

Nutrition in Pregnancy

Good nutrition is preventative medicine and is one of the best gifts you can give to your baby. What better motivation could there be to bringing consciousness to the foods you eat than knowing you are creating a new life from those very foods? Excellent nutrition includes a whole foods diet, plenty of good water, sunlight, exercise, loving relationships, and the gentleness with yourself to accept those days when eating well does not get prioritized. The recommended amounts/ servings below are numbers to strive for, not to stress over. Do what you can to work approximately these amounts into your daily diet.

During pregnancy try to avoid the following: unpasteurized milk and cheeses, pate, uncooked or under-cooked meat, deli meats, unpasteurized juices, caffeine, alcohol, drugs, cigarettes, marijuana, medications (unless known to be safe for pregnancy), cat feces, toxins, x-rays, and stress.

1-2 liters of water

Keeping well hydrated can help prevent pre-term labor, urinary tract infections, headaches, and dizziness. Drinking water supports your kidneys, which are now responsible for filtering the increase in your blood volume and the waste products for both you and your baby. Using a glass or stainless steel water bottle throughout the day can help you know how much water you've been drinking. Another good source of nourishing liquid, beyond your 1-2 liters of water, are herbal infusions (see below). One good marker of hydration is the level of concentration of your urine. Unconcentrated urine is a good sign that you are drinking enough (though taking vitamins may effect the color of your urine).

Protein (4-5 servings)

Proteins are the building blocks of your baby's cellular make-up. A pregnant woman needs to increase her daily protein intake to total around 60 grams. In order to meet this requirement, it should be included in every meal, whenever possible. Protein is a sustained source of energy that doesn't subject your body to dramatic blood sugar ups and downs. High protein snacks like mixed nuts can be a great pick-me-up when you're feeling a little low on energy between meals. Some good sources include: meat and fish, dairy products, beans, eggs, soy products, nuts and seeds, nut butters.

Whole grains (4-6 servings), Vegetables and Fruit (5 servings, at least one green vegetable!)

Eating a varied diet filled with fresh vegetables and whole grains is a great way to assure you are getting a balance of vitamins and minerals. Organic fruits and vegetables contain more vitamins and minerals than their non-organic counterparts. Refined and processed foods such as white sugar and white flour can lead to unstable blood glucose levels, contain no nutritional value, and actually leech essential vitamins and minerals from you in order to be digested. Therefore, refined and heavily processed foods should be avoided when possible, especially in pregnancy.

Calcium (1200-1600mg) and Magnesium (460mg)

Calcium forms bones and teeth, and helps nerve and muscle function. Inadequate calcium is sometimes associated with muscle cramping, backache, high blood pressure, osteoporosis, tooth problems, intense labor and afterbirth pains. Calcium is especially important during pregnancy because it helps grow your baby's teeth and bones, aids muscle function, helps blood to clot, helps prevent leg cramps, and promotes relaxation and good sleep.

Exercise, especially weight-bearing, helps calcium assimilation as does Vitamin D. Some good sources of calcium include: dairy products, leafy greens (kale, collards, chard, etc), broccoli, tahini, almonds, seaweed, raspberry leaf and nettle infusions.

Magnesium works along with calcium to form a healthy skeletal system and is necessary for proper Calcium absorption. Magnesium is necessary for efficient muscle contraction, nerve function, protein synthesis, regulation of normal blood pressure and blood sugar levels and is responsible for the strength of our teeth and bones. If you are going to take a Calcium supplement, make sure it contains Magnesium as well. Some good food sources of Magnesium include nuts, whole grains, fish and legumes. Herbal sources of magnesium include watercress, alfalfa, parsley, and wild lettuce.

Iron

Getting plenty of iron is important to prevent anemia. Anemia is diagnosed, in part, by a low hemoglobin count which is a measure of the oxygen carrying capacity of your blood. Hemoglobin is formed using iron. Due to the normal blood volume expansion in pregnancy, it is normal for your hemoglobin to drop as much as 1- 2 points by 28 weeks. Getting enough iron helps to keep your hemoglobin at a non-anemic level even after this drop (we like to see your hemoglobin stay above 11 mg/dl). Fatigue and diminished vitality are two major symptoms of iron deficiency. Anemia can be particularly difficult in the postpartum period, as it renders you more susceptible to infections, poor healing, extreme fatigue and postpartum depression. Having sufficient iron is also important for your baby. Very low iron can cause growth restriction and leave the baby with insufficient body fat. During pregnancy the baby stores iron in his/her liver for the newborn period.

Drinking orange juice, or having another vitamin C rich food with iron increases absorption. Calcium blocks iron absorption and should be eaten separately. Good sources of iron include: leafy greens, beets, whole grains, eggs, seaweed, dried fruit, blackstrap molasses, beans, seeds, prune juice, meat (especially organ meat) and cooking in cast iron pans. Herbal sources of iron include borage, nettles, red raspberry leaf, parsley, horsetail, alfalfa, red clover, and floradix (herbal iron supplement)

Folic acid

Requirements are increased during pregnancy (from 400 mcg pre-pregnant to 800 mcg during pregnancy) as it helps with the formation of red blood cells, development of your baby's central nervous system, and the prevention of neural tube defects (mostly in the first 8 weeks of pregnancy). The best food sources are leafy greens, liver, beans, whole grains.

