day to gain control of the symptoms with maintenance treatment possible in some cases with 20 units every other day. However, many of these patients have relatively high dosage requirements, even during maintenance treatment, and in these cases the sustained action seems to be particularly beneficial to satisfactory control of the disease.

In bronchial asthma, including status asthmaticus, 60 units a day were required for control, and 40 units twice a week has in some instances provided successful maintenance.

In polyarteritis and periarteritis nodosa, the initial dosage suggested is 40 units per day, maintenance may be achieved with 40 units twice a week.

In pulmonary emphysema, initial dosage has been 60 units per day, reduced to 20 units per day or every other day for maintenance.

These dosages are, of course, only gauges for the physician to follow. As with other corticotropin preparations, either the gel-form or aqueous, the dosage must be adjusted to the needs of the particular patient being treated.

Contraindications—The use of corticotropin is contraindicated in Addison's disease. Tuberculosis, active, latent or questionably healed, herpes simplex of the eye, and acute psychoses are usually absolute contraindications. Peptic ulcer, psychotic tendencies, diverticulitis, fresh intestinal anastomoses, thromboembolic tendencies, local or systemic infections including fungal and exanthematous diseases, osteoporposis, renal insufficiency, congestive heart failure and pregnancy (except in severe disease) are relative contraindications.

This product should not be used in patients with a history of previous reactions to any form of corticotropin or who are known to be allergic to products of porcine origin.

Precautions and Side Effects—This product functions by stimulating the production of steroid hormones by the adrenal cortices, and in this manner *influences protein and carbohydrate metabolism. It also alters the metabolism of electrolytes with retention of sodium and excretion of potassium. Should sodium retention and edema occur this may be controlled by restricting sodium intake, giving a diuretic or by temporarily discontiuing therapy until diuresis occurs. If potassium deficiency with muscular weakness occurs supplemental potassium should be given: 1 Gm. potassium citrate or chloride orally three times a day. Periodic determinations of serum potassium during prolonged therapy is advised. In this same manner the steroid hormones of the adrenal cortices induce atrophy of the thymus and produce an increase in antihyaluronidase activity. Because the action of this product is enhanced and prolonged as compared with other corticotropin preparations, the possibility of overdosage symptoms must be borne in mind.*

Corticotropin will produce the same type of side effects as corticosteroids and these include: Cushing-like syndrome, purpura or petechiae, electrolyte imbalance, insomnia, osteoporosis, spontaneous fractures, peptic ulcer, euphoria, psychic disturbances, menstrual irregularities, weight changes, hyperglycemia, hypertension, edema, bloating or gastric distress, aseptic necrosis of the hip, protein depletion, pancreatitis, increased intracranial pressure, convulsions, and hirsutism. Vascular changes such as polyarteritis nodosa or an increased tendency for thrombophlebitis have been reported. The incidence, type and severity of untoward reactions is usually related to the size of the dose and duration of therapy. For example prolonged use of corticotropin may also cause growth suppression (reversible on withdrawal) in children, delayed wound healing, or posterior subcapsular cataracts in adults.

Susceptible individuals may become sensitized to traces of protein that accompany corticotropin so that subsequent injections given after intervals of several days may give rise to hypersensitivity phenomena ranging from mild urticaria to anaphylactic shock. The first sign of developing hypersensitivity may be localized itching or wheal formation at the injection site. This product should not be used in patients with a history of previous reactions to any form of corticotropin or who are known to be allergic to products of porcine origin.

It may be used as adjuvant therapy in certain infectious diseases providing such infections are adequately controlled by appropriate antibiotics or chemotherapeutic agents. *It must be remembered that the anti-inflammatory effects of corticotropin may mask signs of infection and such patients should be carefully observed.* While average doses will usually not increase insulin requirements in controlled diabetics, *when the drug is used in such patients, they should be observed closely for evidences of increased hyperglycemia or glycosuria. Periodic determinations of blood sugar during prolonged therapy is advised.*