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# The low-dose ozone concept and its pharmacology in prevention and convalescence.

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#### **ABSTRACT**

Systemically administered ozone with its mild oxidative eustress, able to upregulate antioxidative enzymes and to modulate the immune response e.g. "cytokine storm" is recommended as part of a complementary treatment concept in chronic inflammatory, long lasting processes with high oxidative stress and in diseases which are accompanied by an redox imbalance, rather than in the acute stages. To restore the glutathione equilibrium GSH/ GSSG the low-dose ozone concept offers a strategy in redox medicine as shown here in primary and secondary prevention and convalescence.

To illustrate the main pharmacological effects and to follow the treatment success we focus to the following refence substances: GSH (reduced glutathione), GGT (gamma glutamyl transferase) or SOD (superoxide dismutase) as protection markers and one or two parameters of stress markers: MDA (malondialdehyde). Especially liver and kidneys are prevented from oxidative stress, regularly GSH increases, MDA decreases. In post acute inflammations (convalescence) we find the same biochemical mechanisms, summarized in virus diseases and diabetic angiopathy.