**The Effects of Corticosterone on Birdsong in the Adult Zebra Finch**

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Stress represents an adaptive response to overcome external threats, yet stress can have adverse effects on the body and the brain. Previous research has shown that stress in juvenile songbirds can detrimentally affect song learning and production. However, little is known about the effects of stress hormones, such as corticosterone on adult birdsong. I used male zebra finches to conduct a within-subjects experiment to examine the effects of corticosterone administration on song stereotypy. I administered corticosterone and peanut oil (vehicle) both for a period of 24 hours and three weeks to each individual before recording and comparing their for similarity. I determined percent similarities between and within conditions. Results show a significant effect of experiment duration regardless of treatment and a significant linear trend in the decrease of percent similarity across treatments. Although stereotypy was seen to decrease as corticosterone and time increased, song latency and the number of songs per recording showed no trends. These results suggest that the primary neural structures responsible for aspects of song development and maintenance (HVC) are vulnerable to the negative effects of stress and corticosterone, while other aspects of song production such as motivation to sing seem to be maintained. This study demonstrates that adult songbirds along with juveniles can be just as susceptible to the negative aspects of stress.