

First Trimester

Fetal Development, Nutrition, Lifestyle, and Feeling Great



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**FULL CIRCLE
FAMILY CARE**

About Me



- Naturopathic Doctor – specialize in botanical medicine, nutrition and homeopathy
- Professionally licensed as a PCP in Connecticut
- I consult with women at Full Circle Family Care
- Specialize in natural medicine for women and pediatrics
- Mainstream medicine does not necessarily emphasize the importance of healthy habits during the first trimester. In fact it is of utmost importance.
- I believe that pregnancy and planning for pregnancy is the perfect window for making positive life changes

What to Expect



Within two weeks of conception, hormones trigger your body to begin nourishing the baby — even before tests and a physical exam can confirm the pregnancy

- **Tender breasts.** Increased hormone production may make your breasts unusually sensitive. Your breasts will probably feel fuller and heavier.
- **Bouts of nausea.** Many women have queasiness, nausea or vomiting in early pregnancy — probably due to normal hormonal changes. Nausea tends to be worse in the morning, but it can last all day.
- **Unusual fatigue.** You may feel tired as your body prepares to support the pregnancy. Your heart will pump faster and harder, and your pulse will quicken.
- **Increased urination.** You may need to urinate more often as your enlarging uterus presses on your bladder. The same pressure may cause you to leak urine when sneezing, coughing or laughing.
- **Heartburn and constipation.** During first trimester pregnancy, the movements that push swallowed food from your esophagus into your stomach are slower. Your stomach also takes longer to empty. This slowdown gives nutrients more time to be absorbed into your bloodstream and reach your baby. Unfortunately, it may also lead to heartburn and constipation.
- **Dizziness.** Normal circulatory changes in early pregnancy may leave you feeling a little dizzy. Stress, fatigue and hunger also may play a role.
- **Your emotions.** Pregnancy may leave you feeling delighted, anxious, exhilarated and exhausted — sometimes all at once. Even if you're thrilled about being pregnant, a new baby adds emotional stress to your life.

Being in Touch with your body



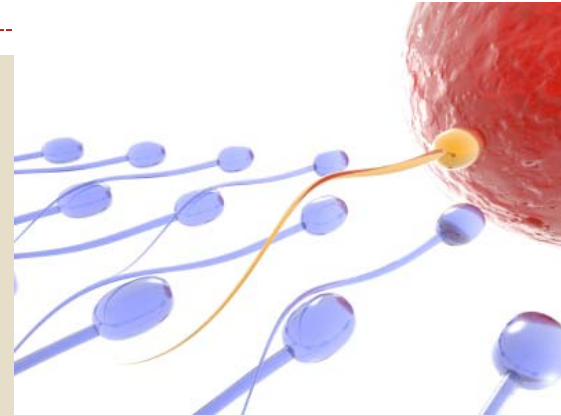
- Listen to your body's signals. What you feel may not necessarily be written about in a book
- Connect/communicate with your body – what does your body need that will nourish and nurture it?
- When you feel the urge to urinate – do it
- When you feel the need to rest – rest
- Does anyone have any experiences they haven't read about in the books?

Fetal Development – Weeks 1-4



Week 1 and 2 (from the date of your last menstrual period):

- You're not actually pregnant the first week or two of the time allotted to your pregnancy. Conception typically occurs about two weeks after your period begins – when you ovulate.



Week 3: Fertilization

- The sperm and egg unite in one of your fallopian tubes to form a one-celled entity called a zygote. If more than one egg is released and fertilized, you may have multiple zygotes.
- The zygote has 46 chromosomes — 23 from you and 23 from your partner. These chromosomes will help determine your baby's sex, traits such as eye and hair color, and, to some extent, personality and intelligence.
- Soon after fertilization, the zygote travels down the fallopian tube toward the uterus. At the same time, it will begin dividing rapidly to form a cluster of cells resembling a tiny raspberry. The inner group of cells will become the embryo. The outer group of cells will become the membranes that nourish and protect it.

