

# The Latest News on Delphinol® Research

Published clinical study shows Delphinol® lowers blood glucose in people by a novel mechanism.

First results of double-blind, placebo-controlled study with 50 obese participants shows Delphinol® supports cardiovascular health.



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[Panminerva Med.](#) 2014 Jun;56(2 Suppl 3):1-7.

## **Delphinol® standardized maqui berry extract reduces postprandial blood glucose increase in individuals with impaired glucose regulation by novel mechanism of sodium glucose cotransporter inhibition.**

[Hidalgo J<sup>1</sup>](#), [Flores C](#), [Hidalgo MA](#), [Perez M](#), [Yañez A](#), [Quiñones L](#), [Caceres DD](#), [Burgos RA](#).

### **⊕ Author information**

#### **Abstract**

**AIM:** The impetus of our study was to investigate the effects of a nutritional supplement Delphinol®, an extract of maqui berries (*Aristotelia chilensis*) standardised to  $\geq 25\%$  delphinidins and  $\geq 35\%$  total anthocyanins, on postprandial blood glucose and insulin levels and identify the physiologic mechanism involved.

**METHODS:** Postprandial blood glucose and insulin were investigated in double-blind, placebo-controlled, cross-over fashion in ten volunteers with moderate glucose intolerance. Longer term effects on blood sugar levels were investigated in streptozotocin-diabetic rats over a four months period. Effects of maqui berry delphinidins on sodium-glucose symport were examined in rodent jejunum of the small intestine.

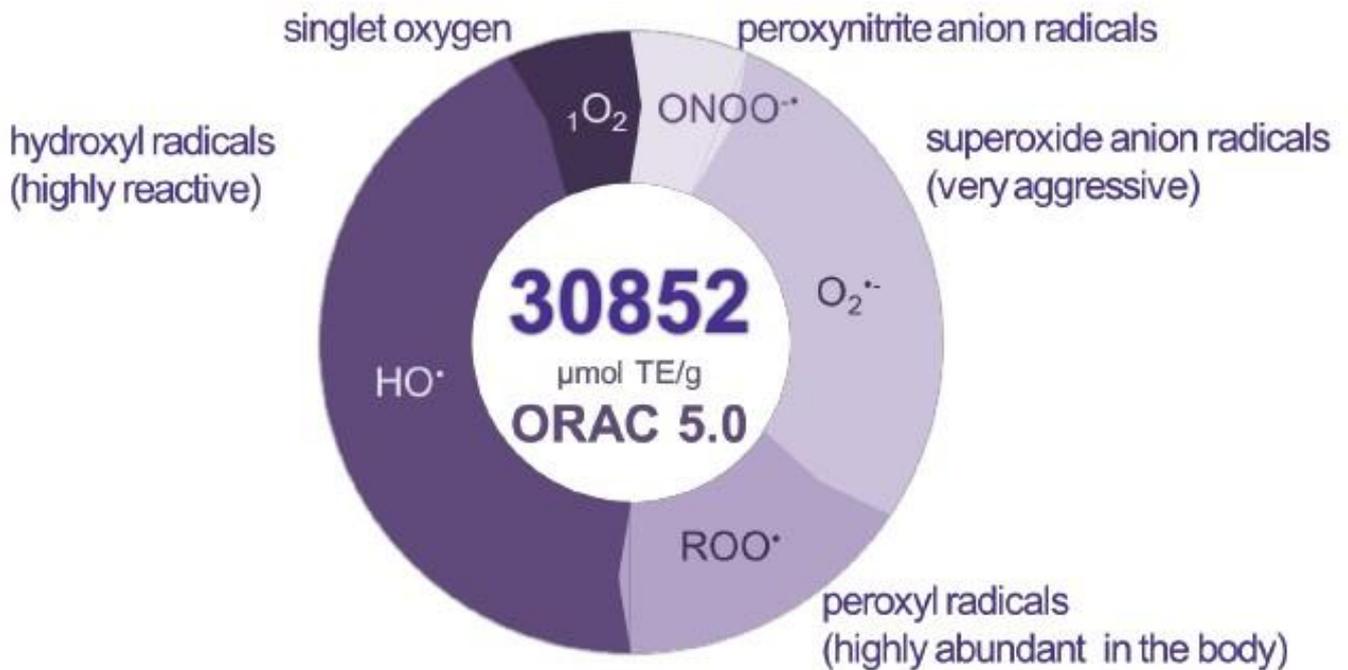
**RESULTS:** Delphinol® intake prior to rice consumption statistical significantly lowered post prandial blood glucose and insulin as compared to placebo. We identified an inhibition of Na<sup>+</sup>-dependant glucose transport by delphinidin, the principal polyphenol to which Delphinol® is standardised. In a diabetic rat model the daily oral application of Delphinol® over a period of four months significantly lowered fasting blood glucose levels and reached values indistinguishable from healthy non-diabetic rats.

