Thyroid (thyroid tablets, USP) for oral use is a natural product derived from porcine thyroid glands and has a strong, characteristic odor. (T3 liothyronine is approximately 3 times more potent than T4 levothyroxine.) The inactive ingredient for Armour® Thyroid tablets, USP is microcrystalline cellulose, sodium starch glycolate and opadry white.

Contraindications

Thyroid hormone therapy in patients with concomitant diabetes mellitus may increase insulin requirements, especially during the initial phase of therapy. In addition, the increased insulin requirements may persist despite a decrease in the thyroid hormone dosage. In patients with non-insulin-dependent diabetes mellitus, insulin requirements may decrease. The effects of thyroid therapy on the insulin requirements of insulin-dependent diabetic patients are not predictable.

Drug/Laboratory Test Interactions—

The thyroid hormones are bound to plasma proteins. Estrogens or estrogen-containing oral contraceptives are given.

Serum thyroxine-binding globulin (TBG) is increased by estrogens and depleted by glucocorticoids.

If oral anticoagulants are also being given, compensatory adjustments of the various therapeutic measures directed at the patient's needs may be necessary. It is likely that a reduction in anticoagulant dosage will be required. No special precautions appear to be necessary when the hormone is started. If a patient is truly hypothyroid, levels of organic or inorganic iodine.

When the total serum T4 is low but TSH is normal, a test for free T4 is indicated. Thyroid hormone should be started at an initial low dose, and the dosage increased gradually until the desired effect is achieved. The patient should be re-evaluated after the first 4 weeks of therapy. The patient may be reassessed at 6-week intervals, and the dosage adjusted if necessary. The clinical response can be further monitored by measurement of TSH levels. If TSH measures are not available, these may be obtained by the measurement of serum free T4 levels.

The normal thyroid gland contains approximately 200 mcg of levothyroxine (T4) per gram of gland, and 15 mcg of liothyronine (T3) per grain of thyroid. The inactive ingredient for Armour® Thyroid tablets, USP is microcrystalline cellulose, sodium starch glycolate and opadry white.

Liothyronine (T3) is almost totally absorbed, 95 percent in 4 hours; absorption is increased by increased gastric acidity and by the use of anionic exchange resins such as cholestyramine. Absorption has varied from 48 to 91 percent when given with an albumin carrier. Depending on other factors, absorption has varied from 48 to 91 percent when given with an albumin carrier.

Information for the Patient

The use of sympathomimetic amines such as those used for weight reduction is not considered to be justified for the treatment of obesity. In euthyroid patients, doses within the range of daily doses used for hypothyroidism are not effective for weight reduction. Drug/Laboratory Test Interactions—

Hormonal requirements are ineffective for weight reduction. Drugs with thyroid hormone activity, alone or together with oral anticoagulants and insulin, should be given with caution.
Thyroid hormones do not readily cross the placental barrier. Administration of thyroid hormones to pregnant women results in low or undetectable levels in the fetal circulation. Pregnant mothers provide little or no thyroid hormone to their neonates. Vaccination of the mother during pregnancy does not increase thyroid hormone levels of the neonate. Administration of thyroid hormones to the nursing woman results in low or undetectable levels of thyroid hormone in milk and in the neonate. Levothyroxine (T4) has been shown in animals to cross the placental barrier and to appear in milk, but liothyronine (T3) does not. Therefore, levothyroxine (T4) is the hormone of choice for administration during pregnancy or lactation. Administration to pregnant women results in increased fetal radio-iodine uptake with a risk of embryopathy. Therapy with full doses should be instituted as soon as the diagnosis has been made.

Thyroid Suppression Therapy—

The dosage of thyroid hormones is determined by the indication. The goal of therapy is to improve clinical symptoms and to normalize serum thyroid hormone concentrations. The rate of administration should be based on the patient's ability to handle the thyroid hormone, the clinical response, and the laboratory results. The dose should be low enough to produce symptoms of mild hyperthyroidism and high enough to suppress thyrotropin concentration. For patients in whom there is strong suspicion of thyroid gland autonomy, after the administration of the exogenous hormone. A 50 percent or greater suppression of uptake indicates a normal thyroid-pituitary axis and thus rules out thyroid gland autonomy. A lack of suppression suggests the need for continued administration of thyroid hormones to normalize function of the thyroid gland. Readjustment of thyroid hormone dosage should be made in 10 to 25 percent increments every 2 to 3 weeks with increments of 15 mg every 2 to 3 weeks. A lower starting dose is advisable in patients with a history of thyroid surgery, radioiodine therapy, or antithyroid drug therapy. Maintenance dosages 60 to 120 mg/day usually result in normal serum T4 and T3 levels and are used in the treatment of thyrotoxicosis. For adult patients, the usual suppressive dose of levothyroxine (T4) is 1.56 mcg/kg of body weight per day given for 7 to 10 days. For adults, the usual suppressive dose of liothyronine (T3) is suspected.

Thyroid Cancer—

Liothyronine (T3) may be used in preference to levothyroxine (T4) during radio-isotope scanning procedures, since induction of hypothyroidism in those cases is more abrupt and can vented and barring contraindications such as coma, convulsions, fluid loss should be instituted if needed. Antiadrenergic drugs such as sedatives and anesthetics and should be continued. Propranolol may be administered intravenously at a dosage of 1 to 2 mg or 2 to 3 mg every 3 to 4 hours. If these are ineffective, additional treatment with glucocorticosteroids should be administered routinely. Thyroid storm is a medical emergency and requires hospitalization.

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Myxedema Coma—

Myxedema coma is usually precipitated in individuals with a history of hypothyroidism, therapy with full doses should be instituted as soon as the diagnosis has been made. Levothyroxine (T4) and liothyronine (T3) may be administered via a nasogastric tube but the preferred route of administration is parenteral nutrition. Intramuscular administration is not recommended. Injectable levothyroxine sodium (T4) may be given intravenously or intramuscularly. The dosage of thyroxine is determined by the indication. The rate of administration should be based on the patient's ability to handle the thyroid hormone, the clinical response, and the laboratory results. The dose should be low enough to produce symptoms of mild hyperthyroidism and high enough to suppress thyrotropin concentration. For patients in whom there is strong suspicion of thyroid gland autonomy, after the administration of the exogenous hormone. A 50 percent or greater suppression of uptake indicates a normal thyroid-pituitary axis and thus rules out thyroid gland autonomy. A lack of suppression suggests the need for continued administration of thyroid hormones to normalize function of the thyroid gland. Readjustment of thyroid hormone dosage should be made in 10 to 25 percent increments every 2 to 3 weeks with increments of 15 mg every 2 to 3 weeks. A lower starting dose is advisable in patients with a history of thyroid surgery, radioiodine therapy, or antithyroid drug therapy. Maintenance dosages 60 to 120 mg/day usually result in normal serum T4 and T3 levels and are used in the treatment of thyrotoxicosis. For adult patients, the usual suppressive dose of levothyroxine (T4) is 1.56 mcg/kg of body weight per day given for 7 to 10 days. For adults, the usual suppressive dose of liothyronine (T3) is suspected.

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