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JOURNAL ARTICLE

Effect of gonadotropin-releasing hormone on prolactin levels in males unrelated to stress or behavioral changes

W. R. Phipps, S. E. Lukas, J. H. Mendelson and I. Schiff

Hormone levels, physiologic parameters, electroencephalographic (EEG) activity, and changes in subjective feelings recorded using a nonverbal instrumental device were assessed following the double-blind intravenous administration of 500 micrograms of gonadotropin-releasing hormone (GnRH) or placebo to five normal males. Within 30 minutes of GnRH administration, prolactin (PRL) levels had risen by 4.3 +/- 1.2 ng/ml (mean +/- SEM) from a baseline of 8.5 +/- 0.9 ng/ml (overall increase P less than 0.005 vs. baseline, P less than 0.001 vs.

placebo); maximally stimulated values had a mean of 16.7 +/- 2.3 ng/ml. The PRL elevations measured in absolute terms significantly correlated with increases in luteinizing hormone (LH) ($r = 0.97$) and follicle stimulating hormone (FSH) ($r = 0.89$). No changes in physiologic parameters or EEG activity occurred in response to GnRH, nor were any behavioral responses found. The increase in PRL following GnRH was specifically shown to be unrelated to experimental stress or the behavioral effects of GnRH.

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