**CONCLUSION:** Our results suggest a potential use of Delphinol® for naturally controlling post-prandial blood glucose owed to inhibition of sodium glucose co-transporter in small intestine.

PMID: 24861886 [PubMed - in process] [Free full text](#)



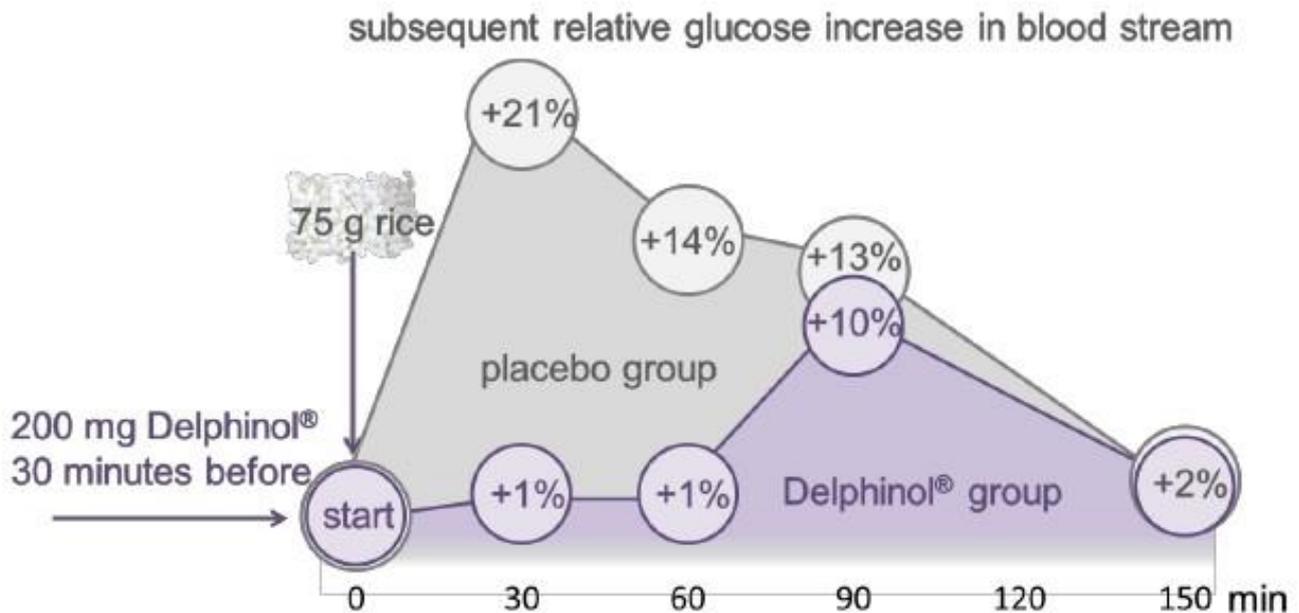
## Delphinol<sup>®</sup> is a superior antioxidant



The Brunswick has carried out the current state-of-the-art ORAC 5.0 antioxidant testing for the five most common and most energetic oxygen radical species.

