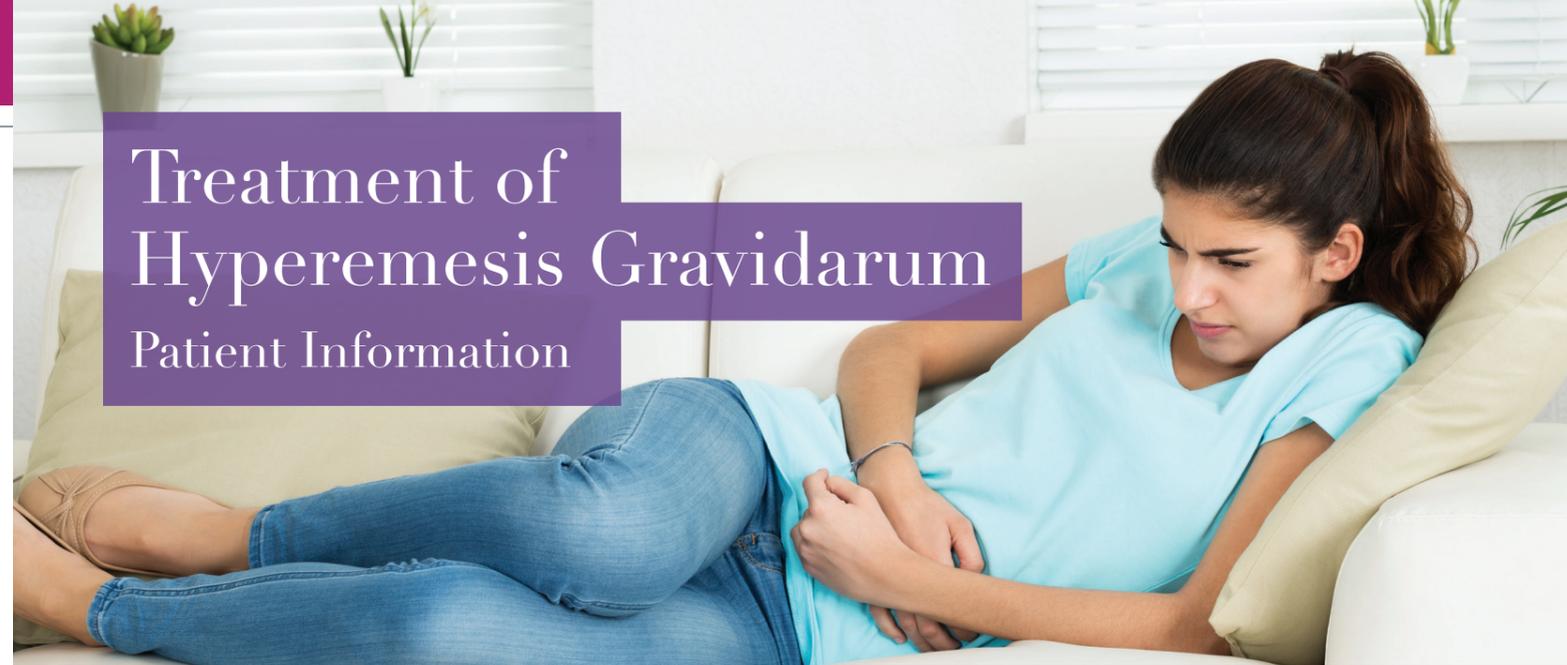


Treatment of Hyperemesis Gravidarum

Patient Information



How do I get the most from my medications?

1. Avoid changing medications abruptly or frequently.
2. Ask about increasing the dose or frequency, or changing to non-oral medications and in different combinations.
3. Try taking medications on a strict schedule.
4. Request laboratory testing to make sure you get nutrition and electrolytes.
5. Discuss how to prevent possible side-effects of HG and treatment.
6. If you have a history of HG, make sure you have a plan and a doctor ready to treat you early in pregnancy.
7. After you are feeling better for a few weeks, ask about slowly going off the medications.
8. Prepare to take medication beyond 12 weeks, maybe until delivery.
9. Share your needs and changes in your symptoms with your care team.
10. HG can be traumatic so get lots of support and do whatever you need to survive these months of being sick.

Do I need vitamins?

Vitamins are very important for you and baby! If you can take a prenatal with at least 10 mg of thiamin (vitamin B1), that is great. Sometimes switching to a prenatal without iron is more tolerable. If needed, take single vitamins like calcium, magnesium, thiamin (B1), folate, vitamin D, etc.