Prenatal Vitamins

Since it's hard to know how much we really absorb from pills, prenatal vitamins should be used as *supplements* to your already well-balanced and healthy diet. Food-based prenats, such as Rainbow Light, contain vitamins and minerals in forms most easily assimilated. Also, taking vitamins throughout the day, rather than a "one a day" variety ensures better absorption.

Herbal Infusions

Nettles and Red Raspberry Leaf infusions are also great "prenatal vitamins" themselves. **Red Raspberry Leaf** is a uterine tonic which may allow the contracting uterus to work more effectively in labor. It is rich in vitamins C, E, A, and B complex, phosphorus, potassium, and easily assimilated forms of calcium and iron. **Nettle Leaf** is one of the most nourishing tonics known. It is rich in vitamins A, C, D and K, calcium, potassium, phosphorus, and iron. Nettles are great kidney support, act as a digestive restorative, respiratory strengthener, help to prevent postpartum hemorrhage, reduce hemorrhoids, and increase the richness and amount of breastmilk. You can get both of these herbs bulk at Whole Foods, Lhasa Kharnak, or from a good on-line source such as MountainRoseHerbs.com. **To make our pregnancy tea:** Nettle Leaf (1 part), Raspberry Leaf (1), Alfalfa Leaf (1/2), Red Clover Leaf and Flower (1/2), Peppermint Leaf (1/4), Lemon Balm (1/4). Cover the bottom of a quart jar with 1/2 inch of herbs, cover with boiling water, cap, and let sit overnight. In the morning, strain (squeezing the herbs to get all that good liquid out) and enjoy! It can be re-warmed or enjoyed cold. Refrigerate what you are not drinking, and use within two days.

Enjoy your foods! Trust your intuition. Know that you know how to best nourish yourself. Take advantage of this time to set-up or strengthen healthy habits that will nourish your whole family for years to come.

	Protein (g)	Iron (mg)	Calcium (mg)		Protein (g)	Iron (mg)	Calcium (mg)
Meat, Eggs				Dried Apricots, uncooked, 1/2 C	4	4.2	50
Beef (ground, reg.), 4oz.	18.8	2	10	Blackberries, 1 C	1	0.8	46
Pork (roast, lean & fat)	21	2.7	9	Dates, 1 C	4	5.3	105
Lamb (leg, lean & fat)	22	1.4	9	Raisins, 1 C (pressed down)	4	5.8	102
Chicken (flesh only)	20	1.4	8	Prunes, uncooked, 4 med.	1	1.1	14
Liver (beef, fried)	15	5	6	Prune Juice, 1 C	1	10.5	36
Whitefish, 3 oz.	16	0.3	22	Tomato Juice	2.2	2.2	17
Salmon, 3 oz.	16	0.7	10	Avocado	4	2.1	22
Egg (1)	6	1.1	27	Vegetables			
Dairy Products				Spinach, cooked, 1/2 C	2.5	2	89
Whole Milk, 1 C	8.5	0.1	290	Kale	2.2	1.1	90
Lowfat Milk, 1 C	10	0.1	350	Collard Greens	0.8	0.7	52
Nonfat Milk, 1 C	8.8	0.1	300	Beet Greens	0.7	1.2	42
Goat Milk, 1 C	8.7	0.2	326	Parsley	2.2	3.7	122
Plain Yogurt				Broccoli	2.6	0.8	42
Whole Milk, 1 C	7.4	0.1	270	Brussel Sprouts	3.3	1.2	36
Partially Skim, 1 C	8.3	0.1	290	Mushrooms	1.5	0.9	4
Lowfat Cottage Cheese, 1 C	28	0.3	137	Sauerkraut	2.4	1.2	85
Swiss, 1 oz.	7.8	0.3	260	Peas, green, cooked, 1/2 C	5	1.9	18
Mozzarella, Part Skim, 1 oz.	7.7	--	181	Lima Beans, cooked, 1/2 C	8	2.9	28
Cheddar Cheese, 1 oz.	7.1	0.3	140	Wakame, 2 T	0.3	0.2	15
Ricotta Cheese	27.7	0.9	509	Beans, Nuts, Seeds			
Parmesan Cheese	10	0.2	336	White Beans, 1 C	14	5	90
Jack Cheese, 1 oz	6.9	0.2	210	Tempeh, 100g	19	2.7	111
Grains & Cereals				Tofu, 1/2 C	10	1.8	204
Bread, white, enriched 1 slice	2	0.6	20	Lentils, 1 C cooked	10	4.2	50
Bread, whole wheat, 1 slice	2.4	0.9	23	Garbanzo Beans, 1 C	15	4.7	80
Spaghetti, enriched, 2 oz	7.3	2.2	10	Black Beans, 1 C	15	3.6	46
Spaghetti, whole wheat, 2 oz.	8.4	2	23	Pumpkin Seed Kernels, 1 C	41	16	71
Cornmeal, enriched 1 C	11	5.7	7.3	Sunflower Seed Kernels, 1 C	35	10	170
Oats, 1 C	26	7.4	84	Sesame Seeds (whole), 1 C	27	15	1700
Quinoa, 1 C	22	16	102	Black Walnuts (chopped), 1 C	26	7.5	Tr.
Rice, brown, long grain, 1 C	14.8	3.2	64	Peanuts (roasted), 1/2 C	19	1	50
Fruits				Peanut Butter, 1 T	3.9	0.3	6
Apple, 1	0.3	0.3	10	Almonds, 1 C	26.4	6.7	332
Orange, 1	1.2	0.1	52	Carob Flour, 1 C	4.8	3	358
Banana, 1	1.2	0.4	7				

