quently because these drugs thin the skin and increase the risk of pressure ulcers. This risk is further increased if edema also is present.
- Dietary changes may be beneficial in some clients. Salt restriction may help prevent hypernatremia, fluid retention, and edema. Foods high in potassium may help prevent hypokalemia. A diet high in protein, calcium, and vitamin D may help to prevent osteoporosis. Increased intake of vitamin C may help to decrease bleeding in the skin and soft tissues.
- Avoid exposing the client to potential sources of infection by washing hands frequently, using aseptic technique when changing dressings, keeping health care personnel and visitors with colds or other infections away from the client, and following other appropriate measures. Reverse or protective isolation of the client is sometimes indicated, commonly for those who have had organ transplants and are receiving corticosteroids to help prevent rejection of the transplanted organ.
- Handle tissues very gently during any procedures (eg, bathing, assisting out of bed, venipunctures). Because long-term corticosteroid therapy weakens the skin and bones, there are risks of skin damage and fractures with even minor trauma.

Evaluation

- Interview and observe for relief of symptoms for which corticosteroids were prescribed.
- Interview and observe for accurate drug administration.
- Interview and observe for use of nondrug measures indicated for the condition being treated.
- Interview and observe for adverse drug effects on a regular basis.
- Interview regarding drug knowledge and effects to be reported to health care providers.

PRINCIPLES OF THERAPY

Risk–Benefit Factors

1. Because systemic corticosteroid drugs can cause serious adverse reactions, indications for their clinical use should be as clear-cut as possible. They are relatively safe for short-term treatment of self-limiting conditions, such as allergic reactions or acute exacerbations of chronic conditions. Long-term use of pharmacologic doses (eg, more than 5 mg of prednisone daily) produces adverse reactions. For this reason, long-term corticosteroid therapy should be reserved for life-threatening conditions or severe, disabling symptoms that do not respond to treatment with more benign drugs or other measures.
2. The goal of corticosteroid therapy is usually to reduce symptoms to a tolerable level. Total suppression of symptoms may require excessively large doses and produce excessive adverse effects.

Drug Selection

Choice of corticosteroid drug is influenced by many factors, including the purpose for use, characteristics of specific drugs, desired route of administration, characteristics of individual clients, and expected adverse effects. Some guidelines for rational drug choice include the following:

1. **Adrenocortical insufficiency,** whether caused by Addison's disease, adrenalectomy, or inadequate corticotropin, requires replacement of both glucocorticoids and mineralocorticoids. Hydrocortisone and cortisone are usually the drugs of choice because they have greater mineralocorticoid activity compared with other corticosteroids. If additional mineralocorticoid activity is required, fludrocortisone can be given.
2. **Nonendocrine disorders,** in which anti-inflammatory, antiallergic, antistress, and immunosuppressive effects are desired, can be treated by a corticosteroid drug with primarily glucocorticoid activity. Prednisone is often the glucocorticoid of choice.
3. **Respiratory disorders.** Beclomethasone (Vanceril, Vancenase), budesonide (Pulmicort, Rhinocort), flunisolide (Aerobid, Nasalide), fluticasone (Flonase, Flovent), mometasone (Nasonex), and triamcinolone (Azmacort, Nasacort) are corticosteroids formulated to be given by oral or nasal inhalation. Their use replaces, prevents, delays, or decreases use of systemic drugs and thereby decreases risks of serious adverse effects. However, high doses or frequent use may suppress adrenocortical function.
4. **Cerebral edema** associated with brain tumors, craniotomy, or head injury. Dexamethasone (parenterally or orally) is considered the corticosteroid of choice because it is thought to penetrate the blood–brain barrier more readily and achieve higher concentrations in cerebrospinal fluids and tissues. It also has minimal sodium- and water-retaining properties. With brain tumors, the drug is more effective in metastatic lesions and glioblastomas than astrocytomas and meningiomas.
5. **Acute, life-threatening situations** require a drug that can be given parenterally, usually intravenously (IV). This limits the choice of drugs because not all are available in injectable preparations. Hydrocortisone, dexamethasone, and methylprednisolone are among those that may be given parenterally.

Dosage Factors

Dosage of corticosteroid drugs must be individualized because it is influenced by many factors, such as the specific drug to be given, the desired route of administration, the reason for use, expected adverse effects, and client characteristics. In general, the smallest effective dose should be given for the shortest effective time. Dosage guidelines include the following:

1. Dosage must be individualized according to the severity of the disorder being treated, whether the disease is