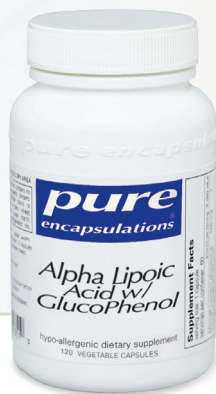




Alpha Lipoic Acid w/GlucoPhenol

*A science-based approach to
cardiometabolic health**



*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Alpha Lipoic Acid w/GlucoPhenol

Over the past decade, research in metabolism and cardiology has highlighted important links between metabolic and cardiovascular health. Accordingly, highly effective therapeutic approaches to glucose homeostasis, lipid metabolism and vascular health address the larger picture of “cardiometabolic health.” Recent cross-disciplinary studies have established that maintaining inflammatory balance in the liver, muscle, fat and vascular endothelium is a powerful approach to optimizing and sustaining cardiometabolic health.*

Alpha lipoic acid

Alpha lipoic acid is a multifaceted nutraceutical substantiated by over 15 years of clinical research. In a recent double-blind, placebo-controlled trial, daily alpha lipoic acid supplementation provided statistically significant support for both fasting and postprandial blood glucose.¹ In a randomized placebo-controlled study, alpha lipoic acid supported healthy endothelial dilation, an important measure of cardiovascular health.^{2*}

By maintaining healthy activity of the genomic inflammatory messenger nuclear factor kappa B (NFκB), alpha lipoic acid helps maintain the ability of cells to utilize glucose.³ In addition, alpha lipoic acid promotes the activity of PGC-1α and AMP kinase (AMPK), two critical regulators of mitochondrial function.⁴ By supporting the synthesis of new mitochondria, alpha lipoic acid enhances the ability of the cell to metabolize both carbohydrates and fats (Figure 1).⁵ These actions are associated with metabolic homeostasis in fat, liver, muscle and vascular tissue.*



GlucoPhenol: Combined cardiovascular and metabolic benefits*

GlucoPhenol delivers 25 mg of polyphenols from a unique blend of cranberry and Orléans strawberry standardized extracts. Polyphenols in cranberry and strawberry target cellular metabolic paradigms that overlap and complement well-established mechanisms of alpha lipoic acid. Cranberries, which contain the highest level of total phenolics of all common fruits, are rich in polyphenol oligomers known as proanthocyanidins (PAC). Known as A-type PAC, these rare phenolics differ from those in tea, cocoa and grapes, and mediate many of the effects of cranberries on metabolism and vascular tissue. Although lower in total polyphenols, strawberries exhibit a unique profile of phenolics, including anthocyanins, quercetin, ellagic acid and catechin. Both fruits support the function of enzymes, receptors and genes involved in glucose uptake and cytokine signaling.⁶ Specifically, both PAC and low-molecular weight phenolics maintain inflammatory balance by targeting NFκB (Figure 1).⁷ This genomic factor regulates genes involved in both inflammatory and glycemic responses. Scientists attribute the successful cardiometabolic outcomes in clinical research to inflammatory balance achieved through gene expression.*

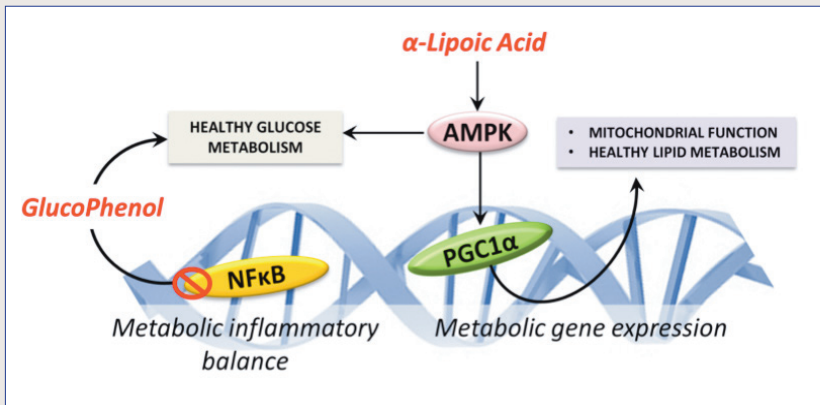


Figure 1. Cardiometabolic mechanisms of alpha lipoic acid and GlucoPhenol.

