Prenatal Nutrition: Why Eating Healthy Matters

Lily Nichols, RD
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Objectives

- After this presentation, participants will be able to:
  - Identify healthy food to eat during pregnancy to prevent nutrient deficiencies and birth defects
  - List foods to avoid/limit during pregnancy and understand why
  - Explain weight gain guidelines during pregnancy
Background

- Eating healthy helps a pregnant woman:
  - Gain the right amount of weight during pregnancy
  - Prevent nutrition related complications, such as gestational diabetes or high blood pressure
  - Manage complications when they already exist
  - Prevent birth defects
  - Promote normal growth of baby
Healthy weight gain goals are based on a woman’s weight before pregnancy.

<table>
<thead>
<tr>
<th>Category</th>
<th>BMI</th>
<th>Recommended total wt gain Singleton</th>
<th>Twins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt; 18.5</td>
<td>28-40 lbs</td>
<td>N/A</td>
</tr>
<tr>
<td>Normal</td>
<td>18.5-24.9</td>
<td>25-35 lbs</td>
<td>37-54 lbs</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0-29.9</td>
<td>15-25 lbs</td>
<td>31-50 lbs</td>
</tr>
<tr>
<td>Obese</td>
<td>≥ 30</td>
<td>11-20 lbs</td>
<td>25-42 lbs</td>
</tr>
</tbody>
</table>
Weight Gain During Pregnancy

The March of Dimes suggests that normal-weight women should gain between 25 and 35 pounds during pregnancy. Below, how a normal weight gain of 29 pounds would be distributed.

[Diagram showing weight distribution]

Weight lost at or soon after birth

- Baby: 7½ lbs.
- Retained water: 3 lbs.
- Blood: 4 lbs.
- Amniotic fluid: 2 lbs.
- Placenta: 1½ lbs.
- Uterus: 2 lbs.
- Breasts: 2 lbs.

Retained at birth

- Fat and protein: 7 lbs.

Source: March of Dimes

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Morbid Obesity

- BMI > 40 or weighing 100# more than ideal weight
  - Doctor may suggest lower weight gain goals (5-15#) or no weight gain at all (0#)
What should a pregnant women eat?

- First trimester (0-13 weeks) – no change in calorie needs
- Second trimester to full term – additional 300 calories per day
  - 300 calories is the size of a snack, for example:
    - small yogurt + small handful of nuts
    - ½ peanut butter and jelly sandwich
Eating For Two Myth

- Many women overeat, thinking they need to eat double portions to feed the baby
  - Pressure from family, FOB, own beliefs about baby, excuse to “let go” while pregnant

- Instead, suggest moms trust internal hunger cues and not eat to the point of discomfort
  - “Eat enough to satisfy your hunger and know that it’s enough for you and the baby”
Other Pregnancy Diet Myths

- If you eat:
  - Chili/spicy foods – baby will have acne, rough skin, red skin, or be angry
  - Crab, lobster – baby will have claw hands
  - Lemon/lime – the acid will hurt the baby

- NOT TRUE!!!

- What have you heard?
What should a pregnant women eat?

- Variety is key:
  - Grains
  - Vegetables
  - Fruits
  - Milk Products
  - Proteins
  - Fats

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Grains

- 6+ servings per day
  - 1 slice bread
  - ½ cup cooked rice, pasta, or cereal
  - 1 small tortilla

- Careful with portion sizes here!
- Choose whole grains
Vegetables

- Aim for ½ your plate to be green!
- Encourage 5+ servings per day
  - 1 cup raw or cooked vegetables
  - 2 cups salad greens
Fruit

- 2 -3 servings per day
  - ½ cup fresh, frozen, or canned fruit
  - Baseball-size fruit (small orange, apple, or ½ banana)
  - ¼ cup dried fruit
  - ½ cup 100% fruit juice
# Fruit – Caution with Juice

## Fruit juice vs. soft drinks

Juice enjoys the reputation of a health food, but critics say its calorie and sugar content are on a par with soda and other more vilified beverages.

### Calorie and sugar counts of selected beverages

(Per 8-ounce serving; all juices are unsweetened)

<table>
<thead>
<tr>
<th>Beverage</th>
<th>Calories</th>
<th>Grams of total sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprite</td>
<td>100</td>
<td>26</td>
</tr>
<tr>
<td>Pepsi</td>
<td>100</td>
<td>28</td>
</tr>
<tr>
<td>Coca-Cola classic</td>
<td>97</td>
<td>27</td>
</tr>
<tr>
<td>Gatorade G Cool Blue</td>
<td>50</td>
<td>14</td>
</tr>
<tr>
<td>Grape juice</td>
<td>152</td>
<td>36</td>
</tr>
<tr>
<td>Pineapple juice</td>
<td>132</td>
<td>25</td>
</tr>
<tr>
<td>Cranberry juice</td>
<td>116</td>
<td>31</td>
</tr>
<tr>
<td>Apple juice</td>
<td>114</td>
<td>24</td>
</tr>
<tr>
<td>Orange juice</td>
<td>112</td>
<td>21</td>
</tr>
<tr>
<td>Grapefruit juice</td>
<td>96</td>
<td>22</td>
</tr>
</tbody>
</table>

