METHYLPHENIDATE tab/amp:

Class: Central Nervous System Stimulant
Indications: Treatment of attention-deficit/hyperactivity disorder (ADHD); symptomatic management of narcolepsy, treatment of depression in medically-ill older adults or adult patients with terminal illness and/or receiving palliative care

Available dosage form in the hospital:

Trade Names: 10MG TAB
10MG/AMP

Dosage:
-ADHD:
-Oral, immediate release (IR) products (tablets, chewable tablets, and solution): Initial: 5 mg twice daily, before breakfast and lunch; increase by 5-10 mg daily at weekly intervals; maximum dose: 60 mg daily (in 2-3 divided doses).

-Oral, extended release (ER), sustained release (SR) products (capsules, tablets, and oral suspension):
  -Concerta: (Adults <65 years):
    -Patients not currently taking methylphenidate: Initial: Note: Dosing based on current regimen and clinical judgment; suggested dosing listed below:
      - Patients taking IR methylphenidate 5 mg 2-3 times daily or (Canadian labeling; not in U.S. labeling) methylphenidate SR 20 mg daily: 18 mg once every morning
      - Patients taking IR methylphenidate 10 mg 2-3 times daily or (Canadian labeling; not in U.S. labeling) methylphenidate SR 40 mg daily: 36 mg once every morning
      - Patients taking IR methylphenidate 15 mg 2-3 times daily or (Canadian labeling; not in U.S. labeling) methylphenidate SR 60 mg daily: 54 mg once every morning
      - Patients taking IR methylphenidate 20 mg 2-3 times daily: 72 mg once every morning
    Dose adjustment: May increase dose in increments of 18 mg at weekly intervals. A dosage strength of 27 mg is available for situations in which a dosage between 18-36 mg is desired. Maximum dose: 72 mg daily.
  -Biphentin (Canadian product): Patients not currently taking methylphenidate: Initial: 10-20 mg once daily; may be adjusted in 10 mg increments at weekly intervals to a maximum dose of 80 mg daily.
  -Conversion from immediate release methylphenidate formulations to Biphentin: Use equivalent total daily dose administered once daily.
  -Metadate ER, Ritalin-SR: May be given in place of immediate release products (duration of action ~8 hours), once the immediate release formulation daily dose is titrated and the titrated 8-hour dosage corresponds to sustained or extended release tablet size; maximum: 60 mg daily
  -Metadate CD, Quillivant XR: Initial: 20 mg once daily; may be adjusted in 10-20 mg increments at weekly intervals; maximum: 60 mg daily
  -Ritalin LA: Initial: 20 mg once daily (10 mg once daily may be considered for some patients); may be adjusted in 10 mg increments at weekly intervals; maximum: 60 mg daily
  -Conversion from immediate release or sustained release methylphenidate formulation to Ritalin LA: Use equivalent total daily dose administered once daily.

-Narcolepsy: Oral:
-Immediate release tablets and solution (Methylin, Ritalin): Initial: 5 mg twice daily before breakfast and lunch; increase by 5-10 mg daily at weekly intervals; maximum dose: 60 mg daily (in 2-3 divided doses).

-Extended and sustained release tablets (Metadate ER, Ritalin-SR): May be given in place of immediate release products (duration of action ~8 hours), once the immediate release formulation daily
dose is titrated and the titrated 8-hour dosage corresponds to sustained or extended release tablet size; maximum: 60 mg daily.

- **Depression in medically-ill older adults or adult patients with terminal illness and/or receiving palliative care (unlabeled use):** Oral: Initial: **Immediate release:** 2.5-5 mg once daily before breakfast or twice daily before breakfast and lunch; increase by 2.5-5 mg daily every 1-3 days in divided doses before breakfast and lunch as tolerated; maximum dose: 20-40 mg daily (Hardy, 2009; Kerr 2012). Do not use sustained release product.

**Renal Impairment:**
- Oral: No dosage adjustment provided in manufacturer’s labeling (has not been studied); undergoes extensive metabolism to a renally eliminated metabolite with little or no pharmacologic activity.
- Transdermal: No dosage adjustment provided in manufacturer’s labeling (has not been studied).

**Hepatic Impairment:**
- Oral: No dosage adjustment provided in manufacturer’s labeling (has not been studied).
- Transdermal: No dosage adjustment provided in manufacturer’s labeling (has not been studied).

**Common side effect:**

**All dosage forms:**
Cardiovascular: Angina, cardiac arrhythmia, cerebral arteritis, cerebral hemorrhage, cerebral occlusion, cerebrovascular accidents, hyper-/hypotension, MI, murmur, palpitation, pulse increased/decreased, Raynaud’s phenomenon, tachycardia, vasculitis
Central nervous system: Motion sickness (children 2%), tic (children 2%), aggression, agitation, anger, anxiety, confusional state, depression, dizziness, drowsiness, emotional lability, fatigue, fever, headache, hypervigilance, insomnia, irritability, lethargy, nervousness, neuroleptic malignant syndrome (NMS) (rare), restlessless, stroke, tension, Tourette's syndrome (rare), toxic psychosis, tremor, vertigo
Dermatologic: Excoriation (children 4%), alopecia, erythema multiforme, exfoliative dermatitis, hyperhidrosis, rash, urticaria
Endocrine & metabolic: Dysmenorrhea, growth retardation, libido decreased
Gastrointestinal: Abdominal pain, anorexia, appetite decreased, bruxism, constipation, diarrhea, dyspepsia, nausea, vomiting, weight loss, xerostomia
Genitourinary: Erectile dysfunction
Hematologic: Anemia, leukopenia, pancytopenia, thrombocytopenia, thrombocytopenic purpura
Hepatic: Bilirubin increased, hepatic coma, liver function tests abnormal, transaminases increased
Neuromuscular & skeletal: Arthralgia, dyskinesia, muscle tightness, paresthesia
Ocular: Eye pain (children 2%), blurred vision, dry eyes, mydriasis, visual accommodation disturbance
Renal: Nocrotizing vasculitis
Respiratory: Cough increased, dyspnea, pharyngitis, pharyngolaryngeal pain, rhinitis, sinusitis, upper respiratory tract infection
Miscellaneous: Accidental injury, hypersensitivity reactions
Postmarketing and/or case reports (Limited to important or life-threatening): Alkaline phosphatase increased, bradycardia, disorientation, extrasystole, hallucinations; hypersensitivity reactions (eg, angioedema, anaphylactic reactions, auricular swelling, bullous conditions, exfoliative conditions, urticaria, pruritus, rash, eruptions, exanthemas); mania, migraine, obsessive-compulsive disorder, priapism, seizure, supraventricular tachycardia, ventricular extrasystole

**Transdermal system:**
Central nervous system: Headache (≤15%; long-term use in children: 28%), insomnia (6% to 13%; long-term use in children: 30%), irritability (7% to 11%)
Gastrointestinal: Appetite decreased (26%), nausea (10% to 12%)
Miscellaneous: Viral infection (long-term use in children: 28%)

**Pregnancy Risk Factor:** C