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*Consumer Abstract*

Natural antioxidants, such as vitamin C, found in fruits and vegetables, may be partially responsible for the reduced risk of chronic diseases, such as type 2 diabetes, observed in individuals consuming diets high in these foods. Uncoupling protein-2 (UCP2) is a protein found in the mitochondria that influences the production of free radicals, or reactive molecules that can damage cells. Genetic differences in UCP2 impacts ones risk for development of type 2 diabetes. In mice, the absence of UCP2 leads to increased levels of oxidized vitamin C, suggesting a relationship between UCP2 and this vitamin. However, it is not known whether supplemental vitamin C can be an effective treatment for type 2 diabetes. Dr. Warden's research group plans to use a special mouse model to determine the relationship between UCP2 and vitamin C. The findings from this research may help determine whether this vitamin can be used in the treatment of type 2 diabetes.