Carisoprodol (kar-i-sop-ro-dole)

**Classification**
Therapeutic: Skeletal muscle relaxant (centrally acting)

**Schedule IV**

**Pregnancy Category C**

**Indications**
Adjunct to rest and physical therapy in the treatment of muscle spasm associated with acute painful musculoskeletal conditions.

**Action**
Skeletal muscle relaxation, probably due to CNS depression.

**Pharmacokinetics**

**Absorption:** Well absorbed after oral administration.

**Distribution:** Crosses the placenta; high concentrations in breast milk.

**Metabolism and Excretion:** Mostly metabolized by the liver via CYP2C19 to meprobamate; 2% of Whites, 4% of Blacks, and 14% of Asians have CYP2C19 genotype that results in reduced metabolism of carisoprodol (poor metabolizers) into its active metabolite (may result in sedation).

**Half-life:** 8 hr.

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

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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</thead>
<tbody>
<tr>
<td>PO</td>
<td>30 min</td>
<td>4–6 hr</td>
<td>4–6 hr</td>
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</table>

**Contraindications/Precautions**

- Hypersensitivity to carisoprodol or to meprobamate; Porphyria or suspected porphyria.

- Use cautiously in severe liver or kidney disease; OB, Lactation, Pedi: Safety not established for pregnant women, breast-feeding infants, or children <16 yr; Geri: Poorly tolerated due to anticholinergic effects. Appears on Beers list.

**Adverse Reactions/Side Effects**

- **CNS:** Dizziness, drowsiness, agitation, ataxia, depression, headache, insomnia, irritability, tremor, twitching, seizures
- **Resp:** Asthma attacks
- **CV:** Hypotension, tachycardia
- **GI:** Epigastric distress, hiccups, nausea, vomiting
- **Derm:** Flushing, rashes
- **Hemat:** Eosinophilia, leukopenia
- **Misc:** Anaphylactic shock, fever, psychological dependence, severe idiosyncratic reaction.

**Interactions**

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

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

**Route/Dosage**

- **PO (Adults >16 yrs):** 250–350 mg 4 times daily for no longer than 2–3 wk.

**Nursing Implications**

**Assessment**
- Assess patient for pain, muscle stiffness, and range of motion before and periodically throughout therapy.
- Observe patient for idiosyncratic symptoms that may appear within minutes or hours of administration during the first dose. Symptoms include extreme weakness, quadriplegia, dizziness, ataxia, disorientation, visual disturbances, agitation, euphoria, confusion, and disorientation. Usually subsides over several hours.
- Geri: Assess geriatric patients for anticholinergic effects (sedation and weakness).

**Potential Nursing Diagnoses**
- Acute pain (Indications)
- Impaired mobility (Indications)
- Risk for injury (Side Effects)

**Implementation**
- Should be used ONLY for acute treatment periods of no more than 2–3 wk.
- Provide safety measures as indicated. Supervise ambulation and transfer of patients.
- **PO:** Administer with food to minimize GI irritation. Give dose at bedtime.
Patient/Family Teaching

- Instruct patient to take medication as directed. Missed doses should be taken within 1 hr; if not, omit and return to regular dosing schedule. Do not double doses.
- Instruct patient that use is limited to acute relief of musculoskeletal discomfort of 2–3 wks. Prolonged use may lead to dependence, withdrawal, and abuse. Encourage patient to comply with additional therapies prescribed for muscle spasm (rest, physical therapy, heat, etc). If musculoskeletal discomfort persists consult health care professional for further evaluation.
- May cause dizziness or drowsiness. Advise patient to avoid driving or other activities requiring alertness until response to drug is known.
- Instruct patient to change positions slowly to minimize orthostatic hypotension.
- Advise patient to avoid concurrent use of alcohol and other CNS depressants while taking this medication.
- Instruct patient to notify health care professional if signs of allergy (rash, hives, swelling of tongue or lips, dyspnea) or idiosyncratic reaction occur.

Evaluation/Desired Outcomes

- Decreased musculoskeletal pain and muscle spasticity.
- Increased range of motion.

Why was this drug prescribed for your patient?