Week 4: Implantation

- When the zygote — now known as a blastocyst — reaches your uterus, it will burrow into the uterine wall for nourishment. The placenta, which will nourish your baby throughout the pregnancy, also begins to form.
- By the end of this week, you may be celebrating a positive pregnancy test.

Fetal Development – Weeks 5-8



Week 5: The embryonic period begins

- This is when the baby's brain, spinal cord, heart and other organs begin to form.

Week 6: The neural tube closes

- Basic facial features will begin to appear, including passageways that will make up the inner ear and arches that will contribute to the jaw. Your baby's body begins to take on a c-shaped curvature. Small buds will soon become arms and legs.

Week 7: Baby's head develops

- Seven weeks into your pregnancy, or five weeks after conception, your baby's brain and face are rapidly developing. Tiny nostrils become visible, and the eye lenses begin to form. The arm buds that sprouted last week now take on the shape of paddles.

Week 8: Movement begins

- Eight weeks into your pregnancy, or six weeks after conception, your baby's arms and legs are growing longer, and fingers have begun to form. The shell-shaped parts of your baby's ears also are forming, and your baby's eyes and nipples are visible. The upper lip and nose have formed. The trunk of your baby's body is beginning to straighten.
- Your baby may begin to move this week, but you won't be able to feel it yet.
- By the end of this week, your baby may be about 1/2 inch (11 to 14 millimeters) long.



Fetal Development – Weeks 9-12



Week 9: Baby's toes form

- In the ninth week of pregnancy, or seven weeks after conception, your baby's arms grow, develop bones and bend at the elbows. Toes begin to form, and your baby's eyelids and ears continue developing.

Week 10: Baby's neck begins to develop

- By the 10th week of pregnancy, or eight weeks after conception, your baby's head has become more round. The neck begins to develop, and your baby's eyelids begin to close to protect his or her developing eyes.

Week 11: Baby's genitals develop

- Your baby is now officially described as a fetus. This week your baby's eyes are widely separated, the eyelids fused and the ears low set. Red blood cells are beginning to form in your baby's liver. By the end of this week, your baby's external genitalia will start developing into a penis or clitoris and labia majora.

Week 12: Baby's fingernails develop

- Twelve weeks into your pregnancy, or 10 weeks after conception, your baby is developing fingernails. Your baby's face now has a human profile.
- By now your baby may be nearly 2 1/2 inches (61 millimeters) long from crown to rump and weigh about 1/2 ounce (14 grams).



Nutrition During the First Trimester



- **Do's**
 - Eat an extra 300 calories a day
 - Listen to your body
 - Supplement with a prenatal vitamin. Start taking them before conception if you can. A good choice if you're sensitive to them is the INNATE brand prenatal
 - Make sure you get 400 mcg of folic acid daily (and 12 weeks before conception if possible)
 - Get 1,500 mg per day of calcium
 - Take 400 IU of Vitamin D per day

Nutritional Needs During Pregnancy



Protein: Approximately 71g of protein/day for the average women

(Increase protein consumption by 25 grams/day above usual pre-pregnancy needs)

Each of the following servings = 14 g of Protein (therefore you need 4-5 servings a day to meet 71g of protein)

- 2 oz. chicken, turkey, beef, pork, lamb
- 2 eggs
- 1/2 oz. firm tofu
- 2 oz. cheese
- 1/2 C tuna, canned
- 1/4 C nuts/seeds and nut/seed butter
- 2/3 C cottage cheese
- 1 C beans, cooked

Calories: For the average women, increase caloric consumption above daily needs by: 300 calories /day during the 1st trimester, 350 calories/day during the 2nd trimester, 450 calories/day during the 3rd trimester

Each serving = approx 300-400 calories

- Whole wheat bagel with 1 oz. cream cheese
- Small rice and bean burrito w/ salsa
- Tuna sandwich (1/2 C tuna + 2 tsp. mayo)
- Veggie burger (wheat bun & 1 tbsp. avocado)
- 2 egg omelet with sautéed veggies
- 1/2 C rice, 1 C veggies + 2 T tahini dressing
- 1/2 C oatmeal, 2 T raisins + 1 T nuts/seeds
- 4.5 oz fish with small baked potato
- Stuffed chicken breast w/ 1/2 C veggies