With the ORAC values in excess of 30000  $\mu\text{mol trolox equivalence per gram}$ , the potency is outstanding

## Delphinol® slows carbohydrate absorption by novel mechanism

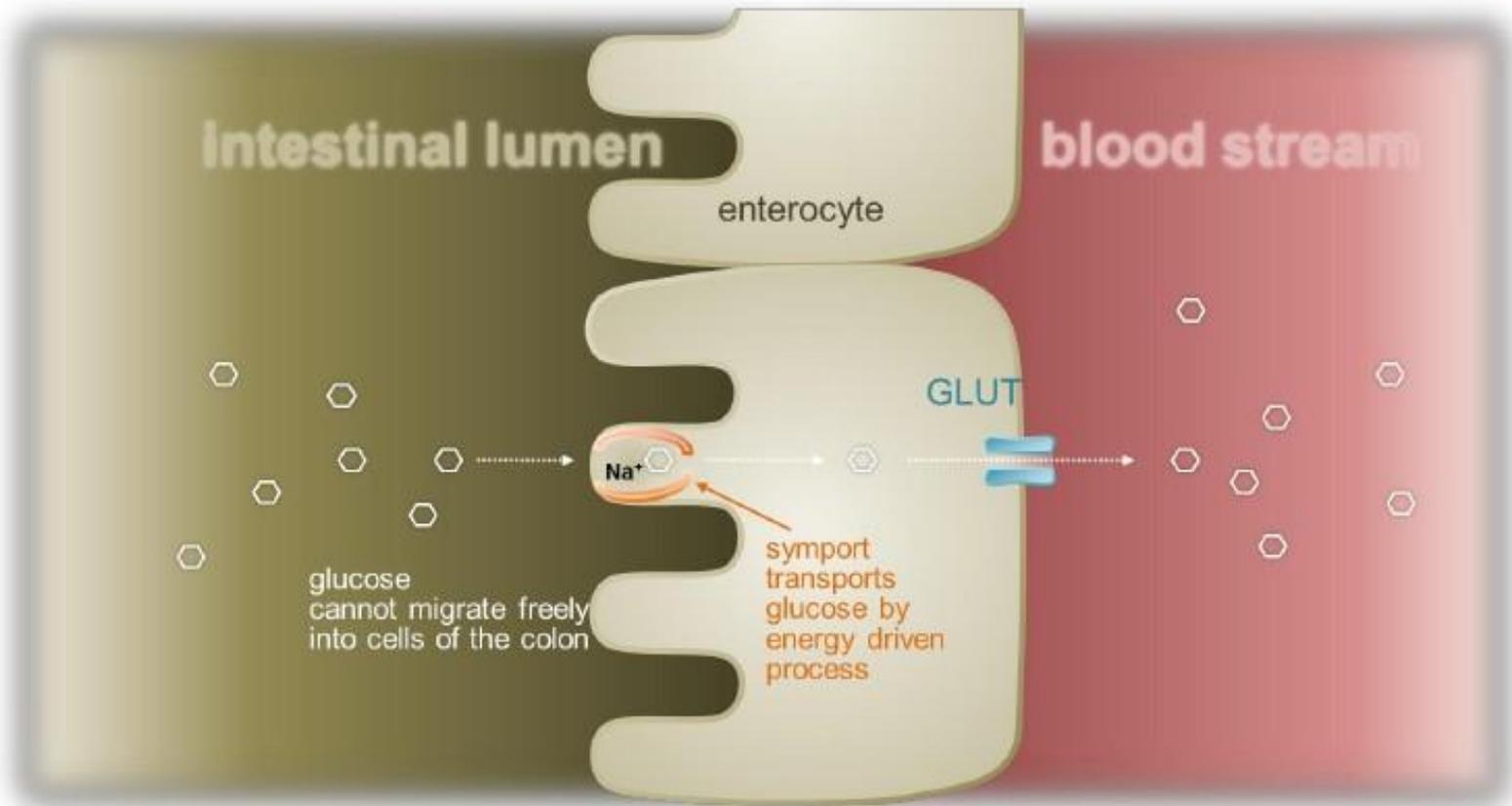


A recent publication demonstrated that Delphinol® potently lowers blood glucose (and insulin) increase after consumption of boiled rice.

For an entire hour after rice consumption a single intake of 200 mg standardised maqui berry extract Delphinol® almost entirely abolished the sugar, released from rice, from rushing into the blood stream.

For general blood glucose control a dosage of 100 mg Delphinol® before meals should be sufficient.

