prenatal
NUTRITION
GUIDE
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OFF TO A GOOD START: PRECONCEPTION

Healthy habits start before conception
Some nutrients are so important for developing babies that it’s recommended you have a good supply from the very first day of your pregnancy. If you’re trying to become pregnant, it’s a good idea to take a prenatal vitamin each day. Here are some vitamins and minerals that are particularly important before (and during) pregnancy:

Antioxidants – Helps prevent cell damage. Diets rich in fruits, vegetables, and whole grains are highest in antioxidants like selenium, vitamin E and vitamin C.

Folic Acid – Helps prevent neural tube defects like spina bifida. The body won’t store up extra folic acid – you need it every day. Since its role in fetal development is so early in pregnancy, it’s recommended that all women of child-bearing age get at least 400 mcg per day. It’s in prenatal vitamin supplements, and also found in fortified grains and cereals, leafy greens (e.g., spinach), broccoli, oranges, beans, peas, and peanuts.

Zinc – This mineral is important for proper function of the immune system. It’s recommended that you get 11 mg per day during pregnancy (8mg per day for non-pregnant and 12 mg/d for lactating women over the age of 19). Good sources include beef, lamb, pumpkin seeds, yogurt, spinach, broccoli, peas, and leafy greens.

Iron – Pregnant women are at risk for becoming iron-deficient and anemic. By making sure you have good sources of iron in your diet now, you can start with a good supply of this important mineral. Food sources include lean red meats, beans, tofu, fortified cereals, leafy greens, and shitake mushrooms.

Limit mercury
Steer clear of these fish which are highest in the contaminant methylmercury which can build up in your body and may cause neurological damage: Tilefish, King Mackerel, Swordfish, Bigeye Tuna and Shark. Instead, choose these safe, low-mercury fish (the ones with a * are particularly rich in omega-3 fatty acids): Anchovies*, Catfish, Flounder, Halibut* (limit to fewer than 6 servings per month), Herring*, North Atlantic Mackerel*, Pollock, Salmon*, Sardines*, Shrimp, Tilapia, Trout*, Tuna canned, light* is lower in mercury than canned albacore, limit canned albacore 6 oz per week! For more information visit: https://www.epa.gov/choose-fish-and-shellfish-wisely/what-you-need-know-about-mercury-fish-and-shellfish

Choose kitchen plastics carefully
Avoid polycarbonate plastic, the hard clear plastic coded with the number 7 that may leach a hormone-disrupting chemical called BPA into foods and drink. Instead, choose safer plastics like those labeled with a 1, 2, 4, or 5, and never put plastics in the microwave. Better yet: avoid plastics in favor of stainless steel, aluminum, and glass.

Test your drinking water
Most municipal tap water is considered safe, however a study by the Environmental Working Group indicates that some sources may contain contaminants like chlorine byproducts and other industrial pollutants. Plus, old pipes may leach lead into your water. Pick up a simple home testing kit at your local hardware store and test your water for safety. If you have a well that provides your drinking water, a licensed well contractor can test both the well and the pump for contamination.

Healthy eating before pregnancy
Healthy eating when you are trying to conceive is important – consume plenty of fruits and vegetables, whole grains, lean proteins, healthy fats, not too much refined sugar or highly processed foods. There will of course be additional recommendations and restrictions during pregnancy that we will get into later in the guide. If eating lots of fruits, veggies, whole grains, lean proteins and healthy fats doesn’t sound like your diet, don’t wait until you see a positive pregnancy test to do a diet tune up. Start today and you’ll have time to ease into these healthy habits:

- Aim for a healthy weight with a balanced diet and moderate exercise
- Eat whole foods; limit highly refined foods
- Start taking a prenatal vitamin containing folic acid
- Wean off high amounts of caffeine (i.e., more than 2 cups of coffee per day)
- Seek help for a dependency on alcohol, tobacco, or other drugs
- Talk to a professional about an eating disorder


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A healthy diet during pregnancy will help Mama gain just the right amount of weight to support Baby’s growth and development.

Some of the weight gained in pregnancy is actual baby weight — the weight of your baby’s developing body. Other weight comes from amniotic fluid, extra blood to support your body’s needs, and extra fat to provide energy for the amazing task at hand.

Weight gain recommendations are based on your pre-pregnancy weight. Women who are overweight or obese don’t need to accumulate as many fat reserves, so their weight gain recommendations are lower. Women who are underweight may need additional stored energy, so it’s recommended that they gain more weight. See the table below for details about healthy weight gain during pregnancy. If you’re carrying twins or triplets, talk to your doctor or midwife about how much weight you should try to gain.

