

Several tests are helpful in confirming excess Cushing syndrome. Serum cortisol levels should be measured at midnight and in the morning along with corticotropin hormone, urinary free cortisol, fasting blood glucose levels for hyperglycemia, serum electrolyte levels for hypokalemia and alkalosis, and 24-hour urinary levels of elevated 17-hydroxycorticoids and 17-ketosteroids ([Lowitz and Keil, 2015](#)). Imaging of the pituitary and adrenal glands to assess for tumors, bone density studies for evidence of osteoporosis, and skull radiographs to determine enlargement of the sella turcica may also aid in the diagnosis. Another procedure used to establish a more definitive diagnosis is the dexamethasone (cortisone) suppression test ([Batista, Riar, and Keil, 2007](#)). Administration of an exogenous supply of cortisone normally suppresses ACTH production. However, in individuals with Cushing syndrome, cortisol levels remain elevated. This test is helpful in differentiating between children who are obese and those who appear to have cushingoid features.

## **Therapeutic Management**

Treatment depends on the cause. In most cases, surgical intervention involves bilateral adrenalectomy and postoperative replacement of the cortical hormones (the therapy for this is the same as that outlined for chronic adrenocortical insufficiency). If a pituitary tumor is found, surgical extirpation or irradiation may be chosen. In either of these instances, treatment of panhypopituitarism with replacement of GH, TH, ADH, gonadotropins, and steroids may be necessary for an indefinite period ([Lau, Rutledge, and Aghi, 2015](#)).

## **Nursing Care Management**

Nursing care also depends on the cause. When cushingoid features are caused by steroid therapy, the effects may be lessened with administration of the drug early in the morning and on an alternate-day basis. Giving the drug early in the day maintains the normal diurnal pattern of cortisol secretion. If given during the evening, it is more likely to produce symptoms because endogenous cortisol levels are already low, and the additional supply exerts more pronounced effects. An alternate-day schedule