

Support of Optimal Arousal

This section will include summaries of articles on arousal and the neurobiology of arousal...suggesting that optimal arousal level is important for learning to occur.

Dillon, D. G, & Labar, K. S. (2005). Startle modulation during conscious emotion regulation is arousal-dependent. *Behav Neurosci*, 119(4), 1118-1124.

Conscious regulation of negative emotion has been shown to affect human eyeblink startle responses, but whether these results depend on modulation of arousal- or valence-based processes is unknown. The authors presented participants with negative, neutral, and positive pictures and directed them to enhance, maintain, and suppress emotional responses. On emotional picture trials, startle responses decreased as a function of cue in the following order: enhance > maintain > suppress. Analysis of negative and positive picture trials separately revealed similar patterns of startle modulation by emotion regulation. There were no effects of emotion regulation on neutral trials. Results indicate that arousal, not valence, may be critical to startle modulation via conscious emotion regulation.