

Controlled trial of copper supplementation during the recovery from marasmus

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To evaluate copper nutritional status and the effect of a Cu supplement during recuperation, 27 marasmic infants were selected on admission to the nutrition recovery center at the Instituto de Nutricion y Tecnologia de los Alimentos. Thirteen infants received 80 $\mu\text{g}/\text{kg}/\text{day}$ of copper supplement as sulphate and the remaining a placebo. They were paired by birth weight, age, and sex. Anthropometric indices, complete blood count, ceruloplasmin, and Cu were measured on admission and at monthly intervals. Superoxide dismutase activity was measured in hypocupremic infants and was found to be low. The mean \pm SE Cu levels on admission were $127 \pm 10 \mu\text{g}/\text{dl}$ for the supplemented group and $137 \pm 10 \mu\text{g}/\text{dl}$ for the control. We found an increase in plasma Cu to 159 and 162 $\mu\text{g}/\text{dl}$ on days 30 and 60 in the supplement group, and a significant decrease after day 30 in the placebo group. The ceruloplasmin levels followed this trend. Hypocupremia was found in 30% of the placebo group and none in the supplement