

# Early life environmental deterioration, nutrition and ontogenesis of the motor cortex in the rat: A golgi study

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Sprague-Dawley albino rats were subjected to an experimental paradigm in which environmental and nutritional variables were studied from birth to day 18. The use of Golgi-Cox-Sholl methodology allowed quantitative evaluations of neurons which were randomly impregnated with metallic mercury after fixation in a mercury salt. The nutritional treatment employed did not significantly influence the cytoplasmatic differentiation of cortical neurons although it was able to induce gross morphological modifications in body weight and size. By contrast, an impoverished surrounding during a limited period of time had a profound effect on the basal dendritic tree. The evidence presented here suggests the importance of the preweaning environment on the development of neural appendages. Motor pyramids of pups housed in deteriorated conditions underwent a progressive decrement in the length and number of peripheral branches and terminal dendrites. A decreased rate of cortical differentiation was also