

Malnutrition-induced changes of responses evoked in the rat prefrontal cortex as revealed by sensitivity to strychnine

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Susceptibility to strychnine of somatosensory responses evoked in the prefrontal cortex was studied in normal and protein-malnourished rats in three groups. (a) The normal group was from mothers fed a 21% casein diet. (b) The prenatally malnourished group was from mothers fed a 6% casein diet during 5 weeks prior to mating and throughout gestation. (c) The postnatally malnourished group born from dams fed a 6% casein diet throughout the nursing period. At 45 days of age, sensitivity of the responses to 0.5% strychnine sulfate solution was tested by measuring changes in peak-to-peak amplitude. The results showed that cortical neurons of the postnatally protein-restricted group had decreased susceptibility to strychnine, indicating functional disturbances of glycinergic synapses. © 1985.