
AUTHORIZED BY: CPC Quality of Care Committee
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CATEGORY: ACP/PCP Medications
TITLE: **ONDANSETRON**

REVISION DATE:
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- Other Names:**
- *Zofran*
- Classifications:**
- Antiemetic (5-HT₃ Receptor Antagonist)
- Pharmacodynamics:**
- Ondansetron is a selective 5-HT₃-receptor antagonist which blocks serotonin, both peripherally on vagal nerve terminals and centrally in the chemoreceptor trigger zone.
- Blocking 5-HT₃ receptors has some effect in blocking nausea and vomiting (due to stimulation of the vagus nerve) but not particularly motion sickness. The most common side effects are headache & vertigo. Sedation is very rare.
- Ondansetron can pass the placental barrier and is excreted in breast milk, therefore exercise caution when considering treatment for nausea and vomiting for a pregnant patient. Ondansetron should only be considered when hyperemesis is present, not just nausea and/or vomiting. Also consider that DimemHYDRINATE may be a more appropriate choice for these patients. Overdose or synergy with the serotonin inhibitors can cause serotonin syndrome (toxicity).
- Onset:**
- PO : Rapid ~30 minutes
- Peak:**
- PO : ~30 minutes - 2 hours
- Duration:**
- 4-8 hours
 - The half-life of Ondansetron PO ~ 5 Hours
- Indications:**
- Nausea and/or vomiting
 - Patient aged ≥18 may be registered in palliative care program
- Contraindications:**
- Allergy to Ondansetron
 - Prolonged QT syndrome (known to patient) which can lead to torsades de pointes
 - Apomorphine use
- Precautions:**
- Ondansetron is not recommended for use during pregnancy
 - Avoid use of ondansetron in patients with congenital long QT syndrome. Use with caution in patients with other risk factors for QT interval prolongation such as electrolyte disturbances (hypokalemia, hypomagnesemia, hypocalcemia), congestive heart failure, bradyarrhythmias or taking other drugs that can lead to either QT interval prolongation or electrolyte disturbances.
 - Increases large bowel transit time
- Adverse Reactions:**
- Tachycardia
 - Bradycardia
 - Chest Pain
 - Seizures
 - Serotonin Syndrome

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- Drug Interaction:**
- Apomorphine
 - Carbamazepine,
 - Phenytoin,
 - Rifampicin
 - QTc-Prolonging Drugs
 - Antipsychotics
 - Antidepressants
 - Antibiotics or antifungals
 - Opioid analgesics (painkillers)
 - Other drugs to treat nausea and vomiting
 - Asthma drugs
 - Cancer drugs
 - Diuretics
 - Other drugs that affect serotonin including SSRIs, SNRIs, triptans, MAOIs (including the antibiotic linezolid and methylene blue), drugs that contain tryptophan, or St. John's Wort.
- Clinical & Special Considerations:**
- The tablet is placed on the patients tongue and disintegrates within seconds. The patient is then instructed to swallow several times as the tablet rapidly dissolves.
- Image & Preparations:** 4mg PO
- References:**
- The Ottawa Hospital Parental Drug Therapy Manual
 - Lexicomp 2020 <http://online.lexi.com>
 - Compendium of Pharmaceuticals and Specialties 2022(CPS)
 - Special Project Palliative Care Medical Directive
 - <https://www.e-therapeutics.ca/search>
 - <https://www.pharmacists.ca/rxtx/en/contact-us/>
 - <https://reference.medscape.com/drug/zofran-zuplenz-ondansetron-342052>

NOTE: The information contained herein does not supersede or negate the MoHLTC Provincial Advanced Life Support Patient Care Standards and should only serve as general information about the medication itself. For medication dosages, please refer to the current version of the Ontario Provincial ALS Patient Care Standards.