## Delphinol® inhibits the gateway for glucose absorption

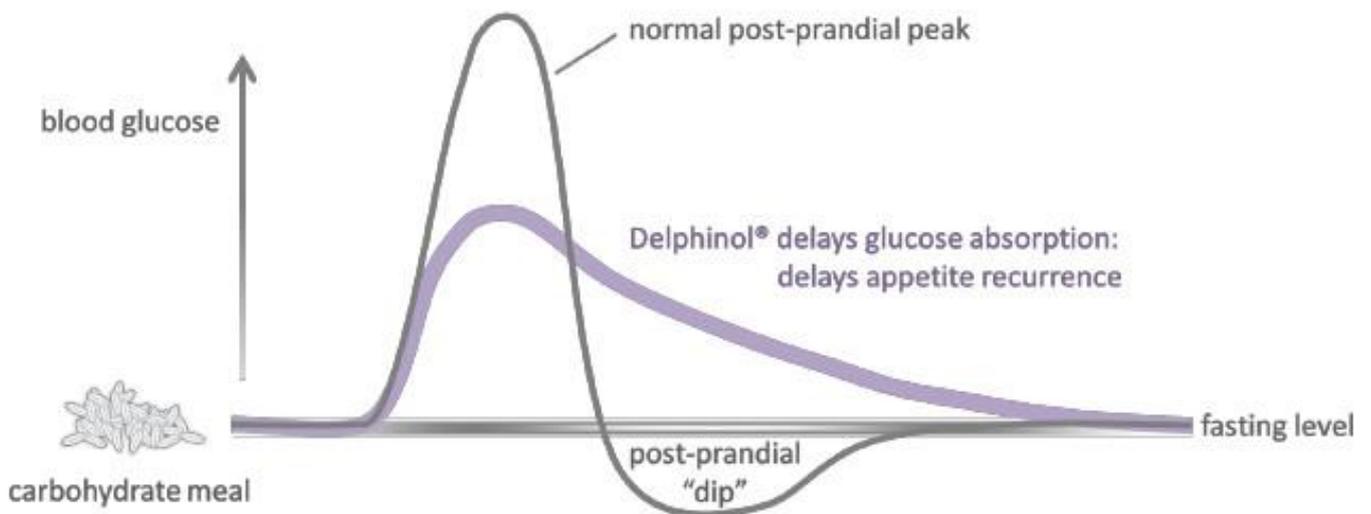


Delphinol® lowers blood glucose by inhibition of the port which is responsible for transferring glucose molecules from food the intestinal lumen into cells lining the colon and from there into the blood stream.

No other flavonoid species has been demonstrated to have an activity on the glucose transporter.

In consequence, Delphinol is superior to other flavonoid species because it's activity is not limited to slowing down absorption of sugar from starchy foods, but Delphinol can also slow-down the absorption of refined sugars such as sucrose and pure glucose.

