

Cognitive and neurobiological mechanisms of alcohol-related aggression

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Abstract

Alcohol-related violence is a serious and common social problem. Moreover, violent behaviour is much more common in alcohol-dependent individuals. Animal experiments and human studies have provided insights into the acute effect of alcohol on aggressive behaviour and into common factors underlying acute and chronic alcohol intake and aggression. These studies have shown that environmental factors, such as early-life stress, interact with genetic variations in serotonin-related genes that affect serotonergic and GABAergic neurotransmission. This leads to increased amygdala activity and impaired prefrontal function that, together, predispose to both increased alcohol intake and impulsive aggression. In addition, acute and chronic alcohol intake can further impair executive control and thereby facilitate aggressive behaviour.

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