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## *Precipitation of Acute Nicotine Withdrawal Measured via Startle Response*

An understanding of the emotional aspects of withdrawal is important in order to combat nicotine addiction as it may fuel the motivation for continued abusive behavior. Such insight can be provided through the use of the rodent animal model and the startle response as a measure of anxiety-like behavior. The startle response, determined as the physical reflex to a loud noise that is increased during a fear or anxiety state, has been shown to be a reliable measure of opiate dependence. This experiment considered whether precipitated withdrawal from the nicotine antagonist dihydro- $\beta$ -erythroidine (DH $\beta$ E) elevated the startle response. Rats injected with nicotine and then DH $\beta$ E were expected to have a significantly higher startle response than control groups due to precipitated withdrawal. However, this result was not found. The conclusion follows that although the anxiety-like response can be similarly measured in spontaneous nicotine withdrawal, the startle response cannot be used to measure nicotine withdrawal precipitated by DH $\beta$ E.



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