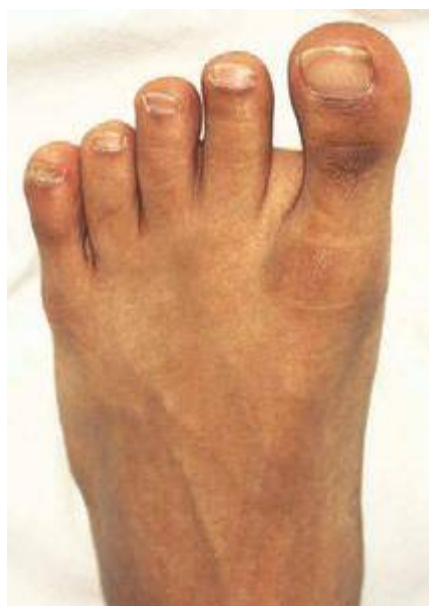




A



B



C



D

FIGURE 406-15 Clinical features of Addison's disease. Note the hyperpigmentation in areas of increased friction including (A) palmar creases, (B) dorsal foot, (C) nipples and axillary region, and (D) patchy hyperpigmentation of the oral mucosa.

the oral administration of 15–25 mg hydrocortisone in two to three divided doses. Pregnancy may require an increase in hydrocortisone dose by 50% during the last trimester. In all patients, at least one-half of the daily dose should be administered in the morning. Currently available glucocorticoid preparations fail to mimic the physiologic cortisol secretion rhythm (Fig. 406-3). Long-acting glucocorticoids such as prednisolone or dexamethasone are not preferred because they result in increased glucocorticoid exposure due to extended glucocorticoid receptor activation at times of physiologically low cortisol secretion. There are no well-established dose equivalencies, but as a guide, equipotency can be assumed for 1 mg hydrocortisone, 1.6 mg cortisone acetate, 0.2 mg prednisolone, 0.25 mg prednisone, and 0.025 mg dexamethasone.

Monitoring of glucocorticoid replacement is mainly based on the history and examination for signs and symptoms suggestive of glucocorticoid over- or underreplacement, including assessment of body weight and blood pressure. Plasma ACTH, 24-h urinary free cortisol, or serum cortisol day curves reflect whether hydrocortisone has been taken or not, but do not convey reliable information about replacement quality. In patients with isolated primary adrenal insufficiency, monitoring should include screening for autoimmune thyroid disease, and female patients should be made aware of the possibility of premature ovarian failure. Supraphysiologic glucocorticoid treatment with doses equivalent to 30 mg hydrocortisone or more will affect bone metabolism, and these patients should

undergo regular bone mineral density evaluation. All patients with adrenal insufficiency need to be instructed about the requirement for stress-related glucocorticoid dose adjustments. These generally consist of doubling the routine oral glucocorticoid dose in the case of intercurrent illness with fever and bed rest and the need for IV hydrocortisone injection at a daily dose of 100 mg in cases of prolonged vomiting, surgery, or trauma. Patients living or traveling in regions with delayed access to acute health care should carry a hydrocortisone self-injection emergency kit, in addition to their usual steroid emergency cards and bracelets.

Mineralocorticoid replacement in primary adrenal insufficiency should be initiated at a dose of 100–150 μ g fludrocortisone. The adequacy of treatment can be evaluated by measuring blood pressure, sitting and standing, to detect a postural drop indicative of hypovolemia. In addition, serum sodium, potassium, and plasma renin should be measured regularly. Renin levels should be kept in the upper normal reference range. Changes in glucocorticoid dose may also impact on mineralocorticoid replacement as cortisol also binds the mineralocorticoid receptor; 40 mg hydrocortisone is equivalent to 100 μ g fludrocortisone. In patients living or traveling in areas with hot or tropical weather conditions, the fludrocortisone dose should be increased by 50–100 μ g during the summer. Mineralocorticoid dose may also need to be adjusted during pregnancy, due to the antiminerlocorticoid activity of progesterone, but this is less often required than hydrocortisone dose adjustment.