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**Positive correlation of selenium supplementation and principal antioxidant defenders  
at sepsis**

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Severe infections as sepsis, septic shock and systemic inflammatory response syndrome are characterized by dramatic decrease in the levels of antioxidant defenders and their cofactors. In our study we try to reduce the irreversible consequences of oxidative stress. Preliminary results from 19 patients with selenium intravenous injection supplementation at a dose of 750 µg/day within 1–3 weeks showed an increase in glutathione peroxidase activity from 0.19 to 0.62 µkat/g protein. An opposite effect was recorded with superoxiddismutase activity of which approached control levels. Slight increase in glutathione reductase activity, but also improvement in APACHE II score as well as decreased mortality suggest potential activation of another selenoenzyme which uses the same reduction means to reduce oxidised thiols.

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