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# Sex Hormones in Experimental Autoimmune Encephalomyelitis: Implications for Multiple Sclerosis

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For decades, it has been known that females are more susceptible than males to multiple sclerosis (MS). It has also long been appreciated that during late pregnancy there is a decrease in MS disease activity. Interestingly, these two observations have also been made in an extensively used animal model for MS, experimental autoimmune encephalomyelitis (EAE) in SJL mice. Female mice are more susceptible to disease than male mice, and there is an improvement in disease during late pregnancy. In this review, the role of sex hormones in each of these two observations is characterized in this EAE model using castration and exogenous hormone treatment strategies. The gender difference in EAE susceptibility is due primarily to a protective effect of testosterone in male mice. The decrease in disease severity during late pregnancy appears to be due at least in part to high levels of estriol, which characterize this time period. NEUROSCIENTIST 7(3):258–270, 2001

**Key Words:** multiple sclerosis • experimental autoimmune encephalomyelitis • estrogen • testosterone • IL-10



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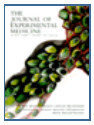

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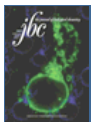

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