

# Medical Nutrition Therapy Diet: Hyperemesis

## 1. Purpose

### a. Nutrition Indicators:

- Someone who has hyperemesis is usually dehydrated and malnourished from losing weight despite efforts to eat. Also, there is a fluid and electrolyte imbalance from constant vomiting and diarrhea.

### b. Criteria to Assign the Diet:

- A loss of greater than 5% of pre-pregnancy body weight (usually over 10%)
- Dehydration and production of ketones
- Nutritional deficiencies
- Metabolic imbalances
- Difficulty with daily activities

\*\*Person with hyperemesis needs to consume a lot of fluids and eat foods high in potassium and sodium.

### c. Rationale for Diet:

- If a person is constantly vomiting, they can easily become dehydrated. Therefore, the woman needs to replenish her body with fluids and replace her electrolytes (sodium, potassium, chloride) to remedy her electrolyte imbalance.

## 2. Population

### a. Overview:

- Hyperemesis is a disease that occurs in pregnant women. About half of all pregnant women experience nausea and vomiting in their first trimester. This is typically known as morning sickness. However, about 1—2% of women develop a more severe form of nausea and vomiting, known as hyperemesis. Hyperemesis is much worse than morning sickness and may cause a woman to have nausea and vomiting all day for many days. The cause of hyperemesis is unknown. However, it is more common in women who are pregnant for the first time or are pregnant with twins.

### b. Disease Process:

- Hyperemesis may keep a woman from eating and drinking enough nutrients. It can lead to weight loss, dehydration, malnutrition, and changes in the metabolic state.
- The signs and symptoms usually begin in the first trimester (first 3 months) of pregnancy. Hyperemesis often goes away toward the end of second trimester (4th to 6th month) of pregnancy. However, sometimes hyperemesis continues

through an entire pregnancy. Some common signs and symptoms of hyperemesis are:

- Severe nausea and vomiting
- Diarrhea
- Easily irritated by smells, motion, noise, or light
- Heart rate is faster than usual, blood pressure is lower than usual
- Weight loss
- Dehydration (dark yellow urine, dry mouth and lips, dry skin, urinating less than usual)
- Very tired, sad, or anxious

c. Biochemical and Nutrient Needs:

- Sodium, potassium, chloride
- Water and other fluids
- Serum albumin and thiamine levels may be low

### 3. General Guidelines

a. Nutrition Rx:

- For pregnant women:
- Estimated 2700 kcal
- Protein: 0.8–1.0 gm/kg protein/d + 10 gm protein/d per fetus using pre-pregnancy weight
- Carbohydrate: 50%–60% total calories
- Fat: 30% total calories
- Fluid: 30 mL/kg (With nausea and vomiting, pregnant woman will need additional fluids to account for fluid losses with hyperemesis)
- Folate: 600 micrograms/d
- Iron: 27 milligrams/d
- Calcium: 1000 milligrams/d for woman aged 19 to 50 years

b. Adequacy of Nutrition Rx:

- Women who have hyperemesis are typically deficient in their fluid intake. They will need to consume more than the required amount of fluids needed for pregnant women (30 mL/kg).

d. Goals:

- Dietary manipulation
- Oral antiemetics (to prevent nausea and vomiting)
- Enteral feeding (small nasogastrically placed feeding tube)

e. Does it Meet DRI:

- A prenatal vitamin may be needed to meet the micronutrient requirements. Also, enteral nutrition support may be needed to ensure that the patient with hyperemesis gets all of her required nutrients.

#### 4. Education Material

##### a. Nutrition Therapy:

- Provide enteral tube feeding for patient with hyperemesis.
- Explain the importance of enteral nutrition support and tips for success with the tube feedings.
- Provide patient with a chart of recommended foods and foods to avoid once they are off of the enteral tube feedings.
- Monitor patient's weight and ketones in urine that may indicate dehydration

##### c. Ideas for Compliance:

- Provide ways to distract patient during tube feedings (relaxation exercises, reading a book, watching a movie)
- Provide emotional support

#### 5. Sample Menu

##### a. Foods Recommended:

- Low fat, high calorie, high protein foods (lean meat, beans, turkey or chicken without the skin)
- Bland foods (dry toast, dry cereal, crackers, noodles, bread, bananas, apples, rice, popcorn without butter)
- Cool or chilled beverages

##### b. Foods to Avoid:

- Foods that make you feel sick to your stomach
- Foods that have strong odors that may cause nausea
- Spicy or hot foods
- Greasy or fried foods

##### c. Example of a meal plan:

- **Breakfast:**

- 1 regular slice whole wheat toast with 1 tbsp. of peanut butter
- 1 banana
- 1/2 cup oatmeal
- 1 cup orange juice
- 1/2 cup water

- **Lunch:**

- Turkey sandwich (2 thin slices of roasted turkey breast on 2 regular slices of multigrain bread)
- 1/2 cup raw baby carrots
- 1.5 cups tomato soup with 6 saltine crackers
- 1/2 cup applesauce
- Smoothie (yogurt, strawberries, bananas)
- 1/2 cup water

- **Dinner:**

- 3 oz. Grilled chicken breast
- 1/2 cup cooked green beans
- 1/2 cup whole grain rice
- 1 dinner roll
- Vanilla milkshake
- 1/2 cup water
- **HS Snack:**
  - 1/2 cup plain cottage cheese with 1/2 cup sliced canned peaches

**\*\*Nutritional Analysis:**

Calories: 2775 kcal, Carbohydrates: 455.6 g, Protein: 119.6 g, Fat: 59.6 g, Sodium: 3100 mg, Potassium: 4800 mg, Iron: 21.4 mg, Calcium: 1000 mg

## 6. Websites

- a. Organizations with Websites:
  - University of Virginia Health System:  
[http://www.healthsystem.virginia.edu/uvahealth/peds\\_hrpregnant/hypereme.cfm](http://www.healthsystem.virginia.edu/uvahealth/peds_hrpregnant/hypereme.cfm)
  - HER (Hyperemesis Education and Research) Foundation:  
<http://www.hyperemesis.org/hyperemesis-gravidarum/>
- b. Government Websites:
  - National Institutes of Health:  
<http://www.nlm.nih.gov/medlineplus/ency/article/001499.htm>

## 7. References

- a. Journal articles references:
 

Tan, P.C. (2010). Anxiety and depression in hyperemesis gravidarum: prevalence, risk factors and correlation with clinical severity. *European Journal of Obstetrics & Gynecology & Reproductive Biology*, 149(2), Retrieved from [www.elsevier.com/locate/ejogrb](http://www.elsevier.com/locate/ejogrb)