ethosuximide (eth-oh-sux-i-mide)
Zarontin

**Classification**
Therapeutic: anticonvulsants
Pregnancy Category UK

**Indications**
Absence seizures (petit mal).

**Action**

**Pharmacokinetics**
Absorption: Rapidly and completely absorbed from the GI tract following oral administration.
Distribution: Freely distributed throughout body water.
Metabolism and Excretion: Mostly metabolized by the liver. 10% excreted unchanged by the kidneys.
Half-life: 50–60 hr (adults); 30 hr (children).

**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; Pedi: Children <3 yr (safety not established).
Use Cautiously in: All patients (may risk of suicidal thoughts/behaviors), Hepatic or renal disease; Mixed seizure disorders (may risk of grand mal seizures); Bone marrow suppression; OB, Lactation: Safety not established.

**Adverse Reactions/Side Effects**

**Interactions**
Drug-Drug: Seizure threshold may be lowered by phenothiazines, antidepressants, or MAO inhibitors. Idiosyncratic CNS depression with other CNS depressants, including alcohol, barbiturates, antihistamines, opioid analgesics, and sedative/hypnotics. May ↑ phenytoin levels. May ↓ phenobarbital or primidone levels. May ↑ acetylcholine levels. Methotrexate levels may be ↑ or ↓ by valproic acid.
Drug-Natural Products: See sedative interactions. St. John's wort may affect ethosuximide levels and effectiveness; avoid use. Concomitant use of kava, valerian, skullsce, chamomile, or hops can ↑ CNS depression.

**Route/Dosage**
PO (Adults and Children ≥6 yr): 250 mg bid initially; may ↑ by 250 mg/day every 4–7 days until control achieved (usual maintenance dose: 20–40 mg/kg/day in 2 divided doses).
PO (Children 3–6 yr): 250 mg once daily initially; may ↑ by 250 mg/day every 4–7 days until control achieved (optimal dose for most children is 20 mg/kg/day in 2 divided doses).

**NURSING IMPLICATIONS**
Assessment
● Assess location, duration, frequency, and characteristics of seizure activity.
● Assess patient's mood, behavioral patterns, and facial expressions. Patients with a history of psychiatric disorders have an increased risk of developing behavioral changes. These symptoms may necessitate withdrawal of the medication.
● Monitor closely for changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression.
● Assess for rash periodically during therapy. May cause Stevens-Johnson syndrome. Discontinue therapy if severe or if accompanied with fever, general malaise, fatigue, muscle or joint aches, blisters, oral lesions, conjunctivitis, hepatitis and/or eosinophilia.

**Laboratory Considerations**
Monitor CBC, hepatic function tests, and urinalysis routinely during prolonged therapy.
Toxicity and Overdose: Therapeutic serum ethosuximide levels range from 40–100 mcg/mL.

Potential Nursing Diagnoses
- Risk for injury (Indications) (Side Effects)
- Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation
- PO: Measure liquid preparations with calibrated measuring device.
- Administer with food or milk to minimize GI irritation.

Patient/Family Teaching
- Instruct patient to take medication as directed. If dose is missed, take as soon as remembered within 4 hr, then continue on same schedule. Do not double doses. Do not discontinue medication without advice of health care professional. Sudden withdrawal may precipitate seizures. Instruct patient to read Medication Guide before starting and with each Rx refill; changes may occur.
- Advise patient to avoid driving or other activities requiring alertness until response to medication is known. Do not resume driving until physician gives clearance based on control of seizures observed.
- Advise patient to avoid alcohol while taking this medication.
- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Instruct patient to notify health care professional if skin rash, joint pain, sore throat, fever, unusual bleeding or bruising, swollen glands, or pink/brown urine occurs. Advise patient and family to notify health care professional if thoughts about suicide or dying, attempts to commit suicide; new or worse depression; new or worse anxiety; feeling very agitated or restless; panic attacks; trouble sleeping; new or worse irritability; acting aggressive, being angry or violent; acting on dangerous impulses; an extreme increase in activity and talking, other unusual changes in behavior or mood occur.
- Advise patient to notify health care professional if pregnancy is planned or suspected.

Evaluation/Desired Outcomes
- Decrease or cessation of seizure activity without excessive sedation.