

Ethanol-Related Gastric Mucosal Damage: Evidence of a Free Radical-Mediated Mechanism and Beneficial Effect of Oral Supplementation with Immun'Age, a Novel Natural Antioxidant

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KeyWords

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Abstract

Twenty-two healthy teetotal volunteers underwent gastroscopy during which biopsy samples from the antrum and body were taken for chemiluminescence assay, routine histology, and for malonyldialdehyde, xanthine oxidase and glutathione determination. Subjects were divided into 2 groups which, in a double-blind fashion, were randomly and orally given either (a) Immun'Age 9 g at bedtime and 3 h prior examination, or (b) flavored sugar 9 g as placebo. During the second gastroscopy 40 ml of 80% ethanol were sprayed perendoscopically. Gastroscopy with biopsy was repeated 60 min later. As compared to the placebo group, subjects given Immun'Age showed significantly reduced gastric mucosal damage at endoscopy and the histological level. When considering the placebo group, ethanol administration brought about a significant increase in the luminol-amplified chemiluminescence response in gastric mucosa as compared to the baseline value which was correlated with the histological score. The mean chemiluminescence value in the Immun'Age group was signifi-

cantly lower than in the placebo group. Ethanol ingestion brought about a significant increase in xanthine oxidase and malonyldialdehyde together with a decreased glutathione concentration. Immun'Age significantly prevented such changes. The present data suggest that the natural antioxidant Immun'Age when given orally promotes an effective protection against ethanol-induced gastric mucosal damage.