

# Effects of mild protein prenatal malnutrition and subsequent postnatal nutritional rehabilitation on noradrenaline release and neuronal density in the rat occipital cortex

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There is evidence that severe malnutrition started during gestation and continued through lactation affects adversely the morphologic development of the neocortex leading to increased neuronal cell packing density and decreased dendritic branching. Nevertheless, the effect of purely mild protein prenatal malnutrition on neocortical development remains rather unexplored. This study evaluates the effects of mild protein prenatal malnutrition (8% casein diet, calorically compensated by carbohydrates) and subsequent postnatal nutritional rehabilitation (25% casein diet) on: (i) the potassium-induced release of [3H]-noradrenaline (NA) in occipital cortex slices obtained from 1- and 22-day-old pups; and (ii) the packing density of neurons in lateral, dorso-lateral and dorsal regions of the occipital cortex of 22-day-old pups by using the optical dissector method. The experiments were performed in rats normally fed during gestation and lactation (G+L+), malnourished during gestation but rehab