Discuss the information on thiamin (B1) from HER's website with your doctor (/tools) if you are unable to eat much for more than 2 weeks. Request IV vitamins in any IV fluids you receive. Sometimes diluting them in more fluid makes them easier to tolerate. www.hyperemesis.org/tools

We recommend daily thiamin throughout pregnancy and while breastfeeding to protect you and your baby(ies). If you have HG, taking 100 mg per day at least is very important, more if you are eating a lot of sugar or carbohydrates. Know the common signs of thiamin deficiency and ask for IV thiamin if you have any of these.

- Blurry or changes in vision
- Increased or decreased heart rate
- Muscle weakness
- Worsening nausea/vomiting
- Memory loss or confusion
- Nerve pain or tingling
- Pain in abdomen or head

What do I do if I cannot eat?

If you are unable to eat and drink and lose about 10% of your body weight, a consult with nutrition should be considered. There are options for intravenous nutritional therapy as well as feeding tubes that can be placed through your nose or your abdomen. Without nutrition and weight gain by mid-pregnancy, serious complications can develop that endanger both mother and child. www.hyperemesis.org/malnutrition

Do IV fluids help?

Intravenous fluids not only help keep you hydrated, but also help medications work correctly. When you get an IV, it's a great time to also get a multivitamin and B complex, as well as electrolytes if needed. Getting IV fluids on a schedule several days a week as needed can be very helpful. Ask about an IV catheter that can remain in for a few weeks or a few months. See the



Patient HG Protocol for more details.

Comfort Measures

HG is miserable, so ask about the following if you feel they would be of help to you.

- Private room to avoid triggers
- Avoid IM injections because of muscle loss
- Warmed IV fluids/blankets
- Lidocaine or numbing agent before IVs
- Request preferred foods when least ill

Resources from HER:

The HER Foundation website has many resources to help you get the care and support you need. www.hyperemesis.org More detailed info on these topics is available on the HER Foundation site. You can also download brochures to read and share, share our assessment and treatment tools with your health care team, read about our free iOS HG Care App, and learn many ways to cope with HG.

What is HG?

Hyperemesis Gravidarum (HG) is a potentially life-threatening pregnancy disease that may cause weight loss, malnutrition, dehydration, and inability to function due to severe nausea and/or vomiting. Without adequate treatment, HG may cause pregnancy complications and long-term health issues for mother and baby(ies).

Do I have HG?

Morning Sickness	Hyperemesis Gravidarum
You lose little if any weight.	You lose 5-20 pounds or more. (> 5% of prepregnancy weight).
Nausea and vomiting rarely interfere with your ability to eat or drink enough each day.	Nausea and vomiting cause you to eat very little and get dehydrated if not treated.
You vomit infrequently and the nausea is episodic but not severe. You have significant discomfort and misery.	You vomit, or feel the need to, often and may vomit bile or blood if not treated. Nausea is usually moderate to severe and constant.
Traditional remedies like diet or lifestyle changes are enough to help you feel better most of the time.	You will probably require fluid hydration through an IV and/or medications to ease your symptoms.
You typically improve after the first trimester, but may be queasy at times throughout pregnancy.	You usually feel some relief by mid-pregnancy, but may be nauseous and/or vomit until late pregnancy.
You will be able to work most days and care for your family, though less than usual at times.	You will likely be unable to work for weeks or months, and may need help just caring for yourself.
You may feel a bit depressed at times, especially if you have more severe nausea, but are able to be your usual self most of the time. You will likely forget most of the unpleasantness after delivery.	You may feel anxious about what lies ahead if you had HG before. You will likely become depressed due to misery and physical depletion. More severe HG often is traumatic and may impact you for years to come.

Go to HYPEREMESIS.ORG to access these resources:

- /tools - treatment and assessment resources
- /support - support groups

/info - brochures

- /research - research articles and opportunities
- /help - referrals and direct support

What causes HG?

HG is caused by multiple factors, some are still being discovered. Our research finds some genes are responsible for the symptoms of HG including nausea, lack of appetite, muscle loss, and aversions to food. Being dehydrated, malnourished, stressed, and having

The Genes Have Spoken: not in her **HEAD** but in her **GENES** infections all worsen symptoms and put you at risk for additional complications.