Your doctor or midwife will check your weight periodically throughout pregnancy. If he or she is concerned, you’ll be advised to cut back on or add extra calories in your diet, or to be more active with regular light to moderate exercise.

<table>
<thead>
<tr>
<th>Pre-pregnancy weight (BMI)*</th>
<th>Total weight gain 1st Trimester</th>
<th>Weekly weight gain 2nd + 3rd Trimester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (18.5-24.9)</td>
<td>Less than 5 lbs.</td>
<td>Slightly less than 1 lb.</td>
</tr>
<tr>
<td>Underweight (&lt;18.5)</td>
<td>5 to 10 lbs.</td>
<td>1 lb.</td>
</tr>
<tr>
<td>Overweight (25-29.9)</td>
<td>Less than 5 lbs.</td>
<td>2/3 lb.</td>
</tr>
<tr>
<td>Obese (30)</td>
<td>Less than 5 lbs.</td>
<td>1/2 lb.</td>
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</table>

<table>
<thead>
<tr>
<th>Pre-pregnancy weight (BMI)*</th>
<th>Total pregnancy weight gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (18.5-24.9)</td>
<td>25-35 lbs.</td>
</tr>
<tr>
<td>Underweight (&lt;18.5)</td>
<td>28-40 lbs.</td>
</tr>
<tr>
<td>Overweight (25-29.9)</td>
<td>15-25 lbs.</td>
</tr>
<tr>
<td>Obese (30)</td>
<td>11-20 lbs.</td>
</tr>
</tbody>
</table>

**Adequate gestational weight gain is good for you and your baby.**
Avoiding excess weight gain is important, because too much weight in pregnancy may result in:

- An increase in your risk of gestational diabetes
- More stretch marks, varicose veins and backaches
- Elevated blood pressure
- A larger sized baby, resulting in a more difficult delivery & recovery after birth
- A more difficult time losing the baby weight

However, undernutrition is also detrimental as it can restrict your baby’s proper growth and development.

**The bottom line on weight gain**
It’s important to keep it under control, but there’s no need to obsess. Eat right, stay as active as you can, and your weight should stay in an ideal range.

**Where does all the baby weight go?**

<table>
<thead>
<tr>
<th></th>
<th>Total pregnancy weight gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby</td>
<td>7 to 8.5 lbs.</td>
</tr>
<tr>
<td>Placenta</td>
<td>1.5 lbs.</td>
</tr>
<tr>
<td>Breasts</td>
<td>1 to 3 lbs.</td>
</tr>
<tr>
<td>Amniotic fluid</td>
<td>2 lbs.</td>
</tr>
<tr>
<td>Blood volume increase</td>
<td>3.5 lbs.</td>
</tr>
<tr>
<td>Maternal fluid</td>
<td>3 lbs.</td>
</tr>
<tr>
<td>Uterus</td>
<td>2 to 3 lbs.</td>
</tr>
<tr>
<td>Maternal fat stores</td>
<td>8 to 10 lbs.</td>
</tr>
<tr>
<td>Total</td>
<td>28 to 35 lbs.</td>
</tr>
</tbody>
</table>

**Body mass index**
Body Mass Index (BMI) is a measure of body fat based on height & weight that applies to both adult men and women. You can easily compute your BMI by using the online calculator at https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm. The National Heart, Lung, & Blood Institute is a part of the National Institutes of Health, US Dept. of Health and Human Services.

**BMI categories**
Underweight = < 18.5 Normal weight = 18.5 - 24.9 Overweight = 25 - 29.9 Obesity = 30 or greater
THE DO'S:
GROW A HEALTHY, HAPPY BABY WITH A HEALTHY DIET

When you’re pregnant, your diet not only supplies you with sustenance and health, but it supplies the baby, too. Here are prenatal eating tips to help you create the optimal diet for you and your baby.

Eat just enough
Make food choices with your baby in mind, we like to say ‘think for two, rather than eat for two’. During the 1st trimester your body doesn’t need extra calories (Baby is only the size of a shrimp!) During the 2nd trimester you need approximately 340 additional calories and during the 3rd trimester an additional 450 calories per day.