Sources: U.S. Department of Agriculture Nutrient Data Laboratory; company information

Graphics reporting by Karen Kaplan

Los Angeles Times

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Milk Products

- 3 servings per day / 4 servings for teens
  - 1 cup milk
  - 1 cup yogurt
  - 1 ½ ounces natural cheese (cheddar, parmesan)

- Avoid unpasteurized milk products
Proteins

- Best consumed in small amounts with each meal and snack. Helps to “keep you full”.
- At least 5 ounces per day – 1 ounce equals:
  - 1 ounce meat, poultry or fish
  - 1 egg (including yolk)
  - ½ cup cooked dry beans or tofu
  - 2 tablespoons peanut butter
  - small handful of nuts
Fats

- Best eaten from whole foods, such as nuts, avocado, and eggs.
- Aids nutrient absorption from vegetables
- Important for normal brain development of infant. The brain is ~70% fat.
- Limit trans fats, found in partially hydrogenated oils.
  - Margarine
  - Shortening, like Crisco
  - Fried foods
Snacking

- Good idea if:
  - Feeling hungry or low energy between meals
  - Experiencing nausea or heartburn
  - Have a tendency to overeat at meals
  - Have gestational diabetes
  - Physically active
Healthy snacks

- Try to include a protein source at snacks for satiety
  - Greek yogurt
  - Crackers + string cheese
  - Apple, celery + peanut butter
  - Nuts

- Careful with junk foods and sweets
  - “Will this food help build a healthy baby?”
Many women experience morning sickness, heartburn, diarrhea, or constipation.

It might be hard to keep foods down, or she may feel too sick to eat at all.
What to Eat When Not Feeling Well

- **Morning Sickness:**
  - Eat crackers before getting out of bed

- **Nausea/Vomiting:**
  - Small, frequent meals
  - Avoid strong odors
  - Don’t get too hungry or too full
  - Try ginger ale, ginger candy, ginger tea
  - Drink fluids, especially after throwing up
What to Eat When Not Feeling Well

- **Constipation:**
  - Eat more fresh fruit, vegetables, whole grains
  - Limit refined grains (white bread, instant noodles)
  - 8+ glasses of water a day

- **Diarrhea:**
  - Increase soluble fiber – oatmeal, rice, bread, ground flaxseeds, chia seeds
  - Limit fruit, especially dried fruit, until resolved

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What to Eat When Not Feeling Well

- **Heartburn:**
  - Eat small, frequent meals throughout the day
  - Drink most liquids between meals
  - Limit caffeine, spicy foods, and acidic foods
  - Avoid large dinners or laying down right after eating
Prenatal Vitamin

- Helps “fill in the gaps” of an imperfect diet, but is not an excuse to skip the vegetables
  - Make sure it has been prescribed by a health care provider
  - Best absorbed when taken with a meal
Folic Acid

- B vitamin that helps prevent neural tube defects
  - Birth defects of the brain and spinal cord
- Naturally found in dark green vegetables
- March of Dimes recommendations:
  - 400 micrograms/day preconception
  - 600 micrograms/day for pregnant women
Omega-3 fatty acids and DHA

- Omega-3 fatty acids is an important kind of fat
- DHA is a type of omega-3 fatty acid that can help a baby’s brain and eyes develop
- Sources of DHA:
  - Salmon, sardines, egg yolks, grass-fed beef
  - Supplements (fish or algae)
Iron

- Keeps blood healthy
  - Pregnant women produce more blood
- Iron rich foods:
  - Red meat, dark meat poultry (legs, thighs)
  - Oysters, clams (cooked)
  - Enriched grains and cereals
  - Beans
  - Dried fruits
  - Green leafy vegetables
Iron: How to enhance absorption

- Eat with a source of vitamin C
  - Oranges, mango, papaya, cantaloupe (raw)
  - Bell pepper, tomato, cabbage, broccoli (raw or lightly steamed)

- Marinate meats in:
  - Citrus juice, vinegar, tomato juice, yogurt marinades
  - Ex: carne asada

- Soak beans + whole grains before cooking

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Calcium

- Important for baby’s bone development
- When pregnant women don’t get enough calcium, it is taken from their bones to supply the baby’s needs
- Encourage 3 servings of calcium-rich foods daily, such as dairy products
  - Milk, cheese, yogurt

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What about Lactose Intolerance?

- Lactose intolerance is the inability to digest lactose, the sugar found in milk.