Nutritional Needs During Pregnancy



IRON

- It can be difficult for some women to obtain adequate Iron from the diet.
- Supplements such as Floradix help
- You can also cook from a cast iron skillet to increase iron levels

Iron: All Ages: 27mg/day

2 T tahini (sesame butter)	2.7 mg
1 packet instant oatmeal	6.32 mg
4 oz. sirloin steak	3.8 mg
1 med. baked potato with skin	2.8 mg
1/2 C beans, cooked	2.2-2.6 mg
1 T blackstrap molasses	3.2 mg
1/2 C cooked spinach	3.2 mg
10 prunes	2.1 mg
10 dried apricots	1.7 mg
1/2 C firm tofu	2.0 mg
1/4 C quinoa, uncooked	3.9 mg
1 serving fortified dry cereal	4-18 mg
1/4 C dry Hijiki (seaweed)	6.4 mg

Nutritional Needs During Pregnancy



Calcium: Teen Pregnancy: 1300mg/day; Adult: 1000mg/day

- 1 C kale, chard, mustard greens 120-180 mg
- 1 C black-eyed peas, cooked 212 mg
- 2 T sesame seeds 176 mg
- 1 T blackstrap molasses 172 mg
- 2 T almonds 75 mg
- 2 T almond butter 86 mg
- 1 C carrot juice 164 mg
- 1 C broccoli, cooked 72 mg
- 1 C milk 302 mg
- 2 T parmesan cheese 138 mg
- 1 C yogurt 320-400 mg
- 1/2 C tofu (with calcium sulfate) 130 mg
- 1 C soy milk (enriched) 160-320 mg

Magnesium: Teen Pregnancy: 360mg/day; Under 30 years old: 350mg/day; Over 30 years old: 400mg/day

- 1 C spinach, cooked 160 mg
- 2 T sunflower or sesame seeds 65 mg
- 1 C black-eyed peas or chickpeas 78-85 mg
- 1 C broccoli, cooked 94 mg
- 1/4 C wheat germ 63 mg
- 2 oz. firm tofu 87 mg
- 3.5 oz shrimp 110 mg
- 1 oz. cashews 74 mg
- 5 dried figs 56 mg

Nutritional Needs During Pregnancy



Zinc: Teen Pregnancy: 12mg/day; Adult: 11mg/day

- 4 oz sirloin steak 6.69 mg
- 3 oz turkey 2.64 mg
- 3 oz. roast beef 4.34 mg
- 3.5 oz shrimp 3.7 mg
- 1/4 C wheat germ 2.75 mg
- 1 oz Swiss cheese 1.10 mg
- 1/4 C pumpkin seeds 1.6 mg
- 1/4 C brazil nuts 1.6 mg

Folic Acid: All Ages: 600mcg/day

- 1 T Brewers Yeast 313 mcg
- 1 C spinach, cooked 131 mcg
- 1 C black, lima or kidney beans 229-273 mcg
- 1 C beets, cooked 90 mcg
- 1 C broccoli, cooked 80 mcg
- 1 C fresh squeezed orange juice 140 mcg
- 1 C chickpeas (garbanzo beans) 282 mcg
- 1/2 C asparagus cooked 132 mcg
- 1/2 crab meat, canned 2.5 mg

Quality Food



- **The Dirty Dozen** – these are must buy organic fruits and veggies (tend to be the thin skinned ones which absorb more chemicals):

- Apples
- Cherries
- Grapes, imported (Chili)
- Nectarines
- Peaches
- Pears
- Raspberries
- Strawberries

- Bell peppers
- Celery
- Potatoes
- Spinach

- **Safest** fruits and veggies lowest in pesticides are:

- Asparagus
- Avocados
- Banana
- Broccoli
- Cauliflower
- Corn
- Kiwi

- Mango
- Onion
- Papaya
- Pineapple
- Peas

- **Lowest Mercury Fish & Seafood** are:

