

# Growth hormone (GH) responses to GH-releasing peptide and to GH-releasing hormone in GH-deficient children

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The GH-releasing peptides (GHRPs) are a family of hexa- and heptapeptides that specifically stimulate GH secretion in normal adults and children. They would be an attractive potential form of therapy for GH deficiency (GHD) if they are also active in these patients. Their action, however, appears to result at least in part through hypothalamic responses, which may be impaired in GHD, and their ability to evoke a GH response in these patients must therefore be directly examined. We studied GH responses to the heptapeptide GHRP-1 in 22 prepubertal children with previously documented GHD and growth failure and compared them to responses to GHRH and the two peptides administered together. Patients received 1  $\mu$ g/kg GHRH-(1-44)NH<sub>2</sub>, 1  $\mu$ g/kg GHRP-1, or both, in random order. Tests were separated by at least 1 week. GHRP-1 evoked a significant GH response in 60% of the patients, comparable to the 68% who responded to GHRH. The magnitudes of the peak responses were similar ( $7.5 \pm 8.0$   $\mu$ g/L to GHR