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# Quercetin ameliorates acute acrylamide induced spleen injury

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## ABSTRACT

Acrylamide is used for industrial and laboratory purposes; it also is produced during cooking of carbohydrate-rich food at high temperature. We investigated the therapeutic potential of quercetin for treatment of acute acrylamide induced injury to the spleen. We used female albino rats treated with acrylamide for 10 days followed by oral administration of quercetin in three doses for 5 days. We observed significantly reduced total body weight, spleen weight,

concentration of serum IgG and IgM after acrylamide induced toxicity compared to controls. We also found that white blood cells, triglycerides, cholesterol and lipid oxidation were increased significantly after acrylamide induced toxicity in rats compared to controls. Histoarchitecture of spleen was affected adversely by acrylamide toxicity. Administration of quercetin ameliorated adverse effects of acrylamide in a dose-dependent manner. Quercetin appears to ameliorate acrylamide induced injury to the spleen by increasing endogenous antioxidants and improving histoarchitecture and immune function.

**Q KEYWORDS:** [Acrylamide](#) [antioxidants](#) [immune function](#) [oxidative stress](#) [quercetin; rats; spleen](#)

## Disclosure statement

The authors declare no conflict of interest.

## Additional information

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