methocarbamol (meth-oh-kar-ba-mole)

- Antihistamine, Anticholinergic

**Classification**
- Skeletal muscle relaxants (centrally acting)

**Pregnancy Category C**

**Indications**

Adjunctive treatment of muscle spasm associated with acute painful musculoskeletal conditions (with rest and physical therapy).

**Action**

Skeletal muscle relaxation, probably as a result of CNS depression. Therapeutic Effects: Skeletal muscle relaxation.

**Pharmacokinetics**

**Absorption:** Rapidly absorbed from the GI tract.

**Distribution:** Widely distributed. Crosses the placenta; enters breast milk in small amounts.

**Metabolism and Excretion:** Metabolized by the liver.

**Half-life:** 1–2 hr.

**TIME/ACTION PROFILE (skeletal muscle relaxation)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>30 min</td>
<td>2 hr</td>
<td>unknown</td>
</tr>
<tr>
<td>IM</td>
<td>rapid</td>
<td>unknown</td>
<td>unknown</td>
</tr>
<tr>
<td>IV</td>
<td>immediate</td>
<td>end of infusion</td>
<td>unknown</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

Contraindicated in:
- Hypersensitivity
- Hypersensitivity to polyethylene glycol (parenteral form)
- Renal impairment (parenteral form)

Use Cautiously in:
- Seizure disorders (parenteral form)
- OB, Pedi: Lactation: Appears on Beers list. Poorly tolerated due to anticholinergic effects.
- Geri: Appears on Beers list. Poorly tolerated due to anticholinergic effects.

**Adverse Reactions/Side Effects**

**CNS:** SEIZURES (IV, IM only), dizziness, drowsiness, light-headedness. **EENT:** Blurred vision, nasal congestion. **CV:** Bradycardia, hypotension. **GI:** Anorexia, GI upset, nausea. **GU:** Brown, black, or green urine. **Derm:** Rash (with IV use only). **Misc:** Allergic reactions including ANAPHYLAXIS (IM, IV use only), fever.

**Interactions**

**Drug-Drug:** Additive CNS depression with other CNS depressants, including alcohol, antihistamines, opioid analgesics, and sedative/hypnotics.

**Drug-Natural Products:** Concomitant use of kava-kava, valerian, chamomile, or hops can cause CNS depression.

**Route/Dosage**

**PO (Adults):** 1.5 g 4 times daily initially (up to 8 g/day) for 2–3 days, then 4–6.5 g/day in 3–5 divided doses, may be followed by maintenance dosing of 750 mg q 4 hr or 1 g q 8 hr or 1.5 g 3 times daily.

**IM, IV (Adults):** 1–3 g/day for not more than 3 days, course may be repeated after a 48-hr rest.

**NURSING IMPLICATIONS**

**Assessment**

- Assess patient for pain, muscle stiffness, and range of motion before and periodically throughout therapy.
- Monitor pulse and BP every 15 min during parenteral administration.

**Geri:** Assess geriatric patients for anticholinergic effects (sedation and weakness).

**Interventions**

- Assess patient for allergic reactions (skin rash, asthma, hives, wheezing, hypertension) after parenteral administration. Keep epinephrine and oxygen on hand in the event of a reaction.

**Lab Test Considerations:** Monitor renal function periodically during prolonged parenteral therapy (>3 days). BUN and creatinine >5 times normal. Serum potassium levels should also be monitored.

- May cause falsely increased urinary 5-hydroxyindoleacetic acid (5-HIAA) and vanilmandelic acid (VMA) determinations.
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Potential Nursing Diagnoses
Acute pain (Indications)
Impaired physical mobility (Indications)
Risk for injury (Side Effects)

Implementation
● Provide safety measures as indicated. Supervise ambulation and transfer of patient.
● PO: May be administered with food to minimize GI irritation. Tablets may be crushed and mixed with food or liquids to facilitate swallowing. For administration via NG tube, crush tablet and suspend in water or saline.
● IM: Do not administer subcut. IM injections should contain no more than 5 mL (500 mg) at a time in the gluteal region.

IV Administration
● Direct IV: Administer undiluted. Concentration: 100 mg/mL. Rate: Administer at a maximum rate of 180 mg/m2/min but not > 5 mL (500 mg)/min.
● Intermittent Infusion: Dilute each dose in no more than 250 mL of 0.9% NaCl or D5W for injection. Concentration: 4 mg/mL for slower infusions. Do not refrigerate after dilution.
● Have patient remain recumbent during and for at least 10–15 min after infusion to avoid orthostatic hypotension.

Patient/Family Teaching
● Advise patient to take medication as directed. Take missed doses within 1 hr; if not, return to regular dosing schedule. Do not double doses.
● Encourage patient to comply with additional therapies prescribed for muscle spasm (rest, physical therapy, heat).
● May cause dizziness, drowsiness, and blurred vision. Advise patient to avoid driving and other activities requiring alertness until response to drug is known.
● Instruct patient to change position slowly to minimize orthostatic hypotension.
● Advise patient to avoid concurrent use of alcohol and other CNS depressants.
● Inform patient that urine may turn black, brown, or green, especially if left standing.
● Instruct patient to notify health care professional if skin rash, itching, fever, or nasal congestion occurs.
● Emphasize the importance of routine follow-up exams to monitor progress.

Evaluation/Desired Outcomes
● Decreased musculoskeletal pain and muscle spasticity.
● Increased range of motion.

Why was this drug prescribed for your patient?