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19. NEUROBIOLOGICAL ASPECTS OF FLOATING LIMB ACTIVITY AND SELF-BITING IN LABORATORY MONKEYS

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More than 50% of self-biting (SB) monkeys at Washington NPRC also exhibit Floating Limb Activity (FLA), where a monkey's leg is elevated without apparent volition and the monkey notices and reacts to it, or the toes of a monkey's unsupported leg are at or above shoulder level for more than 5 seconds without apparent volition. Bentson previously reported reduced FLA during analgesic (ketoprofen) administration and discussed possible involvement of CNS dopamine in FLA (ASP 2005). Here, we report that cortisol and adrenocorticotropin in *Macaca nemestrina* >2 years old do not differ by SB condition (yes-no) but are lower in FLA than non-FLA monkeys in blood samples obtained from 143 animals during routine morning sedations [GLM-ANOVAs, $\alpha=0.05$, controlled for sex, age, weight, minutes between sedation and blood draw, days between sample collection and assay, and health status]. Since more than 65% of the FLA monkeys also engaged in self-biting, it appears that HPA function of FLA monkeys is different than that of non-FLA monkeys regardless of self-biting. Lower cortisol and adrenocorticotropin levels in FLA monkeys during routine sedation are reminiscent of altered basal HPA activity associated with post-traumatic stress disorder in humans. Further study of physiological underpinnings of FLA may yield clues to reduction of self-biting associated with FLA, which appears to involve different HPA function than SB without FLA in *M. nemestrina*. NIH-RR00166.