## Delphinol® inhibits the gateway for glucose absorption

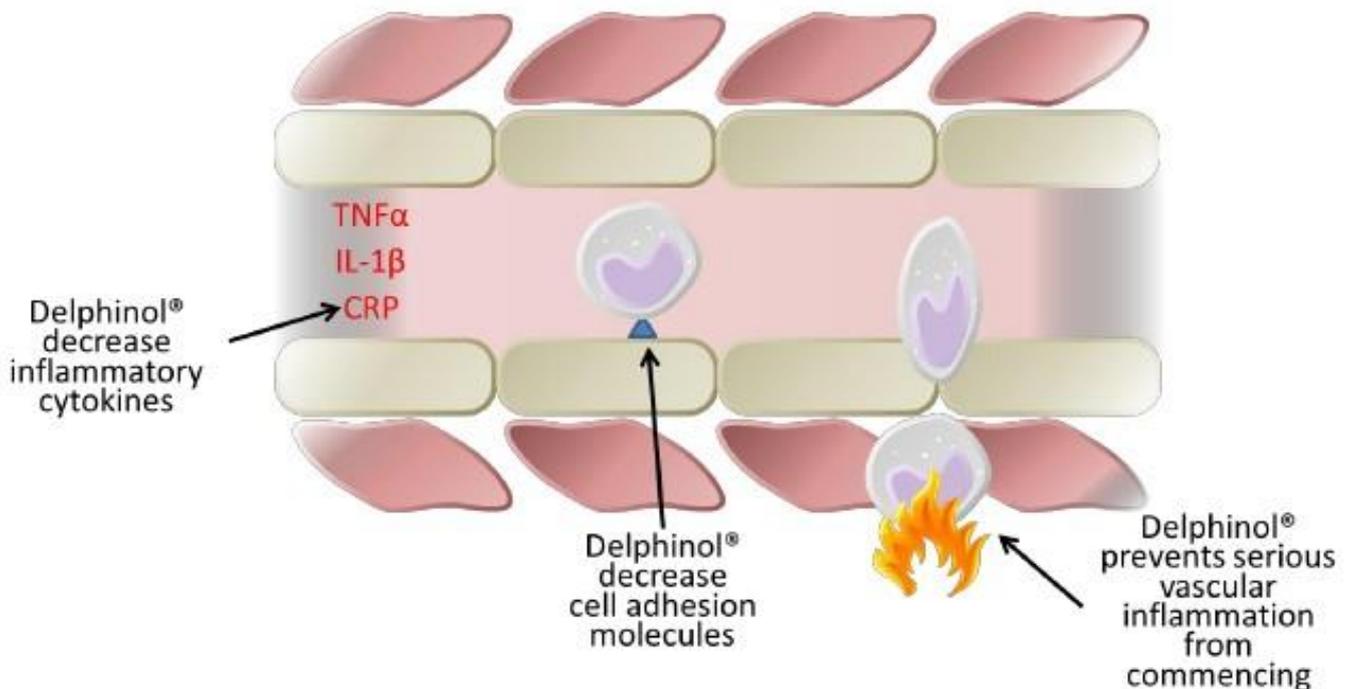


Following the consumption of carbohydrates, such as starch, the blood glucose rapidly rises (shown in grey), to subsequently rapidly drop again, often showing the so-called “post-prandial dip”. Here the glucose drops slightly below fasting glucose levels, which causes appetite recurrence, especially for something sweet (snacking).

The supplementation with Delphinol decreases the uptake of glucose from food. In turn, the blood sugar doesn’t jump up as usual and the sugar stays in the intestines for longer period of time. The carbohydrates from a meal are absorbed over longer periods of time. The blood sugar level is elevated, yet to lesser degree than without Delphinol. Sufficient blood glucose is maintained for longer periods of time. In consequence, appetite recurrence is delayed.

Combination products which may work synergistically with Delphinol are oligomeric proanthocyanidins (OPCs). The OPCs inhibit the enzyme breaking down starch, which separately from Delphinol helps to slows down absorption of dietary carbohydrates.

