

A large, white, serif 'RX' logo is centered within a dark gray square.

**Drug Name: Ondansetron HCL**

**Trade Name: Zofran, Zofran ODT**

**Class:**

Anti-emetic, Selective Serotonin (5HT<sub>3</sub>) Receptor Antagonist

**Mechanism of Action:**

Ondansetron reduces the activity of the vagus nerve, which activates the vomiting center in the medulla oblongata, and also blocks serotonin receptors in the chemoreceptor trigger zone. It has little effect on vomiting caused by motion sickness,

**Indications:**

Moderate to severe Nausea, Vomiting

**Contraindications:**

- Hypersensitivity to the drug.
- Prolonged QT syndrome
- Concurrent use of Apomorphine (Apokyn), an anti-parkinsonian drug.

**Precautions:**

- Not well studied in children less than 2 years of age
- Use with caution with patients concurrently using drugs which effect QT interval (i.e. Procainamide, Amiodarone, TCA's, Haldol)
- Use with caution with hepatic impairment (consider prolonging dosage intervals or decreasing dose)

**Dosage:**

**Adults:**

- IV/IO/IM- 4 mg, repeated once in 15 minutes PRN
- ODT: **(Not carried currently by ACP)**
  - 8 mg PO once

**Pediatrics: (>2 years of age)**

- IV/IO/IM- 0.1 mg/kg IV/IO, MAX of 4 mg/Dose.
- **Contact medical control to repeat.**
- ODT: **(Not carried currently by ACP)**
  - 8-15 kg: 2 mg PO once
  - 15-30 kg: 4 mg PO once
  - >30 kg: 8 mg PO once

**Duration:**

- 2-4 hours

**Side Effects:**

- Sedation
- Hypotension
- Tachycardia
- Angina
- EPS (Rare)
- Torsades de Pointes (rare)
- Constipation

**Interactions:**

**Additive effects with medications that prolong Q-T interval.**  
Additive CNS depressant effects

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### **PEARLS:**

- **Pregnancy Class B** - Usually safe but benefits must outweigh the risks. Ondansetron showed no benefit over the antiemetic Promethazine (Phenergan) (Pregnancy Class C) for Hyperemesis Gravidarum (HEG) in a double blinded randomized study. It may be used for cases refractory to other treatments/drugs..
- The rate of IV administration should not be less than 30 seconds and preferably over 2-5 minutes.
- Oral Dissolvable Tablets (Zofran ODT) are increasingly being used in the ED, clinic and pre-hospital settings, especially in pediatrics. Providers should be familiar with this route as well.
- A large, prospective, randomized, double-blind trial compared a single dose of an orally disintegrating Ondansetron tablet to placebo in children presenting to an emergency department with acute gastroenteritis. The study found that children treated with Ondansetron were less likely to vomit, had greater oral intake, were less likely to require intravenous rehydration, and had a reduced length of stay in the emergency department compared with children treated with placebo.
- Avoid use with Apomorphine (Apokyn, Uprima). Apokyn is used to treat Parkinson's disorders, and Uprima is used to treat erectile dysfunction. This is important to note because both of these compositions may promote nausea in some patients.

**Do not use Zofran concurrently with Procainamide, Haldol, or Amiodarone due to QT prolongation.**