When to call for help

It can be difficult to communicate to your healthcare professional how sick you are. We have many resources to understand how sick you are on our site. Use our HG tools and iOS HG Care app to document your symptoms and share with your medical team. Also take copies of our treatment protocols and algorithm to appointments and hospital visits to discuss.

Warning! Call your health provider if you experience these:

- › Fainting/dizziness
- › Blood in your vomit
- › Very little urine all day
- › Severe pain in abdomen or head
- › Weight changes 3+ lbs/1.5 kg in 1 week

Or you have a change in your ability to:

Walk Talk See
Think Breathe Cope

HG MEDICATION OPTIONS

- 1) Maximize dose. 2) Try non-oral meds.
- 3) Add nutrition/fluids before severe. 4) Prevent side-effects.
- 5) Stop meds ineffective or not tolerated.

1st Line	Antihistamine: Doxylamine or Meclizine + vitamins B6 and B1: 10-100 mg	Add Acid Reducer or PPI: Famotidine or Esomeprazole or Lansoprazole	Add Dopamine Antagonist: promethazine or metoclopramide
2nd Line	Add Serotonin Antagonist: ondansetron or granisetron with a daily bowel regimen	Add Steroid (9+ wks): Prednisone; Fluids/Nutrition: IV vitamins/nutrition, Jejunal feedings	 HER Foundation <small>NOT MEDICAL ADVICE. CONSULT YOUR PROVIDER.</small>

What do I do if I can't keep my medication down?

Did you know you don't always have to swallow a pill? If you can't keep your medication(s) down, tell your provider. You have options.

Medication options:



What to know about medications:

- › Symptom relief will not be 100%.
- › May need non-oral medications.
- › Medications don't target nausea.
- › Dose changes are common.
- › Don't discontinue abruptly.
- › Taking multiple medications is typical.
- › Medications may be needed until delivery.
- › Medication risks are similar for higher doses.
- › You do not need to take lower doses because you are pregnant.

Are Medications Safe?

Medications given for nausea and vomiting in pregnancy are generally considered low risk. The potential for complications and harm to the baby from nausea and vomiting are often greater than any possible small risk from medications. See the HER Foundation website for ondansetron safety information. www.hyperemesis.org/zofran

Common Medications

See www.hyperemesis.org/meds for detailed info.

Medications are commonly given in this order, however, this does not represent the order that is most effective. The most effective medications are IV fluids and serotonin antagonists.

For women with a history of nausea and vomiting during pregnancy (NVP), start treatment when symptoms begin and use what worked in a previous pregnancy.

Class	Common Medications (Generic)	Main symptoms targeted	Main side-effects	Notes
Antihistamines	Meclizine/Meclizine Diphenhydramine Dimenhydrinate Doxylamine	Nausea, motion sickness, insomnia	Sleepiness, dry mouth	May be more effective with other medications like serotonin meds.
Anti-reflux/Anti-acid	Famotidine Lansoprazole Esomeprazole	Acid reflux, nausea	Headache, dizziness, diarrhea, constipation	Acid reducers and acid blockers (PPIs) available.
Dopamine antagonists	Promethazine Prochlorperazine Metoclopramide	Nausea, vomiting	Sleepiness, anxiety, movement disorders (TD)*	Avoid IV promethazine. Give IV metoclopramide SLOW. Ask about ODT and suppositories.
Serotonin antagonists	Ondansetron Granisetron Dolasetron	Vomiting	Headache, severe constipation**	Give a stool softener daily and laxative as needed.
Steroids	Prednisolone Prednisone Solu-Medrol	Nausea, vomiting	Weight gain, immune dysfunction, abnormal glucose	Start after 9+ weeks.
Vitamins	Pyridoxine (B6) Thiamin (B1) Folic acid Vitamin K Vitamin D	Nausea, vomiting, muscle wasting	B6 may cause neuropathy in high doses.	Folic acid and vitamin K important in 1st trimester. B complex important, especially B1 100 mg B1 daily during HG.

When should I stop my medications?

Medications generally should not be stopped quickly especially if you still feel sick and are in the first trimester. If a medication has no effect on nausea or vomiting at the maximum dose on a schedule and all routes are tried (oral, IV, suppository, compounded, etc.), either adding another medication or changing medications is the next step. IV fluids can help not only nausea and vomiting, but also make medications more effective.

Kimber's RULE OF 2'S

Wean medications for HG:

