

CarnoSyn® Beta-Alanine Clinical Research



**Brain
Health**



**Muscle
Health**



**Systemic
Protection**



**Improve
Endurance**

Clinical Claims At 2.4g Dosage Per Day

- Improve muscle endurance
- Support executive functioning & cognitive processing
- Improve muscle function
- Support healthy circulation

Additional Clinical Claims At 3.2g+ Per Day

- Increase working & exercise capacity
- Increase muscle strength
- Boost detoxification & antioxidant levels
- Speed recovery from intense exercise
- Enhance the buffering capacity of muscle
- Elevate muscle carnosine levels
- Decrease acidosis
- Delay fatigue during workout
- Enhance mental focus
- Improve speed
- Enhance exercise training
- Improve overall muscle performance

See full list of clinical studies on the next page.



Clinical studies using a daily dosage of 2.4g of beta-alanine:

1. β -Alanine supplementation improves fractional anisotropy scores in the hippocampus and amygdala in 60-80-year-old men and women. [Full text open access](#)
2. Role of β -Alanine Supplementation on Cognitive Function, Mood, and Physical Function in Older Adults; Double-Blind Randomized Controlled Study. [Full text open access](#)
3. β -Alanine supplementation increased physical performance and improved executive function following endurance exercise in middle aged individuals. [Full text open access](#)
4. Oral Nutritional Supplement Fortified with Beta-Alanine Improves Physical Working Capacity in Older Adults: A Randomized, Placebo Controlled Study. [Full text open access](#)
5. The effect of beta-alanine supplementation on neuromuscular fatigue in elderly (55-92 Years): a double-blind randomized study. [Full text open access](#)

Clinical studies using a daily dosage of 3.2g or higher of beta-alanine:

