

## Increased blood ethanol elimination in rats treated with halothane

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The effect of chronic halothane inhalation and blood ethanol elimination was studied in the rat. Hepatic  $\alpha$ -glycerophosphate, oxidase ADH and malic enzyme activities were determined. Malic enzyme activity was also assayed in adipose tissue. Halothane treated rats showed an increased ethanol elimination ( $378 \pm 13$  vs.  $292 \pm 19$ ;  $p < 0.01$ ). Hepatic and adipose tissue malic enzyme activities were significantly enhanced in halothane treated rats ( $6.26 \pm 1.2$  vs.  $1.03 \pm 0.23$ ;  $p < 0.002$  for the liver and  $1.84 \pm 0.71$  vs.  $0.75 \pm 0.33$  for adipose tissue). Mitochondrial  $\alpha$ -glycerophosphate oxidase activity was also significantly increased in the liver of halothane treated animals ( $p < 0.05$ ) while no changes in ADH activity were observed. The enhanced ethanol elimination after halothane treatment, a substance which inhibits microsomal enzyme, is possibly due to increased NADH reoxidation. Another possibility explaining augmented ethanol metabolism may be an increased incorporation of ethanol into lipids rel