- •Anchovies
- •Catfish
- •Clam

- •Crab
- •Crawfish
- •Flounder
- •Haddock
- •Herring
- •Mackerel
- •Mullet

- •Oyster
- •Perch
- •Pollock
- •Salmon
- •Sardine
- •Scallop
- •Shrimp

- •Sole
- •Squid
- •Tilapia
- •Trout
- •Whitefish

What to Avoid



Avoid seafood high in mercury

- The bigger and older the fish, the more mercury it may contain. The Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) encourage pregnant women to avoid:
 - Swordfish
 - Shark
 - King mackerel
 - Tilefish
- So what's safe? Some types of seafood contain little mercury. Although concerns have been raised about the level of mercury in any type of canned tuna, the FDA and EPA say pregnant women can safely eat up to 12 ounces (340 grams) a week or two average-sized portions of:
 - Shrimp
 - Canned light tuna (limit albacore tuna and tuna steak to no more than 6 ounces or 170 grams a week)
 - Salmon
 - Pollock
 - Catfish
 - Cod

Avoid raw, undercooked or contaminated seafood

- To avoid ingesting harmful bacteria or viruses:

Avoid raw fish and shellfish. It's especially important to avoid oysters and clams.

Cook seafood properly. Cook most fish to an internal temperature of 145 F (63 C). The fish is done when it separates into flakes and appears opaque throughout. Cook shrimp, lobster and scallops until they're milky white. Cook clams, mussels and oysters until their shells open. Discard any that don't open.

What to Avoid



To prevent food-borne illness:

Fully cook all meats and poultry before

eating. Look for the juices to run clear, but use a meat thermometer to make sure.

Cook hot dogs and warm processed deli meats, such as bologna, until they're steaming hot — or avoid them completely.

Don't buy raw poultry that's been pre-stuffed.

Raw juice that mixes with the stuffing can cause bacterial growth. Frozen poultry that's been pre-stuffed is safe when cooked from its frozen state.

Cook eggs until the egg yolks and whites are

firm. Raw eggs can be contaminated with the harmful bacteria salmonella. Avoid foods made with raw or partially cooked eggs, such as eggnog and hollandaise sauce.

Avoid unpasteurized foods

Many low-fat dairy products — such as skim milk, mozzarella cheese and cottage cheese — can be a healthy part of your diet. But anything containing unpasteurized milk is a no-no. These products may lead to food-borne illness.

Unless these soft cheeses are clearly labeled as being made with pasteurized milk, don't eat:

- Brie
- Feta
- Camembert
- Blue cheese
- Mexican-style cheeses, such as queso blanco, queso fresco and panela

What to Avoid



Avoid unwashed fruits and vegetables

- To eliminate any harmful bacteria, thoroughly wash all raw fruits and vegetables and cut away damaged portions. Avoid raw sprouts of any kind — including alfalfa, clover, radish and mung bean — which also may contain disease-causing bacteria.

Avoid large quantities of liver

- Liver is high in vitamin A, and too much vitamin A may cause birth defects.

Avoid excess caffeine

- Caffeine can cross the placenta and affect your baby's heart rate. Some studies suggest that drinking too much caffeine may be associated with a small decrease in birth weight or an increased risk of miscarriage and stillbirth. In fact, a large 2008 study suggests that 200 milligrams (mg) of caffeine a day — about a 12-ounce cup (354 milliliters) of brewed coffee — during pregnancy may slow fetal growth.

Avoid alcohol

- Consider the risks. Mothers who drink alcohol have a higher risk of miscarriage and stillbirth. Too much alcohol during pregnancy may result in fetal alcohol syndrome, which can cause facial deformities, heart problems, low birth weight and mental retardation. Even moderate drinking can impact your baby's brain development.