- Symptoms include:
  - Cramping
  - Gas
  - Diarrhea
Alternative Sources of Calcium

- Low-lactose dairy products:
  - Cheese, Greek yogurt, and cottage cheese
  - Lactaid milk

- Non-dairy calcium sources:
  - Greens – spinach, broccoli, kale, collards, bok choy
  - Almonds or sesame seeds, almond milk
  - Sardines (with the bones)
  - Homemade soup broth (made with the bones, >2 cups)
Vegetarians and Vegans

- Careful to include enough
  - Protein (beans, nuts, soy, dairy, eggs)
  - Vitamin B12 (animal foods only)
  - Vitamin D
  - Choline – mainly found in egg yolks, key for brain development
  - DHA (omega-3, algae is only non-animal source)

- Vegans need additional supplements. Refer to a Registered Dietitian
Foods To Avoid

- Foods with chemicals that can affect a baby’s development
- Foods that can make you sick (food poisoning)
- Foods that lack nutrients and displace healthy foods

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Foods To Avoid

- Raw animal products
  - Undercooked meat, raw eggs, sushi
Foods To Avoid

- Cured meat (unless reheated until steaming)
  - Hot dogs, ham, deli meat, cold cuts
Foods To Avoid

- Unpasteurized milk and dairy:
  - Brie, feta, camembert, Roquefort, blue-veined, queso blanco, queso fresco, panela if made from unpasteurized milk

- Check label. If ingredients say “pasteurized milk”, it IS SAFE!
Foods To Avoid

- Certain kinds of fish should be avoided:
  - Shark
  - Swordfish
  - King mackerel
  - Tile fish
  - Albacore tuna

- Limit tuna to 6oz or less per week
  - “Canned light” tuna is lowest in mercury
Fish That IS SAFE

- These are low mercury fish/seafood. It is safe to eat up to 12 oz per week (cooked):
  - Salmon
  - Sardines
  - Tilapia
  - Cod
  - Catfish
  - Shrimp
  - Crab
  - Oysters

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Foods To Avoid

- Alcohol
  - Linked to premature delivery, mental retardation, and low birth weight babies

- Caffeine
  - Limit to 200-300 mg per day, which is equivalent to:
    - 2 small cups of coffee (6oz each)

- Herbs and herbal teas
  - NOTE: Culinary herbs are safe in moderation, such as: mint, ginger, cilantro, parsley, cinnamon, etc.
Foods To Limit

- **Sugar**
  - Especially sweet drinks

- **Refined grains**
  - White bread, pasta, instant noodles/rice/potatoes, processed cereals

- **Trans fats – “partially hydrogenated oils”**
  - Margarine, fried foods
  - Linked to higher rates of asthma and allergies in infants
Gestational Diabetes

- Diabetes that develops during pregnancy
- If not treated, the baby can grow too large, have birth defects, or complications at delivery
- Diet and exercise are main treatments. Some women will need insulin or medicine.
- Increases mom’s risk of getting diabetes later in her life, especially if poorly controlled

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Cravings

- Whether or not a woman indulges her cravings should depend on the food.
  - OK to give in once in a while, as long as the food is safe (not contaminated + no risk of food poisoning)
  - Caution with “eating for two” excuse and junk foods

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Non-food Cravings (pica)

- Might be eaten because of tradition, custom, or cultural beliefs
- Common beliefs:
  - “Clay keeps the baby from being marked at birth”
  - “Clay keeps the woman from feeling hungry”
  - “Starch makes the newborn lighter”
  - “Starch helps the baby slide out easier during delivery”
Non-food Cravings (pica)

- Might be eaten because mom is not getting nutrients her body needs, such as iron.
- Can be very dangerous!
  - Can cause the intestines to be blocked
  - Can cause constipation
  - Can keep nutrients from being absorbed in the intestines
  - Can displace healthy food

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Eating on a Budget

- Fresh fruits and vegetables help keep a pregnant woman healthy, but can be expensive!
  - Make a budget and a menu for the week
  - Buy in season, such as at the farmer’s market
  - Use a discount card
  - Buy generic or store brand
  - Buy frozen fruits and vegetables

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Eating on a Budget

- Buy whole foods
  - whole chicken instead of chicken breasts
  - dried beans instead of canned
- Buy meat on the bone. Save the bones and make soup.
- Cook in bulk. Freeze the rest for later.
- Keep nutrient-dense staples on hand at home
  - Ex: Beans, eggs, frozen vegetables, peanut butter
Eating on a Budget

- Food assistance programs can help
  - WIC
    - [www.fns.usda.gov/wic](http://www.fns.usda.gov/wic)
  - Supplemental Nutrition Assistance Program (SNAP)
    - CalFresh in California
      - [http://www.calfresh.ca.gov/](http://www.calfresh.ca.gov/)
QUESTIONS?

THE NUTRITIONALISTS HAVE, LIKE, GONE TOO FAR...