

## **Prepulse inhibition of startle response in Attention Deficit Hyperactivity Disorder and deficit and internalizing behaviours**

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Prepulse inhibition of startle response (PPI) is a measure of inhibitory function and time-linked information processing. The anatomic substrate of PPI is a cortico-striato-pallido thalamic circuitry and reflects the activation of behavioural gating processes. We investigated the role of deficit on PPI measures in a group of patients with ADHD and internalizing behaviours, according with DSM-IV criteria. All patients showed normal IQ and not history of other psychiatric problems (assessed by K-SADS Interview), and were drug free at the moment of the first neurophysiological assessment. An important deficit in the ability to inhibit startle response to an acoustic stimuli was found in all patients compared to age, sex matched controls without any psychiatric conditions. The evaluation of PPI response at different moments of pharmacological treatment with stimulants, in our sample, could be an useful method to determine a correlation between clinical improvement of symptoms and psychophysiological modifications.

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