## Delphinol® Supports Cardiovascular Health



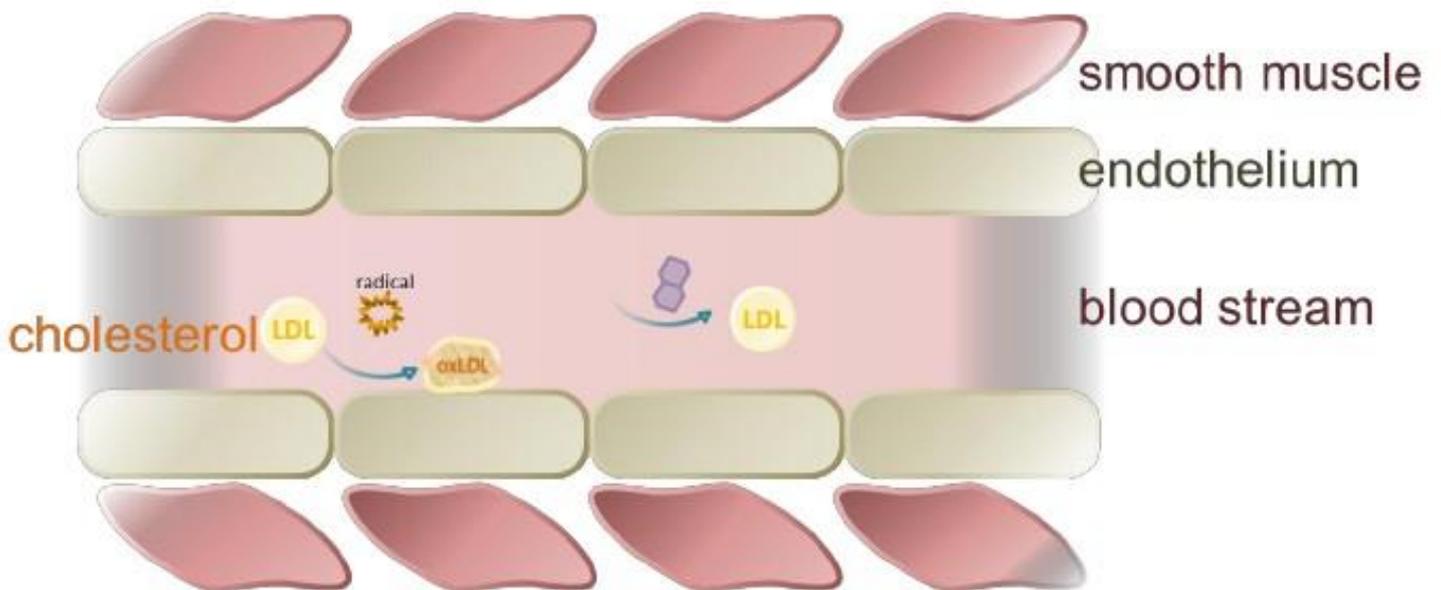
A double-blind, placebo-controlled study with 50 overweight people, who were all smokers were treated with Delphinol® or placebo for two weeks and crossed-over to the opposite regimen, for another two weeks treatment

Blood analyses demonstrated that Delphinol® decreased pro-inflammatory markers including CRP. Furthermore, Delphinol® lowered cell adhesion molecules, which inflammatory cells utilized to bind to blood vessel walls, causing local vascular inflammation.

This study demonstrates that Delphinol® helps to quench vascular inflammatory processes in people at risk (overweight and smoking).



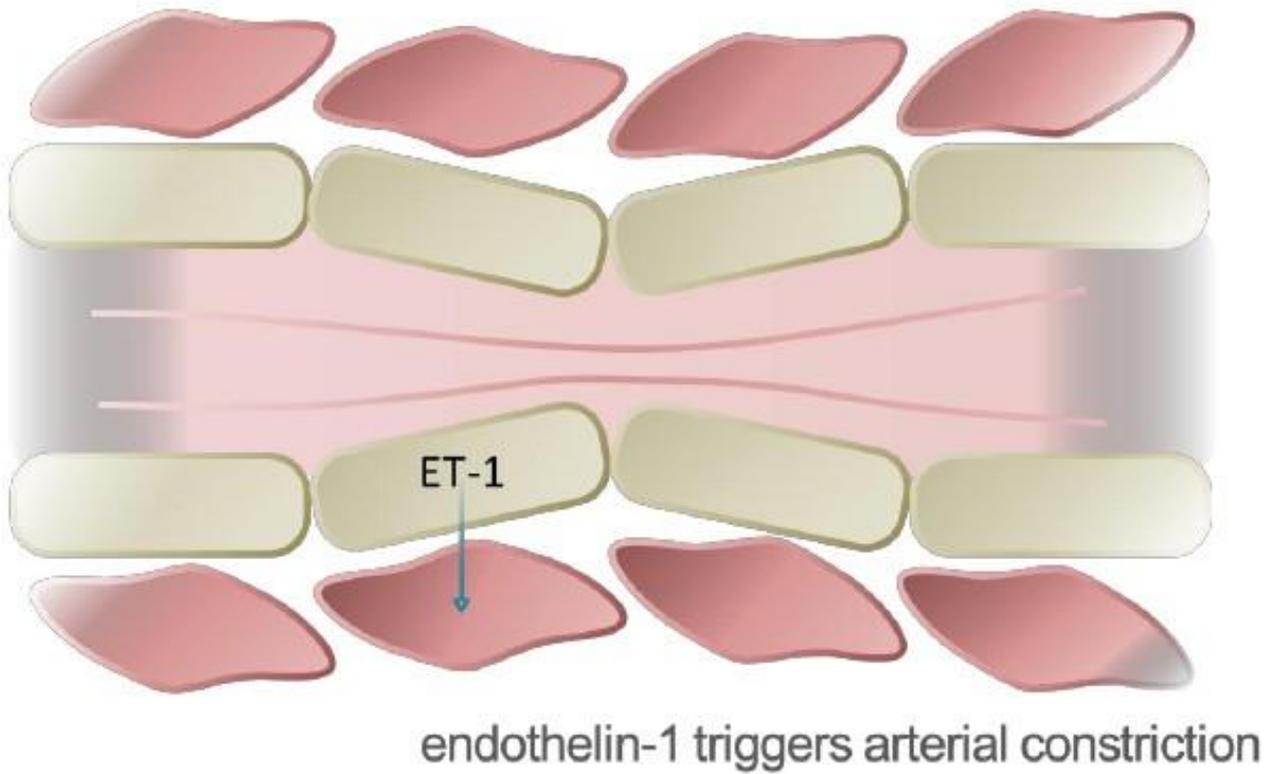
## Delphinol<sup>®</sup> lowers oxidised cholesterol



