

UNIVERSITY OF UTAH STUDIES ON CACAO

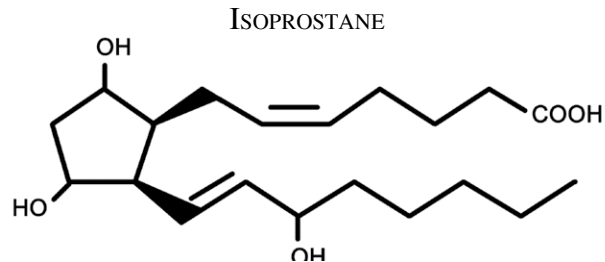
RECENT AND ONGOING DARK CACAO STUDIES

One of the easiest molecules to check in urine is isoprostane—a molecule that damages the body. If antioxidants are absorbed and functioning correctly, there should be a reduced level of isoprostane found in urine. High levels of isoprostane are associated with increased risk for dementia.

THE REVEALING ISOPROSTANE MOLECULE

The study performed in 2008 by the University of Utah showed statistically significant increases of ORAC levels in blood plasma, increases of glutathione levels in plasma, and decreases in isoprostane levels found in urine. University of Utah researchers found these results using both a standard dose of Xocai Active™ (one ounce, three times per day), as well as an increased dose (three ounces, three times per day). These findings confirmed other reports of increased serum ORAC levels, increased glutathione levels, and decreased isoprostane levels found in other “in-vivo” tests (tests performed in the human body) with dark cocoa powder.

Conclusion: Cocoa, specifically Xocai Activ™, contributes to decreased isoprostane levels in the body, proving the absorption of cocoa antioxidants.



XOCAI AND RAW CACAO PRODUCT HAVE SIMILAR RESULTS

Studies from across the country and around the world show that properly manufactured, high-flavanol cacao positively affects blood pressure. From the University of Utah and University of Illinois, to Yale and the United Kingdom, these studies quantify these positive effects.

The University of Utah study found that basically healthy patients experienced a decrease in systolic and diastolic blood pressure by 5mm within two weeks of a program eating unprocessed cocoa (a product produced under the Xocai™ brand). These findings corroborated other studies, and delivered the same success you would find with weight loss, dieting, and even some blood pressure medications.

It is widely accepted among medical professionals that even a small drop in blood pressure translates to a marked reduction in heart attacks, strokes, and other cardiovascular diseases.

Conclusion: Consuming unprocessed cocoa can lower blood pressure and contribute to weight loss.

TUFTS UNIVERSITY, L'AQUILLA UNIVERSITY AND THE UNIVERSITY OF UTAH

A study by researchers at Tufts University and the University of L'Aquila used 1008mg of total flavonoid cocoa product divided into 3 daily doses, compared to a flavonoid-free cocoa product.

These researchers found that flavonols increased the bioavailability of NO and decreased the formation of oxygen- and nitrogen-free radicals. They also found that flavonols and resveratrol inhibit IκB kinase, and downregulate nuclear factor-κB (an oxidation pathway that causes blood vessel damage and increases fat-induced



insulin resistance). This study confirmed other research that flavanol-rich cocoa improved the dilation capacity of blood vessels, and reversed the dysfunction of blood vessels in prediabetics and smokers.

These scientists concluded that high-dose flavanol cocoa improved insulin sensitivity, increased B-cell function (cells that produce insulin), decreased blood pressure, and increased the flexibility of the blood vessel walls. They also found an increase in the QUICKI (quantitative insulin sensitivity check index), which correlates to improved insulin sensitivity, as well as improved scores in the oral glucose tolerance test.



In their study, the University of Utah also found a statistically significant increase in QUICKI, as well as improved two-hour glucose tolerance test scores. U of U scientists also found that unprocessed cocoa powder did improve the function of the pancreas, and lowered diabetic risk. Cocoa was found to be as effective in increasing insulin sensitivity as weight loss, exercise, medications and other dietary supplements.

Conclusion: Research points to the fact that unprocessed cocoa powder improves the function of the pancreas and lowers diabetic risk. Cocoa has also been observed to be as effective as weight loss, exercise, medications and other dietary supplements in increasing insulin sensitivity.

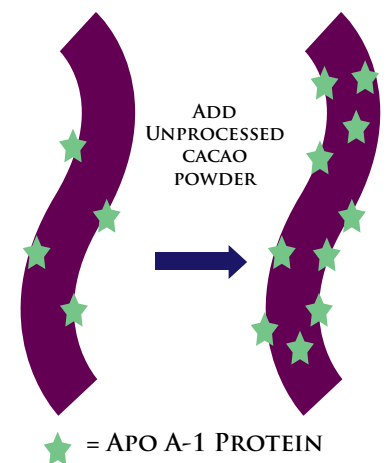
CACAO POSITIVELY AFFECTS CHOLESTEROL LEVELS

Cocoa flavanols also protect the blood vessels by reducing the damage done by oxidized LDL (bad) cholesterol. Basically, flavanols prevent LDL cholesterol from becoming oxidized.

A group from Johns Hopkins found that after two weeks of taking highly flavanol-enriched cocoa, subjects experienced LDL level decreases of 6%, while HDL (good) cholesterol rose by 9%.

Another cholesterol factor important to examine is the production of Apo A-1 protein. Apo A-1 protein, a good cholesterol marker, helps clear cholesterol from arteries.

The University of Utah study found that unprocessed cocoa powder significantly increased the amount of Apo A-1 in the body. They also found that the cocoa flavanols increased the good cholesterol antioxidant (PON-paraoxanase), which is an HDL-associated enzyme that confers antioxidant activity on HDL-C, and also helps protect against atherosclerosis.



Interestingly, the University of Utah also discovered that cocoa flavanols increased lean body mass, which helps the body burn more calories and increases the function of muscles, bones, brain, liver and kidneys. The university researchers also found that flavanols increased adiponectin—a protein hormone that regulates blood sugar, breaks down fat, and suppresses the development of diabetes, obesity, atherosclerosis, and non-alcoholic fatty liver disease.