

New study shows intravenous glutamine reduces ischemia reperfusion injuries

June 9 2015

A single dose of intravenous glutamine (GLN) administered immediately after a non-lethal lower limb ischemia reduces the reperfusion inflammatory reaction locally and systemically according to a new study.

The study, published today in the OnlineFirst version of the *Journal of Parenteral and Enteral Nutrition (JPEN)*, the research journal of the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.), used a mice model to compare the effects of GLN on hind [limb](#) ischemia reperfusion (IR) [injury](#).

The study subjected three groups of mice to 90 minutes of ischemia followed by a variable period of reperfusion. A fourth group was used as a control.

In summary, the study showed that GLN reduced the gene expressions of [inflammatory mediator](#) in muscle tissue and decreased blood macrophage percentage and plasma IL-6 concentrations at the early or late phase of [reperfusion](#). Histological findings also found that remote lung injury was attenuated in IR injury. The results suggest that a single dose of GLN administration immediately after sub-lethal lower limb ischemia reduces the inflammatory reaction locally and systemically; this may offer local and distant organ protection in hind limb IR injury.

Provided by American Society for Parenteral and Enteral Nutrition

Citation: New study shows intravenous glutamine reduces ischemia reperfusion injuries (2015, June 9) retrieved 25 April 2024 from

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