

# Transition for the Growth Hormone Treated Patient from the Pediatric to Adult Clinic

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The transition period between adolescence and adult life is characterized by the attainment of mature stature, body shape, metabolism, and bone and muscle mass, and the development of adult psychosocial health. Since tissue maturation may not be completed until the mid-twenties, the transition period may last from 5-7 years. In the past, GH therapy was discontinued in children with short stature when the epiphyses fused and final adult height was achieved. The necessity for continuing GH therapy after this point became apparent with the growing appreciation that an adult GH deficiency syndrome exists and that bone accrual continues well after linear growth ceases. It has been proposed that children who have received GH therapy for childhood-onset GH deficiency be re-evaluated when growth is completed to determine if they remain GH deficient as teenagers. If GH deficiency can be documented by appropriate testing during this transition period, it has been recommended that GH replacement therapy be re-initiated and maintained for an indefinite period of time. A number of important questions concerning this therapy remain unanswered. Patients with "organic" GH deficiency (i.e., caused by a tumor, radiation, defined genetic mutation or syndrome, etc) should remain on therapy without interruption, but children with idiopathic isolated GH deficiency certainly need to be re-tested. There is no firm consensus regarding the length of time that these patients should discontinue GH therapy after growth has ended, and when testing and re-treatment should be started. Other controversies concern the conversion from childhood to adult dosing of GH and the monitoring of GH therapy during the transition. While it has been difficult to study large numbers of GH-deficient adolescents as they enter the transition period, data concerning body composition changes and quality of life indicators suggest guidelines (1) for proper endocrine treatment, including the necessity to modify thyroid hormone and glucocorticoid therapy.

Clayton PE et al. Consensus statement on the management of the GH-treated adolescent in the transition to adult care. *Eur J Endocrinol* (2005) 152: 165-170.