The double-blinded, placebo-controlled study with 50 overweight cigarette smokers found that Delphinol<sup>®</sup> supplementation for two weeks significantly reduced the amount of oxidized LDL cholesterol in blood.

This study identified further parameters indicative of significantly decreased oxidative stress in study participants taking Delphinol<sup>®</sup>. The F2-isoprostane level in urine, a metabolite developing from oxidized polyunsaturated fats, significantly decreased with Delphinol<sup>®</sup>, but not with placebo capsules.

## Delphinol® May Relieve Arterial Dilatation



The double-blinded, placebo-controlled study with 50 overweight cigarette smokers found that Delphinol® supplementation for two weeks reduced the amount of vasoconstrictor endothelin-1.

# Delphinol® in the News

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## Maqui berry extract shows blood sugar management potential by novel mechanism: Study

By Stephen DANIELLS , 02-Jun-2014



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**Supplements containing extracts from maqui berries may help manage blood sugar levels and lower insulin responses, according to data from humans and lab rats.**

Scientists from the University Austral in Valdivia, Chile, report that data from a single dose human study and animal experiments indicated that the Delphinol-branded maqui berry extract lowered blood glucose in humans by inhibiting the sodium glucose co-transporter, which facilitates glucose uptake from food into intestinal tissue and the blood.

"We have discovered a unique mechanism for the dietary supplement Delphinol, which may help control blood glucose also in response to refined sugar consumption," said Professor Rafael Burgos, corresponding author of the new paper published in *Panminerva Medica*.

### Delphinol

HP Ingredients launched an organic and Kosher Maqui Superberry liquid concentrate powder in 2010, but Delphinol, which was launched in the fall of last year, is said to be 10 times stronger than the previous product. It is standardized to 35% Anthocyanins, and 28% delphinidin.

The ingredient is manufactured exclusively by Maqui New Life (MNL), and is for food, beverage, and supplements. Maqui berry is currently on the approved US import fruits and vegetable list, and GRAS is not needed, the company has previously stated.

Lab experiments with diabetic rats indicated that delphinidin inhibited the sodium-glucose transporter (SGLT).

"Our result suggests that delphinidin, the main anthocyanin in Delphinol reduces the glucose absorption in intestine by interaction with sodium glucose co-transporter SGLT-1," wrote Prof Burgos and his co-authors. "Importantly, a single dose of Delphinol was sufficient to significantly lower postprandial blood glucose and -insulin increase after meals, and thus Delphinol may represent a helpful dietary complement for maintaining healthy blood glucose levels."

"Future research on Delphinol may establish long term effects on blood sugar level control, such as for HbA1c values and other metabolic parameters, especially also in a larger cohort."

Source: *Panminerva Medica*  
Volume 56 (2 Suppl 3), Pages 1-7

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Authors: J. Hidalgo, C. Flores, M.A. Hidalgo, M. Perez, et al.

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