

# Effect of early malnutrition on dynamic properties of axodendritic synapses in the rat prefrontal cortex

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The influence of early protein?calorie malnutrition on synaptic transmission in the rat prefrontal cortex was studied by evoking direct cortical responses with different trains of threshold electrical pulses. Malnutrition resulted in a requirement for increased pulse train stimulating current, reflecting a diminished release of neurotransmitter from the preterminal endings. In addition there was an increase in the time constant of pyramidal cells, indicating that axodendritic synapses have a disability for integrating high frequency inputs at the post synaptic level. It is concluded that early malnutrition alters dynamic properties of axodentritic synapses at both the pre? and the postsynaptic levels. Copyright © 1985 John Wiley & Sons, Inc.