

## عنوان مقاله:

Regulation of mitochondrial function and energy metabolism: A primary mechanism of cytoprotection provided by carnosine

## محل انتشار:

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## خلاصه مقاله:

Carnosine is an abundantly found dipeptide present in different tissues. Several pharmacological properties have been attributed to carnosine. On the other hand, the precise mechanism of cytoprotection provided by carnosine remains obscure. The current study aimed to evaluate the direct effect of different concentrations of carnosine on cellular mitochondria as an essential target involved in the cytoprotection/cytotoxicity. Liver mitochondria were isolated and exposed to carnosine (0.01-20 mM). Mitochondrial depolarization, dehydrogenases activity, mitochondrial swelling and permeability, and ATP content were assessed. On the other hand, the effect of carnosine supplementation on calcium ( $\text{Ca}^{2+}$ ) overload-induced mitochondrial injury was evaluated. It was found that concentrations between 0.01-20 mM of this peptide preserved mitochondrial indices of functionality in a  $\text{Ca}^{2+}$  overloaded environment. These data represent regulation of mitochondrial function as a primary mechanism for the protective properties of carnosine.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/974307>

