Hydrocortisone (Systemic)
(hye droe KOR ti sone)

**Pharmacologic Category**: Alkylamine Derivative; Analgesic, Opioid; Antitussive; Histamine H$_1$ Antagonist; Histamine H$_2$ Antagonist, First Generation

**Use Cough**: Symptomatic relief of exhausting or non-productive cough associated with cold or upper respiratory allergies that does not respond to nonopioid antitussives

**Local Anesthetic/Vasoconstrictor Precautions**: No information available to require special precautions

**Effects on Dental Treatment**: No significant effects or complications reported

**Effects on Bleeding**: No information available to require special precautions

**Adverse Reactions**

### Antitussive effects
- **Respiratory**: Dyspnea, respiratory depression
- **Hypersensitivity**: Hypersensitivity reaction
- **Central nervous system**: Drowsiness, drug dependence, hallucination, seizure

**Mechanism of Action**
- Hydrocortisone binds to opiate receptors in the CNS, altering the perception of and response to pain; suppresses cough in medullary center; produces generalized CNS depression.
- Phenyltoloxamine competes with histamine for H$_1$-receptor sites on effector cells. May potentiate the antitussive effects of hydrocodone; sedative effects are also seen.

**Pharmacodynamics/Kinetics**

**Duration of Action**: Antitussive effects: ~28 hours

**Half-life Elimination**: Hydrocortisone: ~4 hours (Tussinex Pennkinetic US prescribing information 2008).

**Product Availability**
- **Tussinex**: Pennkinetic US contains hydrocortisone and phenyltoloxamine in the US. In Canada, Tussinex (Pennkinetic) contains hydrocortisone and chlorpheniramine.

**Controlled Substance**: CDSA I

### Hydrocortisone (Systemic)

**Brand Names**: US A-Hydrocort (DSC); Cortef; Solu-Cortef

**Brand Names**: Canada Cortef; Solu-Cortef

**Generic Availability (US)**: May be product dependent

**Pharmacologic Category**: Corticosteroid, Systemic

**Dental Use**: Treatment of a variety of oral diseases of allergic, inflammatory, or autoimmune origin

**Use Allergic states**: Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment in drug hypersensitivity reactions, perennial or seasonal allergic rhinitis, serum sickness, transfusion reactions, or acute noninfectious laryngeal edema (epinephrine is the drug of first choice).

**Dermatologic diseases**: Atopic dermatitis; bullous dermatitis herpetiformis; contact dermatitis; exfoliative dermatitis; exfoliative erythroderma; pemphigus; severe erythema multiforme (Stevens-Johnson syndrome); severe psoriasis; severe seborrheic dermatitis; mycosis fungoides.

**Emetogenic states**: To induce diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus.

**Endocrine disorders**: Acute adrenocortical insufficiency; congenital adrenal hyperplasia; hypercalcemia associated with cancer; nonsuppurative thyroiditis; primary or secondary adrenocortical insufficiency; preoperatively and in the event of serious trauma or illness, in patients with known adrenal insufficiency or when adrenocortical reserve is doubtful; shock unresponsive to conventional therapy if adrenocortical insufficiency exists or is suspected.

**GI diseases**: To tide the patient over a critical period of the disease in ulcerative colitis and regional enteritis.

**Hematologic disorders**: Acquired (autoimmune) hemolytic anemia; congenital (erythroid) hypoplastic anemia (Diamond Blackfan anemia); erythroblastopenia (RBC anemia); immune thrombocytopenia (formerly known as idiopathic thrombocytopenic purpura) in adults; pure red cell aplasia; select cases of secondary thrombocytopenia.

**Neoplastic diseases**: Palliative management of leukemia and lymphomas (adults); acute leukemia of childhood.

**Nervous system**: Acute exacerbations of multiple sclerosis; cerebral edema associated with primary or metastatic brain tumor, or craniotomy. **Note**: Treatment guidelines recommend the use of high-dose IV or oral methylprednisolone for acute exacerbations of multiple sclerosis (AAN [Scott 2011]; NICE 2014).

**Ophthalmic diseases**: Severe acute and chronic allergic and inflammatory processes involving the eye, such as allergic conjunctivitis; allergic corneal marginal ulcers; anterior segment inflammation; chorioretinitis; diffuse posterior uveitis and choroiditis; herpes zoster ophthalmicus; iritis and iridocyclitis; keratitis; optic neuritis; sympathetic ophthalmia; other ocular inflammatory conditions unresponsive to topical corticosteroids.

**Respiratory diseases**: Aspiration pneumonitis; bronchial asthma; berylliosis; fulminating or disseminated pulmonary tuberculosis when used concurrently with appropriate antituberculous chemotherapy; idiopathic eosinophilic pneumonias; Loeffler syndrome (not manageable by other means); symptomatic sarcoidosis.

**Rheumatic disorders**: As adjunctive therapy for short-term administration in acute and subacute bursitis, acute gouty arthritis, acute nonspecific tenosynovitis, ankylosing spondylitis, epidydymitis, posttraumatic osteoarthritis, psoriatic arthritis, rheumatoid arthritis, including juvenile rheumatoid arthritis, synovitis of osteoarthritis; during an exacerbation or as maintenance therapy in acute rheumatic carditis, dermatomyositis (polymyositis), temporal arteritis, and systemic lupus erythematosus.

**Miscellaneous**: Trichinosis with neurologic or myocardial involvement; tuberculous meningitis with subarachnoid block or impending block when used concurrently with appropriate antituberculous chemotherapy.