Get sufficient protein
It’s essential for maintaining your muscles and growing tissue like the placenta and umbilical cord. Choose 3 servings of protein rich foods each day during the 2nd and 3rd trimesters when your body needs about 25 grams of protein per day over your non-pregnancy needs, for most women this is around 75 grams of protein per day. Many protein rich foods like beef, shellfish and chickpeas are also good sources of zinc, an important mineral. Here are examples of protein containing foods.

- 2 ½ to 3 oz poultry, pork, or beef – 20-25g
- 3 to 3 ½ oz fish or shrimp (equivalent to about 14 large shrimp) 20g
- 2 whole eggs 12g
- ½ cup lentils – 9g
- 1 cup of milk 8g
- 6 oz of Greek yogurt 18g
- 1 oz aged cheese (e.g., cheddar, swiss) – 7g
- 4 oz cottage cheese – 14g
- (1/2 cup) tofu – 10 g
- ½ cup chickpeas – 7g
- 1 tbsp of peanut or nut butter – 7g

Focus on fruits, veggies + whole grains
Just as before you were pregnant, these healthy foods should make up the foundation of your daily diet during pregnancy. Be sure to include sources of beta carotene, an antioxidant found in yellow and orange foods like yellow squash, papaya, apricots, pumpkin, cantaloupe, sweet potatoes, and carrots. Eat good sources of vitamin C, too. This antioxidant is not only good for the immune system but it also helps your body absorb iron. Sources include citrus fruits like oranges, grapefruit, tangerine, orange or grapefruit juices, tomatoes and tomato products, as well as potatoes. Whole grains provide fiber that can help you alleviate constipation.

Staying Hydrated
Water is critical to helping you normalize your body temperature, transporting nutrients through your body, keeping you regular, and keeping your baby cushioned in the amniotic fluid. You want to aim for at least 10 8-ounce cups of water per day. Plain water is preferable, but you can flavor it up with fruit or herbs like mint, oranges, or strawberries and basil.

Getting enough fiber
Fiber is an undigested carbohydrate that helps to keep you full and regular, and helps maintain healthy blood sugar levels. It’s found in fruits, vegetables, whole grains, and nuts, seeds, and legumes. Pregnant woman need about 28 grams of fiber per day. A full day of fiber might look something like this;

- 1 cup of steel cut oats - 5g
- ¼ cup almonds - 4g
- 2 slices of whole grain bread - 4g
- 1 apple - 4.4g
- 1 cup raw spinach - 2.2g
- ½ red pepper - 1.5g
- 1 cup grape tomatoes - 4g
- ¾ cup quinoa - 3.75g

Total 28.85g

Smart supplements
Certain vitamins and minerals are so essential that most practitioners recommend supplements to ensure proper intake. These include:

Folic acid - Required for the development of your baby’s neural tube – the tissues that become the brain and spinal cord. You need 600 micrograms of folic acid each and every day. (If you’re not taking a prenatal multivitamin, ask your doctor or midwife about taking a folic acid supplement.)

Iron - Produces hemoglobin, which carries the oxygen in your blood to your body tissues. A deficiency causes anemia (you should be tested for this during your 2nd trimester). You need approximately 27 mg of iron per day – a recommendation that may be difficult to meet with your diet alone.

Choline - This essential nutrient plays a crucial role in baby’s brain development, so your needs are higher in pregnancy and while you are breastfeeding. Choline is found in eggs, certain meats, and fortified foods. Choose a prenatal vitamin supplement which contains choline. The Institute of Medicine recommends 450 mg a day for pregnant women.
Vitamin D (in addition to calcium) - is crucial to baby’s bones and teeth developing. It also is essential for healthy skin and eyesight. All women, including those who are pregnant, need 600 international units (15 mcg) of vitamin D a day. Good sources are milk fortified with vitamin D and fatty fish such as salmon. Exposure to sunlight also converts a chemical in the skin to vitamin D.

Bone up on your calcium needs - Calcium strengthens bones and teeth – both yours and baby’s. It may also prevent high blood pressure. You need at least 800 milligrams per day – not very different than your requirements before pregnancy. Your prenatal vitamin likely will provide about 400 to 500 mg. In your diet, aim for four servings of calcium-rich foods like low fat milk (including lactose free milk), low fat yogurt, cheese, fortified cereals, leafy green vegetables, broccoli, Brussels sprouts, green beans, asparagus, tofu, sardines, sesame seeds, oranges, and fortified juices.

