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Gender differences in weather sensitivity of normal people detected in electroencephalograms and rheoencephalograms

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In the real-life environment, the subjectively unperceived reactivity of electroencephalogram (EEG) and rheoencephalogram (REG) to ordinary geophysical factors (including the direction and speed of wind, atmospheric pressure, relative humidity, and temperature) is gender-dependent and increases with age during the reproductive period from 18 to 45 years. Correlations between EEG and REG values and weather fluctuations are more frequent and stronger in men. Dependence of EEG rhythms on weather factors increases as the rhythmic activity within the δ - θ - α - β range becomes more rapid. This pattern is particularly evident in men but not women. Reactivity of neurodynamic parameters in female EEG and REG is responsive to the ovarian-menstrual cycle. Almost all cases of cerebral weather sensitivity of women were objectified in the post-ovulatory period, whereas in the preovulatory period, episodes of weather sensitivity were few. The impression was that women's brains after the unfulfilled conception responds to changes in the environment according "male type", that is, more openly, with a willingness to actively engage with the exogenous conditions of existence. Whereas before ovulation neurodynamic processes almost refractory to fluctuations in the geophysical environment, apparently, focusing on endogenous regulatory functions is aimed at preparing for potentially possible conception. Such physiological weather sensitivity forms a diversity of reactions to environmental changes enlarging the arsenal of the adaptive plasticity of a whole body in the scale of the human population. Studies can help serve as a base for exploring drug addiction affecting the human mind, taking into consideration gender differences.

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