

# Functional Alterations Induced by Prenatal Malnutrition in Callosal Connections and Interhemispheric Asymmetry as Revealed by Transcallosal and Visual Evoked Responses in the Rat

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It is known that nutritional restriction during gestation affects the growth of the corpus callosum. The present study was designed to evaluate whether prenatal malnutrition may alter, in the rat, the normal pattern of functional callosal interhemispheric connections of the visual cortex. Since callosal development has been associated with brain lateralization, the effect of malnutrition during gestation on the normal asymmetry of visual cortical evoked responses was also studied. Prenatal malnutrition was induced by restricting food consumption by pregnant rats (10 g daily) from Day 8 post-conception to parturition. Results of experiments performed on 45- to 50-day-old offspring showed that the starvation treatment (i) reduced both the peak-to-peak amplitude and the extent of the projecting field of transcallosal evoked responses, and (ii) abolished the normal brain interhemispheric asymmetry of visual evoked responses. These effects are discussed in relationship to regressive events