Beyond alpha lipoic acid: Berry polyphenols for metabolic health*

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Decades of metabolic research have arrived at well-established associations between weight control and glucose homeostasis. Successful weight management is contingent upon the ability of cells to transport glucose, and effective and sustainable weight management protocols concomitantly provide nutritional support for healthy cellular glucose uptake.  

Eating less, exercising more, and consuming more plant foods comprise powerful modalities to address total metabolic health. At first glance, these practices seem to have little in common. However, on the cellular level, diet, exercise and phytonutrients coalesce on cellular targets that maintain healthy disposition of food energy. A low-calorie diet rich in phytochemicals from fruits and vegetables, combined with exercise, supports robust activity of a master regulator of glucose homeostasis known as AMP kinase (AMPK).  

AMPK is also one of the major molecular targets of alpha lipoic acid (ALA), a mitochondrial cofactor and antioxidant. ALA has been the subject of over 60 human clinical studies and is among the most effective modalities for glycemic control. Although the depth of supporting research is considerable, it is rivaled by another class of AMPK activators known as polyphenols. These phytochemicals are powerful antioxidants that occur predominantly in fruits, particularly berries. Epidemiological and interventional studies have elucidated a coinciding range of indications for polyphenols and ALA, and synergistic actions have been proposed. 

Prudent dietary modifications for weight management limit the intake of fruits due to their sugar content. Provision of polyphenols in the form of extracts is a prudent and precise strategy to increase polyphenol intake without altering carbohydrate consumption. However, berry extracts exhibit heterogeneity in polyphenol profiles, owing to variables such as cultivar, geographic origin, stage of ripeness and extraction method. Thus, scientific validation of specific extracts is critical. 

Recent research conducted in collaboration with the Institute of Nutraceuticals and Functional Foods (INAF) based at Université Laval, Quebec, Canada, has demonstrated that an extract of Orléans strawberry supports healthy uptake of glucose by muscle cells (Figure 1). In a separate study, this unique strawberry extract supported inflammatory balance, which may partially explain its beneficial effects on glucose transport. 

Figure 1. Orléans strawberry extract promotes glucose uptake into skeletal muscle cells.
This partnership with INAF, a world leader in research on dietary supplements and human metabolism, has led to the development of **Alpha Lipoic Acid w/GlucoPhenol**, which delivers 25 mg of polyphenols per capsule from a proprietary blend of cranberry and Orléans strawberry standardized extracts. The **PureLean**® **Pure Pack** delivers ALA w/GlucoPhenol as part of a broad-spectrum supplement for weight management† and overall metabolic health. Both options are powerful tools in maximizing the benefits of regular exercise and a comprehensive nutritional program.*

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**References**