In fat and muscle cells, alpha lipoic acid targets the enzyme AMP kinase (AMPK), which activates a cellular receptor known as PGC-1α. PGC-1α helps support healthy metabolism of both carbohydrates and fats. GlucoPhenol promotes healthy activity of the genomic regulator NF kappa B (NFκB) to help maintain metabolic inflammatory balance.*

Clinical Research

Pure Encapsulations is part of a comprehensive research collaboration with the Institute of Nutraceuticals and Functional Foods (INAF) based at Université Laval, Quebec, Canada. INAF is one of the largest research centers in the world dedicated to advancing knowledge in functional food ingredients and dietary supplements. The efficacy of fruit extracts in cardiometabolic health is a central focus of this program. GlucoPhenol, developed as part of this program, delivers 25 mg of polyphenols per capsule from a unique blend of cranberry and Orléans strawberry standardized extracts. Recent mechanistic research has demonstrated that Orléans strawberry extract maintains inflammatory balance in metabolically active liver cells (Figure 2).*

*GlucoPhenol Strawberry Extract Supports Inflammatory Balance**

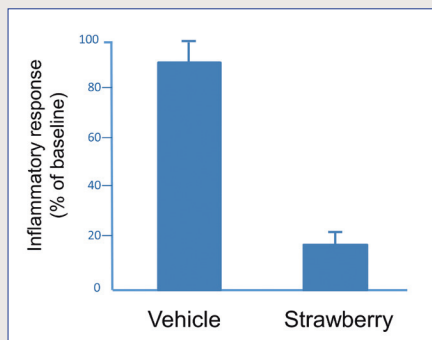


Figure 2. Orléans strawberry extract maintains healthy inflammatory balance in hepatocytes.*

Both liver and skeletal muscle cells are highly metabolically active and help maintain healthy blood glucose by storing it as glycogen. Therefore, maximizing glucose transport from plasma into muscle is a fundamental goal in maintaining metabolic homeostasis. In a second study the proprietary Orléans strawberry extract in GlucoPhenol promoted glucose uptake by muscle cells in vitro (Figure 3). In this study, strawberry was more powerful than other commonly consumed berries.*

*GlucoPhenol Strawberry Extract Supports Healthy Glucose Uptake**

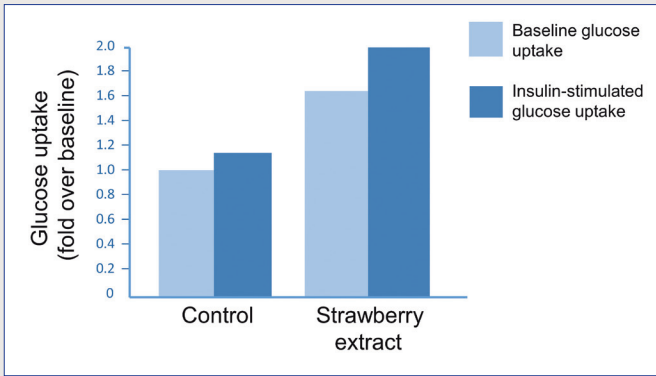


Figure 3. Orléans strawberry extract directly supports glucose uptake into skeletal muscle cells after a 2 hour treatment.*


Cranberry has multiple compositional and functional parallels with strawberry and has been the subject of over 50 clinical studies. Compared with other commonly consumed fruits in the American diet, cranberries exhibit a rare abundance of low-molecular weight phenolic metabolites. Randomized, double-blind placebo-controlled trials of cranberry and its constituent polyphenols have demonstrated significant support for long-term glucose homeostasis, healthy lipid profiles and vascular endothelial function.^{8,9} As part of GlucoPhenol, cranberry provides a diverse spectrum of active phenolic compounds. Together, alpha lipoic acid and GlucoPhenol comprise a scientifically innovative approach to total cardiometabolic health.*



Alpha Lipoic Acid w/GlucoPhenol

**Science-based approach to cardiometabolic health*

- Delivers 200 mg alpha lipoic acid per serving for metabolic support and cardioprotection*
- Provides 25 mg polyphenols per serving from GlucoPhenol, a novel, proprietary extract of cranberry and Orléans strawberry developed and studied as part of a research collaboration with the Institute of Nutraceuticals and Functional Foods (INAF)*
- Supports healthy glucose and fat metabolism by targeting cellular receptors and cellular mediators*
- Supports overall cardiometabolic health by maintaining inflammatory balance and vascular health*

each vegetable capsule contains  v 0

alpha lipoic acid (thioctic acid)..... 200 mg
 GlucoPhenol proprietary blend 138 mg
 providing:
 25 mg of polyphenols from Orléans strawberry (*Fragaria vesca* var Orléans)
 extract (fruit) and cranberry (*Vaccinium macrocarpon*) extract (fruit)
 ascorbyl palmitate (fat-soluble vitamin C) 5 mg
 (hypo-allergenic plant fiber added to complete capsule volume requirement)
 other ingredients: rice maltodextrin, magnesium hydroxide
1-4 capsules per day, in divided doses, with meals.



	Quantity	Order Code
Alpha Lipoic Acid w/GlucoPhenol	120	AGP1
	60	AGP6

References

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