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Grape-Enriched Diet Helps Counter Adverse Effects of Stress
Grape intake reversed stress-related cognitive, behavioral and biochemical deficits

Fresno, CA – Can eating grapes reduce the negative impact of stress? Results from a study recently published in the Journal of Nutrition Research\(^1\) suggest this may be the case. Researchers observed a protective role of grapes on stress-induced anxiety-like behaviors, and learning and memory deficits in an animal model of posttraumatic stress. The researchers attributed these benefits to both gene activation and enhanced antioxidant activity resulting from grape intake.

This study, conducted at the University of Houston, investigated the protective role of grapes against stress, and the mechanisms by which grapes achieved this. For the animals on the grape-enriched diets, freeze-dried, whole grape powder was added to the drinking water for 3 weeks, followed by either the stress or control exposure, and then behavior tests.

The results? Feeding the animals a grape-enriched diet prior to stress exposure successfully countered the detrimental effects of that stress on brain function and behavior. Specifically, grape intake prevented the memory impairment and anxiety-like behaviors that were observed in the rats with stress but no grapes in their diet. The researchers propose that the protective benefits of grape consumption start with enhanced antioxidant activity that reduces oxidative stress levels: systemic markers of oxidative stress were reduced in the grape consuming group. Once the oxidative stress is minimized, activation of key genes that help promote the survival of brain nerve cells is triggered.

“Grapes appear to influence several processes that support brain health,” said Samina Salim, Ph.D., the lead investigator. “The potential interplay between grapes’ antioxidant activity and their impact on cell communication is very intriguing to us and we intend to study it further.”

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