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Title: Ethinyl estradiol and levonorgestrel alter cognition and anxiety in rats concurrent with a decrease in tyrosine hydroxylase expression in the locus coeruleus and brain-derived neurotrophic factor expression in the hippocampus

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Ethinyl estradiol and levonorgestrel alter cognition and anxiety in rats concurrent with a decrease inty-rosine hydroxylase expression in the locus coeruleus and brain-derived neurotrophic factor expression in the hippocampus

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Highlights

- Ovarian suppression by low/high doses: ethinyl estradiol (EE) & levonorgestrel (LNG)
- Rat anxiety models/object recognition tests were used to assess anxiety and learning
- Low dose EE, LNG, and EE/LNG decreased anxiety-like behavior yet impaired learning
- Low dose EE, LNG, and EE/LNG decrease tyrosine hydroxylase mRNA/protein and BDNF mRNA
- Behavior/molecular results suggest a biphasic modulation of noradrenergic function