

# Grape polyphenols may protect against metabolic Sx via gut

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Photo: Scott Bauer,  
U.S. Agricultural  
Research Service

(HealthDay)—Grape polyphenols (GP) may act in the intestine to protect against metabolic syndrome, according to an experimental study published online April 6 in *Diabetes*.

Dietary polyphenols protect against [metabolic syndrome](#), despite limited absorption and digestion. With this in mind, Diana E. Roopchand, Ph.D., from Rutgers University in New Brunswick, N.J., and colleagues examined one possible mechanism of action involving gut microbiota. C57BL/6J mice were fed a high-fat diet (HFD) containing 1 percent Concord GP.

The researchers found that GP attenuated several effects of HFD feeding, including weight gain, adiposity, serum inflammatory markers, and glucose intolerance relative to vehicle controls. GP also lowered intestinal expression of [inflammatory markers](#) and a glucose absorption gene. Increases were seen in intestinal expression of genes involved in barrier function and limiting triglyceride storage in association with GP. There were also increases in intestinal gene expression of proglucagon. In cecal and fecal samples, GP was found to dramatically increase *Akkermansia muciniphila* growth and decrease the proportion of Firmicutes to Bacteroidetes.

"These data suggest that GP act in the intestine to modify gut microbial community structure, resulting in lower intestinal and systemic inflammation and improved metabolic outcomes," the authors write.

"The [gut microbiota](#) may thus provide the missing link in the mechanism of action of poorly absorbed dietary polyphenols."

Several authors disclosed financial ties to Nutrasorb.

**More information:** [Abstract](#)  
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