Remove Toxic Exposures



- 6 billion pounds of chemical pollutants are released into the US environment a year
- Toxicity in the environment is implicated in childhood developmental disorders, 1/58 boys are now being diagnosed with autism. (1/98 children overall)
- Breast milk contains fat soluble toxins.
- Still, breastmilk is best.
- Consider detoxification if you are doing preconception planning

Remove Toxic Exposures - Household



- **House** – old houses can have mold, lead based paints or pipes that leach into the tap water, new houses have building materials that off-gas. If renovating, make ‘green’ choices such as using low VOC paints and carpets.
- **Air** – change filters in the furnace regularly, consider extra air filters especially if someone has allergies or asthma, if there is a smoker in the house, you live close to high traffic roads, have shedding animals and mold issues.
- **Water** – install filters for your drinking water which will give you better quality than bottled water (which is weakly regulated), 1/10th the cost and better for the environment. There are also filters for shower heads. Well water sources should be tested.
- **Plastics** – Especially soft plastics - leach xeno-estrogens (synthetic dangerous estrogens). Drink from glass or metal containers, don't microwave food in plastic containers.
- The best **cooking pots and pans** are: stainless steel, ceramic, glass and cast iron. Avoid aluminum and teflon coated pans (just use more olive oil!). Aluminum is associated with neurological disease like Alzheimers and teflon is carcinogenic at high temps. Cast iron skillets will give extra iron into the diet which can be good for anemic conditions.

Remove Toxic Exposures - Cleaners



- The air quality in our homes is 2-5 times more toxic than outside air mostly due to petrochemical cleaners.
- Common laundry detergent contains chemicals which can alter the activity of certain genes, furniture polish contains chemicals which cause central nervous system depression.
- Remember that your babe will be licking the floors and furniture. Don't let them lick a toxic layer of furniture polish!
- A Green Cleaning Kit includes: baking soda for scrubbing and removing odors, white vinegar kills bacteria and is good for cleaning windows, a combo of olive oil and vinegar to polish furniture.
- Purchase brands such as 7th Generation & Ecover which also sell safer disinfectants. Bon Ami is a good scrubber that is safe.
- Don't forget getting 'green' laundry detergents
- Try to reduce your dry cleaning (which uses chemicals), if you do, choose a 'green' dry cleaner
- Antibacterial hand sanitizer does not take the place of good old fashioned hand washing with soap and hot water.

Remove Toxic Exposures - Cosmetics



- Most personal care and beauty products are filled with chemicals that are hormone disruptors, possible carcinogens and iffy preservatives. More than one-third of all personal care products contain at least one ingredient linked to cancer.
- Our skin does not selectively block toxins. Putting something on the skin is akin to eating it. Ask yourself this question for safety: could you eat your deodorant or lipstick?
- Stay away from phthalates (linked to birth defects), parabens and hair dyes containing coal tars.
- Use simple products without a huge list of synthetic/chemical ingredients
- Go to www.cosmeticsdatabase.com to look up safe cosmetic products
- If you have the time and creativity – try making your own products (see appendix)

Managing Common First Trimester Complaints



Breast changes and tenderness – they grow about a cup size during the first trimester.

- Shooting pains are normal. The areola and nipple will get bigger and darker
- What to do: Get a good support bra

Constipation – happens because of progesterone.

- What to do: Stay hydrated, exercise, eat prunes and veggies, increase fiber (grind up and eat flaxseed, wheat germ)

Cramps – because your uterus is growing

- What to do: use a hot water bottle, drink chamomile or red raspberry leaf tea. Take two Tylenol (acetaminophen)

Managing Common First Trimester Complaints



Depression & mood swings – happens because of progesterone

- Be open about them and express them
- Exercise – even just go on a walk – to help produce endorphins
- Take 3 grams of DHA per day
- Physical therapy like massage, craniosacral therapy or acupuncture

Excess Saliva – happens because of progesterone.

- What to do: nibble regularly, or spit instead of constantly swallowing.

Fatigue – because of growth and progesterone

- What to do: sleep! Pace yourself, know your limits, eat small meals often, moderately exercise, get physical therapy – massage, craniosacral, reiki, acupuncture..

