**Sex Differences in the Impact of Adolescent Psychosocial Stress on Behavior and Body Weight Regulation**

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**Background and Objective:** Social defeat stress (i.e., stress resulting from bullying) is a common problem among adolescents and is linked with psychological (anxiety and depression) and metabolic conditions later in adulthood. Females are twice as likely as males to suffer from stress-related psychopathologies, which emerge during the adolescent period. Despite this fact, the majority of rodent studies utilize males. The goal of the present study was to determine whether there are sex differences in the behavioral and metabolic consequences of adolescent social defeat stress.

**Methods:** To accomplish this goal, male and female rats were exposed to social defeat stress or served as non-stressed controls during the adolescent period. Males and females were tested for anxiety-like and depression-like behavior during adolescence or adulthood. Body weight was also assessed during this time.

**Results:** Adolescent social defeat stress significantly increased anxiety-like behavior in non-social settings during the adolescent period in male and female rats, relative to their same-sex control counterparts. Notably, these behavioral changes persisted through adulthood in both sexes. However, males, but not females, were more likely to demonstrate social deficits (e.g., social avoidance) characterized by heightened anxiety-like behavior in multiple social settings. These anomalies in social behavior persisted through adulthood in males. Adolescent social defeat stress significantly decreased body weight gain during adolescence and adulthood in males, but it had no impact on females.

**Conclusions:** These data indicate that adolescent social stress induces sustained changes in behavior in rodents that are context dependent and sexually dimorphic. Future studies will examine sex differences in neuroendocrine and central (brain) responses following social defeat.

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