



# Symax<sup>®</sup> Duotab

**Hyoscyamine Sulfate**

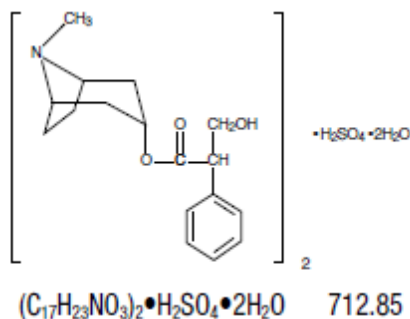
**BIPHASIC TABLETS\***

\*U.S. Pat. Pending No. 10/879,506

**Rx Only**

**DESCRIPTION:** Each purple and white, biphasic, capsule shaped tablet for oral administration is specially formulated to release 0.125 mg of hyoscyamine sulfate immediately and 0.250 mg hyoscyamine sulfate over the remaining 8 to 12 hours of the dosing period.

l-Hyoscyamine sulfate is one of the principal anticholinergic/antispasmodic components of belladonna alkaloids. Hyoscyamine sulfate is Benzene-acetic acid,  $\alpha$ -(hydroxymethyl)-, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester, [3(S)-endo]-, sulfate (2:1), dihydrate.



Inactive ingredients include calcium phosphate, D&C Red #30, FD&C Blue #1, lactose monohydrate, magnesium stearate, methylcellulose, povidone, silicified microcrystalline cellulose, sodium starch glycolate.

**CLINICAL PHARMACOLOGY:** Symax<sup>®</sup> Duotab inhibits specifically the actions of acetylcholine on structures innervated by post-ganglionic cholinergic nerves and on smooth muscles that respond to acetylcholine but lack cholinergic innervation. These peripheral cholinergic receptors are present in the autonomic effector cells of the smooth muscle, the cardiac muscle, the sinoatrial node, the atrioventricular node, and the exocrine glands. At therapeutic doses, it is completely devoid of any action on autonomic ganglia.

Symax<sup>®</sup> Duotab inhibits gastrointestinal propulsive motility and decreases gastric acid secretion. Symax<sup>®</sup> Duotab also controls excessive pharyngeal, tracheal, and bronchial secretions.

Hyoscyamine sulfate is absorbed totally and completely by oral administration. Once absorbed, it disappears rapidly from the blood and is distributed through the entire body: the half-life is 2 to 3½ hours. Hyoscyamine sulfate is partly hydrolyzed to tropic acid and tropine but the majority of the drug is excreted in the urine unchanged within the first 12 hours. Only traces of this drug are found in breast milk. Hyoscyamine sulfate passes the blood brain barrier and the placental barrier.

Symax<sup>®</sup> Duotab releases 0.125 mg hyoscyamine sulfate immediately and 0.250 mg over the remaining 8 to 12 hour dosing period. Tablets may not completely disintegrate and may be excreted by some patients.

**INDICATIONS AND USAGE:** This product may be used in functional intestinal disorders to reduce symptoms such as those seen in mild dysenteries and diverticulitis. It can also be used to control gastric secretion, visceral spasm and hypermotility in cystitis, pylorospasm and associated abdominal cramps. Along with appropriate analgesics, this product is indicated in symptomatic relief of biliary and renal colic and as a drying agent in the relief of symptoms of acute rhinitis. This product is effective as adjunctive therapy in the treatment of peptic ulcer and irritable bowel syndrome, acute enterocolitis and other functional gastrointestinal disorders.

**CONTRAINDICATIONS:** Glaucoma, obstructive uropathy, obstructive diseases of the gastrointestinal tract, paralytic ileum, intestinal atony of elderly or debilitated patients, unstable cardiovascular status, severe ulcerative colitis, toxic megacolon, myasthenia gravis, and myocardial ischemia. This product is not recommended for use in children under twelve years of age.

**WARNINGS:** Heat prostration can occur with drug use in the event of high environmental temperature. Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy; in this instance, treatment would be inappropriate and possibly harmful. This product may cause drowsiness or blurred vision. Patients taking this product should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or to perform hazardous tasks while taking this drug.

**PRECAUTIONS:** Use caution in patients with hiatal hernia associated with reflex esophagitis. Use extreme caution and only when needed in patients with autonomic neuropathy, hyperthyroidism, coronary heart disease, congestive heart failure and cardiac arrhythmia. Investigate any tachycardia before giving any anticholinergic drugs since they may increase the heart rate.

Prolonged use of anticholinergics may decrease or inhibit salivary flow, thus contributing to the development of caries, periodontal disease, oral candidiasis, and discomfort.

**Information for Patients:** This medication should be taken 30 minutes to one hour before meals. Tablets should be swallowed whole.

