold.
Reay JL, et al. Single doses of <i>Panax ginseng</i> (G115) reduce blood glucose levels and improve cognitive performance during sustained mental activity' J Psychopharmacol. 2005 19(4):357-365.	Randomised, double-blind, placebo-controlled, balanced-crossover study.	30 healthy young adults (mean age 22.6 years).	Subjects took G115® 200mg or 400mg, or placebo, as a single dose.	Subjects completed a 10 minute test battery comprising two serial subtraction tasks (Serial Threes and Serial Sevens), a Rapid Visual Information Processing task and then a 'mental fatigue' visual scale, at baseline and 6 times successively from 60 minutes after dosing. A greater number of correct subtractions were made on the Serial Sevens task following the 200mg dose. Subjects made more correct responses on 5 of the 6 post-dose completions of the cognitive demand battery test. The 400mg led to reductions in subjective ratings of mental fatigue during the third completion of the demand battery, whilst 200mg led to statistically significant reductions on the second to sixth completions. Statistically significant blood glucose reductions were noted at all three post-treatment measurements.	Acute efficacy study- cognitive performance and fatigue G115® lowered circulating blood glucose levels, enhanced cognitive performance of a mentally demanding task (Serial Sevens), and ameliorated the increase in subjective feelings of mental fatigue experienced by participants during sustained intense cognitive processing. The 200mg dose provided greater overall benefits.