# THE HYPOTHALAMIC?PITUITARY?ADRENAL AXIS IN INFANTILE MALNUTRITION

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We studied the circadian rhythm and the response of the hypothalamic?pituitary?adrenal (HPA) axis to ovine corticotrophin releasing hormone (oCRH) stimulation and dexamethasone suppression in 32 children with grade II?III marasmus. Children were studied prior to and after nutritional rehabilitation. Mean baseline plasma cortisol concentrations were elevated at admission and decreased significantly after nutritional rehabilitation. Mean±SEM plasma cortisol response to oCRH increased from a basal of 480 ±41 to a peak of 582 ± 58 nmol/1 at the time of admission, and from a basal of 234±27 to a peak of 532±41 nmol/1 after caloric rehabilitation. Dexamethasone suppression in the malnourished group was associated with a decrease in the mean±SEM basal plasma cortisol concentration from 397±44 to 171 ±44 nmol/1. After caloric rehabilitation, basal cortisol levels decreased from 259±27 to 22±5 nmol/l following dexamethasone. Our results support the concept that malnutrition is associated with d