This medication should be used with caution during exercise or hot weather; overheating may result in heat stroke.

Hyoscyamine may cause drowsiness, dizziness or blurred vision; patients should observe caution before driving, using machinery or performing other tasks requiring mental alertness.

**Drug Interactions:** Absorption of other oral medications may be decreased during concurrent use with anticholinergics due to decreased gastrointestinal motility and delayed gastric emptying.

Drug interactions may occur when anticholinergics are used with the following medications: antacids, antidiarrheals (adsorbent), other anticholinergics, antimyasthenics, cyclopropane, haloperidol, ketoconazole, metoclopramide, opioid (narcotic) analgesics, and potassium chloride.

**Pregnancy: Pregnancy Category C.**

Animal reproduction studies have not been conducted with this product. It is also not known whether this product can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Hyoscyamine crosses the placenta. This product should be given to a pregnant woman only if clearly needed.

**Nursing Mothers:** This product is excreted in human milk. This product should not be administered to a nursing mother.

**Pediatric Use:** This product is not recommended for use in children under twelve years of age. Infants and young children are especially susceptible to the toxic effects of anticholinergics. Close supervision is recommended for infants and children with spastic paralysis or brain damage since an increased response to anticholinergics has been reported in these patients and dosage adjustments are often required. When anticholinergics are given to children where the environmental temperature is high, there is a risk of a rapid increase in body temperature because of these medications' suppression of sweat gland activity. A paradoxical reaction characterized by hyperexcitability may occur in children taking large doses of anticholinergics.

**Geriatric Use:** Geriatric patients may respond to usual doses of anticholinergics with excitement, agitation, drowsiness, or confusion.

Geriatric patients are especially susceptible to the anticholinergic side effects, such as constipation, dryness of mouth, and urinary retention (especially in males). If these side effects occur and continue or are severe, medication should probably be discontinued.

Caution is also recommended when anticholinergics are given to geriatric patients, because of the danger of precipitating undiagnosed glaucoma.

Memory may become severely impaired in geriatric patients, especially those who already have memory problems, with the continued use of anticholinergics since these drugs block the actions of acetylcholine, which is responsible for many functions of the brain, including memory functions.

**ADVERSE REACTIONS:** Not all of the following adverse reactions have been reported with hyoscyamine sulfate. The following adverse reactions have been reported for pharmacologically similar drugs with anticholinergic-antispasmodic action. Adverse reactions may include dryness of the mouth, urinary hesitancy and retention; blurred vision; tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; allergic reactions or drug idiosyncrasies; urticaria and other dermal manifestations; ataxia; speech disturbance; some degree of mental confusion and/or excitement (especially in elderly persons); and decreased sweating.

**OVERDOSAGE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision,

dilated pupils, hot dry skin, dizziness, dryness of the mouth, difficulty in swallowing and CNS stimulation. Measures to be taken are immediate lavage of the stomach and injection of physostigmine 0.5 to 2 mg intravenously and repeated as necessary up to a total of 5 mg. Fever may be treated symptomatically (tepid water sponge baths, hypothermic blanket). Excitement to a degree which demands attention may be managed with sodium thiopental 2% solution given slowly intravenously or chloral hydrate (100-200 mL of a 2% solution) by rectal infusion. In the event of progression of the curare-like effect to paralysis of the respiratory muscles, artificial respiration should be instituted and maintained until effective respiratory action returns.

In rats, the LD<sub>50</sub> for hyoscyamine is 375 mg/kg. Hyoscyamine is dialyzable.

**DOSAGE AND ADMINISTRATION:**

**Adults and children 12 years of age and older:** 1 to 2 tablets every 12 hours. Dosage may be adjusted to 1 tablet every 8 hours if needed. Do not exceed 4 tablets in 24 hours.

Note: Geriatric patients may be more sensitive to the effects of the usual adult dose.

Tablets should be swallowed whole.

**HOW SUPPLIED:** Purple and white, bilayered, capsule-shaped tablets debossed "SYMAX" on one side, "DUOTAB" on the opposite side. Bottles of 90 tablets NDC 64543-118-90, and professional physician starter packages of 2 tablets NDC 64543-118-02.

Store at controlled room temperature, 20°-25°C (68°-77°F), see USP Controlled Room Temperature.

Dispense in tight, light-resistant containers as defined in the USP/NF.

**KEEP THIS AND ALL MEDICATION OUT OF THE REACH OF CHILDREN. IN CASE OF ACCIDENTAL OVERDOSE, SEEK PROFESSIONAL ASSISTANCE OR CONTACT A POISON CONTROL CENTER IMMEDIATELY.**

**Manufactured for: Capellon Pharmaceuticals, Ltd. Fort Worth, TX 76118**

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