Corticotropin-releasing factor microinjection into the central nucleus of the amygdala alters REM sleep

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Abstract:
Psychological stressors have a prominent effect on rapid eye movement sleep (REMS) in humans and animals. We hypothesized that the stress-related neurochemical corticotropin-releasing factor (CRF), acting in the amygdala, could initiate neural events that lead to REMS alterations. Therefore, we made bilateral microinjections of three different doses of CRF into the central nucleus of the amygdala (CeA) in five rats. Only the lowest dose of CRF (1 ng) induced a change in sleep, specifically REMS, during the 4-h post-injection period. Thus, REMS alterations following psychological stress may depend, in part, on CRF release in the CeA.

Key words:
amygdala, corticotropin-releasing factor, stress, psychological, sleep, REM