Managing Common First Trimester Complaints



Nausea /food aversion/smell sensitivity– occurs in 70-85%

- What to do: eat what appeals to you, avoiding strong smells and tastes. Eat small meals often, keeping snacks handy. Take prenatal vitamins with biggest meal or before bed. Try B complex vitamins or B6 (50 mg twice a day). Try physical therapy – acupressure (press into inside wrists between the tendons, three finger lengths from the wrist crease), massage, craniosacral therapy. Ginger tea and candies. Chamomile or red raspberry leaf tea

Spotting – occurs in one of five pregnancies, implantation bleeding

- What to do: call your caregiver

Urinary frequency – from progesterone

What to do: don't hold it in and don't drink less. You need a lot of fluid

A Time for Nurturing your CREATIVE Spirit



- In holistic medicine the sex organs represent creativity. Pregnancy represents nature as its most creative expression.
- Creative Ideas:
 - Begin a pregnancy journal – take time to record your thoughts, desires and dreams, and also start an internal dialogue with your babe.
 - Plant a tree, if your energy levels allow it, as a symbol of nurturing life

A Time for Nurturing your RELAXED Spirit



Decrease stress to decrease risks during pregnancy.

- **Relaxation Ideas:**

- Pre-natal Yoga classes – are offered at Full Circle Family Care
- Practice Belly Breathing. Don't wait until labor. Take 2-5 minutes a day to inhale deeply through your nose, letting the breath fill your belly, imagine this breath synchronizing with your baby's breath. As you breath in, say the word 'soft' , as you breath out, say the word 'belly'.
- Meditate upon mantras to calm stress and face your fears. Try repeating this mantra "I am as vast as the universe-open, trusting and flexible."
- Carve out nap-time. If your body wants to collapse, let it. Don't let your body overdo work or play.

Resources - Make your own Baby Products



All Natural Baby Wipes Solution

- 1 cup water
 - 1/4 cup Aloe Vera Juice
 - 1 tablespoon Apple Cider Vinegar
 - 1 tablespoon Calendula Oil
 - 1 teaspoon grated, unscented soap
 - 2 drops Lavender Oil
 - 2 drops Tea Tree Oil
- Mix in a jar and then pour over organic cloth wipes or paper towels. This baby wipe solution is anti-fungal and great for discouraging yeast diaper rashes. The essential oils can be found at any health food store and is sure to please the nose.

A Better Baby Oil

- 1 cup Grapeseed or Apricot Kernel oil
- 4-6 drops lavender essential oil
- 1-2 vitamin E capsules (optional)

Herbs That Can Be Used In Moderation In Pregnancy



This list refers to plants that may be used **in moderation** (1-2 cups of herbal tea per day) in pregnancy. Most other herbs are contraindicated.

Essential oils should be avoided.

- *Althea officinalis* (marshmallow root)
- *Balotta nigra* (black horehound)
- *Dioscorea villosa* (wild yam root)
- *Echinacea* species
- *Gallium aparine* (cleavers)
- *Matricaria chamomilla* (german chamomile)
- *Mentha piperita* (peppermint)
- *Pimpinella anisum* (anise)
- Red Raspberry Leaf tea
- *Urtica dioica* (nettle)
- *Viburnum opulus* (cramp bark)
- *Viburnum prunifolium* (black haw)
- *Zea mays* (corn silk)

Resources - Websites



- My website: **www.westchesternaturalhealth.com**
my email address: **lemke@westchesternaturalhealth.com** email me if you have questions.
- Testing your environment
 - **www.testyourair.com** – for inspections on air quality and mold
 - **www.discovertesting.com** – sells at-home testing kits as well as high quality air and water filters. Consider also filters for your shower and bath water since hot water makes chlorine more volatile.
- **www.waterfiltercomparisons.com** – to look at comparisons of water filters
- **www.cosmeticsdatabase.com** – to look up the safety of your cosmetic products. Having “organic” or “natural” in its name doesn’t necessarily mean it’s safer. Only 11 percent of ingredients found in personal-care products, organic or not, have ever been screened for safety. Includes baby products
- **www.scorecard.org** to look up the pollution emissions in your zip code