1. β -alanine supplementation improves YoYo intermittent recovery test performance. [Full text open access](#)
2. Short-duration beta-alanine supplementation increases training volume and reduces subjective feelings of fatigue in college football players. [Abstract](#)
3. Beta-alanine and the hormonal response to exercise. [Abstract](#)
4. Exercise-induced oxidative stress: the effects of β -alanine supplementation in women. [Abstract](#)
5. Effect of Beta-Alanine Supplementation on 800 m Running Performance. [Abstract](#)
6. β -alanine supplementation elevates intramuscular carnosine content and attenuates fatigue in men & women similarly but does not change muscle l-histidine content. [Abstract](#)
7. β -alanine supplementation improves isometric endurance of the knee extensor muscles. [Abstract](#)
8. Additive effects of beta-alanine and sodium bicarbonate on upper-body intermittent performance. [Abstract](#)
9. Effect of β -alanine, with & without Sodium Bicarbonate, on 2000m Rowing Performance. [Abstract](#)
10. Influence of training status on high-intensity intermittent performance in response to β -alanine supplementation. [Full text open access](#)
11. The Effects of Beta-Alanine Supplementation on Physical Working Capacity at Heart Rate Threshold. [Abstract](#)
12. The effect of β -alanine supplementation on cycling time trials of different length. [Abstract](#)
13. Metabolic consequences of β -alanine supplementation during exhaustive supramaximal cycling and 4000-m time-trial performance. [Abstract](#)
14. Beta-alanine supplementation enhances judo-related performance in highly-trained athletes. [Abstract](#)
15. β -alanine supplementation improves tactical performance but not cognitive function in combat soldiers. [Full text open access](#)
16. Twenty-four Weeks β -alanine Supplementation on Carnosine Content, Related Genes, and Exercise. [Abstract](#)
17. β -alanine Supplementation Improves Throwing Velocities in Repeated Sprint Ability and 200-m Swimming Performance in Young Water Polo Players. [Abstract](#)
18. Four Weeks of β -alanine Supplementation Improves High-Intensity Game Activities in Water Polo. [Abstract](#)
19. Distinct Effects of Repeated-Sprint Training in Normobaric Hypoxia and β -alanine Supplementation. [Abstract](#)
20. β -alanine supplementation augments muscle carnosine content and attenuates fatigue during repeated isokinetic contraction bouts in trained sprinters. [Abstract](#)
21. Additive Benefits of β -alanine Supplementation and Sprint-Interval Training. [Abstract](#)
22. The ergogenic effect of beta-alanine combined with sodium bicarbonate on high-intensity swimming performance. [Abstract](#)
23. The effect of β -alanine and NaHCO₃ co-ingestion on buffering capacity and exercise performance with high-intensity exercise in healthy males. [Abstract](#)
24. Effects of twenty-eight days of beta-alanine and creatine monohydrate supplementation on the physical working capacity at neuromuscular fatigue threshold. [Abstract](#)
25. Effects of β -alanine supplementation on the onset of neuromuscular fatigue and ventilatory threshold in women. [Abstract](#)
26. Influence of β -alanine supplementation on skeletal muscle carnosine concentrations and high intensity cycling capacity. [Abstract](#)
27. Kinetics of Muscle Carnosine Decay after β -alanine Supplementation: A 16-Week Washout Study. [Abstract](#)
28. Beta-alanine supplementation reduces acidosis but not oxygen uptake response during high-intensity cycling exercise. [Abstract](#)
29. Carnosine loading and washout in human skeletal muscles. [Abstract](#)
30. Muscle carnosine loading by beta-alanine supplementation is more pronounced in trained vs. untrained muscles. [Abstract](#)
31. Exercise training and Beta-alanine-induced muscle carnosine loading. [Abstract](#)
32. Effects of 4 Weeks of β -alanine Supplementation on Swim-Performance Parameters in Water Polo Players. [Abstract](#)
33. β -alanine Supplementation's Improvement of High-Intensity Game Activities in Water Polo. [Abstract](#)
34. Exercise and β -alanine supplementation on carnosine-acrolein adduct in skeletal muscle. [Abstract](#)
35. Effect of 10 week beta-alanine supplementation on competition and training performance in elite swimmers. [Abstract](#)
36. Comparison of Two β -alanine Dosing Protocols on Muscle Carnosine Elevations. [Abstract](#)
37. Comparison of Two β -alanine Dosing Protocols Using a Sustained Release Formulation on Muscle Carnosine Elevations. [Abstract](#)
38. Beta-Alanine Supplementation Improves Throwing Velocities in Repeated Sprint Ability and 200-m Swimming Performance in Young Water Polo Players. [Abstract](#)
39. β -alanine Supplementation Does Not Augment the Skeletal Muscle Adaptive Response to 6 Weeks of Sprint Interval Training. [Abstract](#)
40. β -alanine Plus Sodium Bicarbonate Co-Supplementation Does Not Decrease Neuromuscular Fatigue in Swimming. [Abstract](#)
41. Beta-alanine (Carnosyn™) supplementation in elderly subjects (60-80 years): effects on muscle carnosine content and physical capacity. [Abstract](#)
42. beta-Alanine supplementation augments muscle carnosine content and attenuates fatigue during repeated isokinetic contraction bouts in trained sprinters. [Abstract](#)
43. Effect of beta-alanine supplementation on 2000-m rowing-ergometer performance. [Abstract](#)
44. Effects of 28-Day Beta-Alanine Supplementation on Isokinetic Exercise Performance and Body Composition in Female Masters Athletes. [Abstract](#)
45. β -alanine supplementation enhances human skeletal muscle relaxation speed but not force production capacity. [Abstract](#)
46. Changes in muscle carnosine of subjects with 4 weeks supplementation with a controlled release formulation of beta-alanine (Carnosyn™), and for 6 weeks post. [Abstract](#)
47. The absorption of orally supplied beta-alanine and its effect on muscle carnosine synthesis in human vastus lateralis. [Abstract](#)
48. The plasma concentration-time profile of beta-alanine using a controlled-release formulation (Carnosyn®). [Abstract](#)
49. Effect of beta-alanine, with and without sodium bicarbonate, on 2000-m rowing performance. [Abstract](#)
50. Exercise alters and β -alanine combined with exercise augments histidyl dipeptide levels and scavenges lipid peroxidation products in human skeletal muscle. [Full text open access](#)
51. Effect of creatine and beta-alanine supplementation on performance and endocrine responses in strength/power athletes. [Abstract](#)
52. β -alanine ingestion increases muscle carnosine content and combat specific performance in soldiers. [Full text open access](#)
53. Effect of High-Dose, Short-Duration β -alanine Supplementation on Circulating IL-10 Concentrations During Intense Military Training. [Abstract](#)
54. Ingesting a preworkout supplement containing caffeine, creatine, β -alanine amino acids, and B vitamins for 28 days is both safe and efficacious in recreationally active men. [Abstract](#)
55. The effect of 4 weeks beta-alanine supplementation and isokinetic training on carnosine concentrations in type I and II human skeletal muscle fibres. [Abstract](#)
56. Effects of 28 days of beta-alanine and creatine supplementation on muscle carnosine, body composition and exercise performance in recreationally active females. [Full text open access](#)
57. Effect of β -alanine plus sodium bicarbonate on high-intensity cycling capacity. [Abstract](#)
58. 24-Week β -alanine ingestion does not affect muscle taurine or clinical blood parameters in healthy males. [Abstract](#)
59. The influence of β -alanine supplementation on markers of exercise-induced oxidative stress. [Abstract](#)
60. β -alanine dose for maintaining moderately elevated muscle carnosine levels. [Abstract](#)
61. Meal and beta-alanine coingestion enhances muscle carnosine loading. [Abstract](#)
62. Effect of two β -alanine dosing protocols on muscle carnosine synthesis and washout. [Abstract](#)
63. Comparison of sustained-release and rapid-release β -alanine formulations on changes in skeletal muscle carnosine and histidine content and isometric performance following a muscle-damaging protocol. [Abstract](#)
64. β -alanine supplementation elevates intramuscular carnosine content and attenuates fatigue in men and women similarly but does not change muscle l-histidine content. [Abstract](#)
65. Effects of High-Dose, Short-Duration β -alanine Supplementation on Cognitive Function, Mood, and Circulating Brain-Derived Neurotrophic Factor (BDNF) in Recreationally-Active Males Before Simulated Military Operational Stress. [Abstract](#)
66. Effects of 28 days of beta-alanine and creatine monohydrate supplementation on aerobic power, ventilatory and lactate thresholds, and time to exhaustion. [Abstract](#)