3. Proton Pump Inhibitor (PPI) q 24 h at bedtime
2. H2 antagonist BID:
1. Calcium antacid (avoid Aluminum, Bismuth or Bicarbonate)
2.  

1. Bowel Care: Daily stool softener, magnesium (citrate, (prescribe on a strict schedule, NOT prn):
Add DAILY bowel care + serotonin antagonists (5-HT3)

Consider NUTRITION (see box on right) + FLUIDS + 1+ of the following:
1. Mirtazapine 15 mg q 8 h PO or ODT (d/c other 5HT-3)
2. Methylprednisolone (if 9+ weeks) 16 mg q 8 h PO or IV for 3 days. Taper over 2 weeks. Maintain on lowest effective dose if needed. Avoid administration exceeding 6 weeks.
3. Chlorpromazine 25–50 mg IV or 10–25 mg PO q 4-6 h
4. Olanzapine 5 mg PO q 6-8 h
5. Gabapentin 300-800 mg PO q 8 h

NAUSEA/VOMITING OF PREGNANCY ALGORITHM

(HELP Score <20)
1. B6/Pyridoxine 10–25 mg PO with or without Doxylamine 10-25 mg q 6-8 h
   (Either separately or as delayed release combination)
2. Thiamin/Benfotiamine 100 mg PO 1-3 times per day (250 mg daily PO minimum after 20 weeks)
3. Continue prenatal vitamin if tolerated or change to single vitamins (B1, B9, D with K, Ca, Mg).
4. Add gastric/esophageal protection at bedtime with onset of vomiting or poor intake. (See shaded box below.)

NO DEHYDRATION?

Add up to 1 from each class:
1. Antihistamine (discontinue doxylamine)
   • Dimenhydrinate 25-50 mg q 4–6 h PO or PR (limit to 200 mg per day if taking doxylamine)
   • Diphenhydramine 25–50 mg PO q 4–6 h
   • Meclizine or Cyclizine 25 mg PO q 6-8 h
2. Dopamine Antagonist (Use only 1 at a time or alternate.)
   • Metoclopramide 2.5-10 mg q 6-8 h PO or ODT
   • Promethazine 25 mg q 4-6 h PO or PR (avoid IM/IV)
   • Prochlorperazine 5-10 mg q 6-8 h PO or 25 mg PR q 12 h
   • Domperidone 10-20 mg PO q 6-8 h

IV fluids and dilute vitamins; infuse slowly:
1. NS or LR + MVI + B1 + B6 + B Complex (w/B2, B3, B9)  
   • Add prn: KCl, Na, vit D, Zn, Se, Fe, Mg & Ca
   • Always give 200 mg B1 IV w/dextrose (prevent WE).
   • Slowly replace low/marginal electrolytes (prevent ODS).
   • Consider restricted PO intake for 24-72 h (gut rest).
   • Consider midline or central line for frequent IVs.
2. Always include Thiamin/B1 100-500 mg IV q 8 h daily.
3. Choose MVI containing vitamin K or add vitamin K prn.

YES (HELP Score ≥32)  

If oral meds ineffective or not tolerated, change to 1 OF THE FOLLOWING with daily Bowel Care (see box on left):
1. Ondansetron:
   • IV: 4-8 mg over 15 minutes q 3-6 h (up to 32 mg) or continuous infusion
   • Subcutaneous (SubQ) continuous infusion: 8 mg starting dose, then 12-40 mg/day; wean slowly to PO if stable
2. Granisetron 1mg q 12 h IV or continuous infusion or TD
If symptoms continue, add one or both of these meds:
1. Dimenhydrinate or Diphenhydramine 25-50 mg q 4–6 h IV
2. Metoclopramide:
   • IV: 2.5–10 mg q 8 h SLOW infusion
   • SubQ continuous infusion: 2.5-10 mg loading dose, then up to 60 mg/day

* Wean IV/SubQ to PO very slowly when stable, then monitor for at least 24 hours before discharge to home.
* Consider enoxaparin for DVT prophylaxis

NUTRITION - If weight loss ≥7% and/or persistent HG:
1. Consult with GI & Nutrition & IV access team.
2. Prevent Refeeding Syndrome: Very slowly restart nutrition & closely monitor weight, cardiac rhythm and electrolytes (especially phosphate) for 1+ week.
3. Consider EN/PN until gaining weight on PO intake.
   • Enteral nutrition: Gradually increase infusion (after resting GI tract) with or without additional parenteral/enteral fluids. (NJ or G/J-tube preferred). Insert SMALL bore nasal tube under sedation. Often poorly tolerated.
   • Parenteral nutrition (partial peripheral or total central)

GERD or gastric/esophageal protection options:
1. Calcium antacid (avoid Aluminum, Bismuth or Bicarbonate)
2. H2 antagonist BID: famotidine 20-40 mg PO/IV
3. Proton Pump Inhibitor (PPI) q 24 h at bedtime
   • Esomeprazole or pantoprazole 40 mg PO or IV q HS
   • Lansoprazole 15-30 mg PO or ODT q HS

IMPORTANT NOTES:
1. If symptoms persist, follow arrows to next level of care and consider non-oral forms of medications such as compounded, transdermal, IV, or SubQ. ALWAYS wean medications very slowly.
2. After IV therapy, use non-oral options or move slowly to oral medications as tolerated.
3. Most medications can cause QT prolongation, consider EKG or cardiac monitoring for high risk patients, high doses of medications, multiple medications, or electrolyte & vit B1 abnormalities.
4. Intramuscular injections (IM) not recommended due to muscle atrophy and pain sensitivity.
5. Dehydration and nutrient (e.g. electrolytes, B1) deficiencies decrease treatment response.
6. Start prophylactic anticoagulation for DVT if prolonged immobility/hospitalization over 72 hours.
7. Weaning too early or rapidly may result in worsening or refractory symptoms.
8. See less common medications on the HER Foundation website: www.hyperemesis.org/meds.

Disclaimer: This is not medical advice. Do not change your diet, treatment or lifestyle without consultation from your doctor.

© July 2019 HER Foundation. All Rights Reserved.
www.hyperemesis.org/tools
Email: info@hyperemesis.org
Hyperemesis Gravidarum (HG) is diagnosed when a patient has nausea and vomiting that requires medication and/or intravenous therapy due to severe nausea and/or vomiting with poor intake, possible weight loss, and debility. Failure to adequately treat may result in refractory and prolonged symptoms, along with serious complications for both mother and child. HG is caused in part to genes (e.g. GDF15) that reduce appetite, alter taste, and cause nausea, vomiting and muscle wasting. Additionally, infections, stress, and nutrient deficiencies (e.g. B1, Mg, and K+) worsen symptoms and may increase GDF15 hormone levels. (hyperemesis.org/research/#cause)

**WE = Wernicke's encephalopathy**

**UTI = Urinary Tract Infection**

**UOP = urine output**

Delta = Change

GERD = gastroesophageal reflux disease

GI = gastrointestinal

IM = Intramuscular

IV = Intravenous

LR = Lactated Ringers

MFM = Maternal-Fetal Medicine

ODS = Osmotic Demyelination Syndrome - includes CPM = Central Pontine Myelinolysis

PMAD = Perinatal Mood/Anxiety Disorder

HELP = HyperEmesis Level Prediction Score

PO = Per oral

PTSD = Post Traumatic Stress Disorder

SubQ = Subcutaneous

UO = urine output

UTI = Urinary Tract Infection

WE = Wernicke's encephalopathy

© July 2019 HER Foundation. All Rights Re-