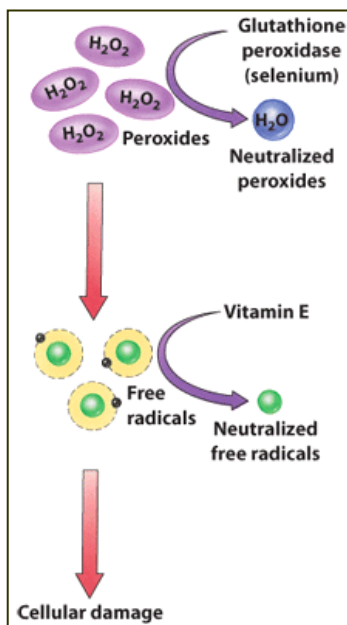




NEWS TO USE

The relationship between selenium and vitamin E

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Both are essential nutrients with different, yet somewhat similar functions.

Selenium, an essential trace mineral, is part of the antioxidant enzyme – *glutathione peroxidase* that neutralizes hydrogen peroxide. Other roles include thyroid function, seleno-proteins and cell-mediated immunity.

Alpha-tocopherol (vitamin E) an essential vitamin is a non-enzymatic antioxidant. Primary function is to neutralize free-radicals created during metabolism. Other functions include gene expression, cell-mediated immunity and humoral immunity. Although a fat-soluble vitamin, there are no body stores for vitamin E like there is for vitamin A.

A misconception is that an injection of selenium-vitamin E products improves both selenium and vitamin E status.

Although selenium status is enhanced after injection, those products **do not** significantly improve vitamin E status. The quantity of vitamin E per mL is the same for all potencies of selenium (68 I.U./mL). If young animals are injected with Mu-Se, the amount of vitamin E would be five-times less than if Bo-Se had been injected due to the higher selenium potency of Mu-Se (1 vs 5 mg/mL). The form of vitamin E in the selenium products is alpha-tocopheryl acetate which has been shown to be much less bioavailable than alpha-tocopherol, the form found in VITAL E products. Newborn calves injected with Bo-Se had an improved selenium status, but no significant improvement in vitamin E status, while calves injected with **VITAL E-A+D** had significant improvements in vitamin E status (See Figures).

