

Amino Acid Quick-Sorb™

Free Form Amino Acids in Liquid Form

Amino Acid Quick-Sorb™ provides a proprietary blend of nine free-form L-amino acids in sublingual form for rapid absorption. It has been designed to provide quick absorption of amino acids that serve as glucogenic precursors, helping to support the maintenance of glucose levels during exercise by modifying fuel utilization. Exercise-induced drops in blood glucose have been associated with a greater utilization of specific amino acids, particularly those that are gluconeogenic, i.e., those that can be converted into glucose via the Krebs cycle.¹

Alanine levels, for example, are increased 2-3 fold in the blood in response to strenuous physical activity, and transported to the liver for conversion into glucose (alanine is a substrate for gluconeogenesis as part of a process known as the Cahill cycle). Alanine supplementation has been shown to prevent drops in other gluconeogenic amino acids among cyclists in a randomized trial, and to promote both glucose production and the synthesis of other non-essential amino acids required by exercising muscles, potentially preventing exercise-induced protein catabolism. Alanine supplementation has also been shown to prevent a spike in glucose, which occurs with carbohydrate supplementation alone, as well as a subsequent increase in insulin levels, providing for more stable glycemic control.²

Providing gluconeogenic precursors may also help to support healthy glucose levels during specific challenges, such as fasting or dips in blood glucose. Alanine, for example, can help to restore deficits in glucagon secretion which occur in some populations, such as individuals with type 1 diabetes, helping to stabilize blood glucose levels.³ Amino acid supplementation has been shown to enhance glucagon production in response to hypoglycemia in both diabetic and non-diabetic populations.⁴ The utilization of alanine for hepatic gluconeogenesis is also critical during periods of fasting.⁵ Alanine levels in the blood have been shown to drop during fasting, largely because it is being utilized for gluconeogenesis. Additionally, the increase in ketones that occurs during fasting (or ketosis) has a hypoglycemic effect, partly by decreasing alanine availability, an effect that is countered with alanine supplementation.⁶

Amino Acid Quick-Sorb™
available in 2 ounce
bottles (#5223)



Experimental models also suggest that supplementation with gluconeogenic amino acids, such as alanine and proline, may increase hepatic glycogen stores and improve exercise endurance. Supplementation with these amino acids can also help to maintain blood glucose levels during exhaustive exercise, particularly when combined with carbohydrates.⁷ Each of the amino acids in **Amino Acid Quick-Sorb™** can be utilized for gluconeogenesis, with the exception of L-lysine which provides a substrate for acetyl-Co production, itself a substrate for the Krebs cycle.⁸ *In vitro* data also indicates that the majority of amino acids in **Amino Acid Quick-Sorb™** are rapidly absorbed in the buccal mucosa, allowing for quick metabolic effects.⁹

Clinical Benefits*

- Provides gluconeogenic precursors to help maintain healthy glucose levels
- Support for gluconeogenesis may help prevent dips in glucose that occur during exercise, or in response to other metabolic stresses, such as fasting
- Amino acids such as alanine may prevent glucose spikes in response to carbohydrates, as well as muscle catabolism in response to exercise
- Rapidly absorbed form of L-amino acids

Recommendations

Five (5) drops under the tongue, two (2) to three (3) times each day as a dietary supplement or as otherwise directed by a healthcare professional.



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References

1. McCarthy, O., Pitt, J., Churm, R., et al. (2020). Metabolomic, hormonal and physiological responses to hypoglycemia versus euglycemia during exercise in adults with type 1 diabetes. *BMJ open diabetes research & care*, 8(1), e001577.
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6. Soto-Mota, A., Norwitz, N. G., Evans, R. D., et al. (2022). Exogenous d-β-hydroxybutyrate lowers blood glucose in part by decreasing the availability of L-alanine for gluconeogenesis. *Endocrinology, diabetes & metabolism*, 5(1), e00300.
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9. Vadgama, J. V., & Evered, D. F. (1992). Absorption of amino acids from the human mouth. *Amino acids*, 3(3), 271–286.

Supplement Facts

Serving Size: 0.16 ml (5 drops)
Servings Per Container: 187

	Amount Per Serving
Proprietary Blend	50 mg
Glycine*, L-Alanine*, L-Arginine HCl*, L-Lysine HCl*, L-Proline*, L-Histidine HCl*, L-Serine*, L-Threonine*, and L-Valine*	

* Daily Value not established

Ingredients: Purified water, glycerol, glycine, L-Alanine, L-Arginine hydrochloride, citric acid, L-Lysine hydrochloride, L-Proline, L-Histidine hydrochloride, L-Serine, L-Threonine, L-Valine, potassium sorbate and sodium benzoate.

This product is gluten and dairy free.

RECOMMENDATION: Five (5) drops under the tongue, two (2) to three (3) times each day as a dietary supplement or as otherwise directed by a healthcare professional.

KEEP OUT OF REACH OF CHILDREN

Store in a cool, dry area.

Sealed with an imprinted safety seal for your protection.



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