- Choose calcium-rich snacks like string cheese, low fat yogurt, or smoothies made with frozen fruit and low fat yogurt.
- Limit caffeine to no more than 200 mg per day, to help decrease your caffeine intake and boost your calcium, instead of coffee, try a decaf latte or a steamed skim milk.
- Include spinach, collard greens, Swiss chard, and other greens in your weekly vegetable rotation. Have them as a side or add them to soups or stir frys.
- Sprinkle sesame seeds on your salad or whole grain side.
- Have some low fat chocolate milk when you’re craving sweets.
- Top a potato or bowl of soup with shredded low fat cheese.
- Try low fat cottage cheese topped with fruit and or granola for a tasty breakfast.
- Make an easy dip for veggies – add fresh herbs to plain low fat yogurt.

Go fish - Many varieties of fish provide DHA, an essential omega-3 fatty acid which will be a major building block for Baby’s brain and eyes. Choose these safe, low-mercury fish.

- Anchovies*
- Catfish
- Flounder
- Halibut* (limit to fewer than 6 servings per month)
- Herring*
- Mackerel* (North Atlantic Mackerel, not King Mackerel which is high in mercury)
- Pollock
- Salmon*
- Sardines*
- Shrimp
- Tilapia
- Trout*
- Tuna (canned light is low in mercury.*; Limit canned albacore to 6 oz per week)
* Particularly rich in omega-3 fatty acids

For vegan mamas
If you eat zero animal products i.e., no meat, no milk, no eggs it is recommended that you take supplemental vitamin B12 during pregnancy as it is primarily found in animal products. Seek out good sources including fortified cereals, fortified soy milks, and nutritional yeast, and ask your OB or midwife if you should take B12 in addition to your prenatal supplement.

To settle the stomach – anti-nausea tips
Being pregnant is an exciting and joyful adventure. Unfortunately, for some of us it can also be a bit nauseating! If you’re feeling queasy, here are some tips that may help:

Avoid hunger — Dips in blood sugar can only make nausea worse. Try to eat a little something every couple of hours. It may help to keep pretzels or crackers by your bed so that you can eat before you even get out of bed in the morning.

Bubbles! – If you have indigestion the bubbles in seltzer or all-natural soda may help to settle your stomach.

Get some exercise — You may be feeling that you can’t even get up from the couch, much less “exercise,” but once you get out there on a walk or hop on a stationary bike or do a prenatal yoga class you’ll understand why we suggest it. Even just a few minutes of light activity can help with nausea and also boost your energy level.

Sour fruits – Many women find that sour tasting fruity flavors help to ease nausea, particularly if the nausea is accompanied by a bad taste in your mouth. Try lemonade or sour apple lollipops, for example.

Starch yourself — Starchy foods like baked potatoes and rice are usually well tolerated. If you prefer something crunchy, pretzels or potato chips may hit the spot.

The nose knows – Avoid smells that turn your stomach, and keep things that have a fresh scent nearby. Take a whiff of a cut lemon, a slice of ginger, or a sprig of rosemary when you need something more pleasant to smell.
The long-term health effects of pesticide exposure are not fully known. What we do know is that organic fruits, vegetables, and grains are grown without toxic persistent pesticides, genetically modified organisms (GMOs) and most synthetic fertilizers. Organic meat and dairy products come from animals who are raised in conditions that follow their natural behavior, fed 100% organic feed and forage and given no antibiotics or growth hormones. In fact, for cattle, it is required that they graze on grass for a minimum of one third of their lives. Conventional produce, meat and dairy does not guarantee any of those things.

Another reason to eat organically grown food is to support a sustainable agriculture system that is friendly to the earth. Organic agriculture helps prevent toxic and persistent chemicals from entering the air, water and soil. Organic farms have also been shown to promote healthy, balanced and biodiverse ecosystems. Even further, organic farming methods on average help build healthy soils by increasing soil organic matter and trapping carbon from the atmosphere, meaning that organic agriculture can be part of the solution to climate change.

2. http://advances.sciencemag.org/content/3/3/e1602638.full
5. https://lib.dr.iastate.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1451&context=leopold_grantreports

SHOULD I CHOOSE ORGANIC?

NEED HELP?
CHAT WITH AN EXPERT

Go to our website & chat with our Happy Mama Mentors, a team of nutritionists and lactation specialists (and all moms!), for questions on lactation, starting solids, advancing textures, picky eating, baby and tot nutrition, and more!

M-F 8am-8pm (EST) and Sat and Sun 8am-4pm (EST)