Effect of calcium channel blocker diltiazem on some depressant actions of ethanol in UChA and UChB rats

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Rats genetically selected for their different ethanol voluntary consumption, UChA (low consumer) and UChB (high consumer) were used. Naive UChA and UChB rats or submitted to ethanol chronic exposure, received an IP dose of ethanol (2.76 g/kg) alone or 30 min after an oral dose of diltiazem (10 mg/kg), a calcium channel blocker. A significant potentiation of the narcosis and hypothermia induced by the dose of ethanol was observed in UChA diltiazem-pretreated rats not previously exposed to ethanol, while no potentiation in narcosis time appears in UChA rats chronically exposed to ethanol that acquire tolerance. In the UChB line of rats, diltiazem did not potentiate ethanol depressant actions in naive or chronic ethanol-exposed rats. Diltiazem did not modify ethanol blood levels. These results indicate that the inhibition of voltage-dependent calcium channels can exaggerate ethanol-induced effects in naive rats but not when tolerance was developed. Results suggest that UChB rats may have