Fats, Essential Fatty Acids, and Seafood

Fats are important in the development of your baby's brain. However, you should avoid unhealthy fats such as hydrogenated oils, also known as, transfats. Good sources of fat include: nuts, avocados, organic eggs, ground flax seeds, flax seed oil, olive oil, coconut oil, organic butter, fish, and fish oil.

Essential fatty acids (omega-3 and omega-6) are highly concentrated in the brain and appear to be particularly important for normal brain growth and development. Omega-6 plays a role in promoting inflammation while omega-3 helps reduce inflammation, therefore a proper balance is crucial for maintaining health. Omega-6 is found in meat as well as many types of oils, especially those used in processed foods, such as safflower, sunflower, corn, and soy. Most diets provide at least ten times more omega-6 than omega-3. The proper balance should be roughly three or four times more omega-6 than omega-3. There are three major types of Omega-3 fatty acids: alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). EPA and DHA are the two types of omega-3 fatty acids more readily used by the body.

Sources of ALA

Flaxseeds (linseeds) & oilⁱ, canola oilⁱⁱ, soybeans & oilⁱⁱ, pumpkin seeds & oil, purslane, perilla seed oil, walnuts & oilⁱⁱⁱ

Sources of EPA and DHA

Cold-water fish such as salmon, mackerel, halibut, sardines, and herring, specialty eggs (from hens fed flax or algae rich diets)

Because there is debate about the body's effectiveness in converting ALA into EPA and DHA, seafood is the ideal source of the forms of omega-3s most readily available for the body's use. However, according to the Environmental Protection Agency, the most common source of mercury exposure for people in the U.S. is contaminated seafood. It is well known that mercury damages the nervous system, and that fetuses and children are particularly vulnerable. Mercury can be transmitted via breastmilk. Therefore, some women choose to use purified fish oil supplements during pregnancy and lactation^{iv}. If you do eat seafood, please look for fish likely to have lower concentrations of mercury.

Lowest in Mercury

Anchovies
Butterfish
Catfish
Clam
Crab (Domestic)
Crawfish/Crayfish
Croaker (Atlantic)
Flounder*
Haddock (Atlantic)*
Hake
Herring
Mackerel (N. Atlantic, Chub)
Mullet
Oyster
Perch (Ocean)
Plaice
Pollock
Salmon (Canned)**
Salmon (Fresh)**
Sardine
Scallop*
Shad (American)
Shrimp*
Sole (Pacific)
Squid (Calamari)
Tilapia
Trout (Freshwater)
Whitefish
Whiting

Moderate Mercury

Eat six servings or less per month:
Bass (Striped, Black)
Carp
Cod (Alaskan)
Croaker (White Pacific)
Halibut (Atlantic)*
Halibut (Pacific)
Jacksmelt (Silverside)
Lobster
Mahi Mahi
Monkfish*
Perch (Freshwater)
Sablefish
Skate*
Snapper*
Tuna (Canned chunk light)
Tuna (Skipjack)*
Weakfish (Sea Trout)

High Mercury

Eat three servings or less per month:
Bluefish
Grouper*
Mackerel (Spanish, Gulf)
Sea Bass (Chilean)*
Tuna (Canned Albacore)
Tuna (Yellowfin)*

Highest Mercury

Avoid eating:
Mackerel (King)
Marlin*
Orange Roughy*
Shark*
Swordfish*
Tilefish*
Tuna (Bigeye, Ahi)*

***Fish in Trouble! These fish are perilously low in numbers or are caught using environmentally destructive methods.**

**** Farmed salmon may contain PCB's, chemicals with serious long-term health effects.**

Information in this guide is based on averages from the FDA's test results for mercury in fish and the EPA's determination of safe levels of mercury for women of reproductive age. Some individual fish have mercury concentrations significantly higher than the average. For more details, see: www.nrdc.org/mercury.

Tips for reducing exposure to PCBs and other contaminants that collect in the fatty parts of fish:

- Remove visible fat before cooking.
- Do not eat the skin.
- Grill, broil or bake fish.
- Let fat drip off during cooking.
- Don't use fat for gravy or sauces.
- Eat a variety of fish.
- Consume younger, smaller fish.
- If you eat more than the recommended amount of fish one month, try to eat less the next month.^v

ⁱ Flaxseeds must be ground in order to be absorbed by the body; however, ground flax must be used within 24 hours or kept in a light resistant container.

ⁱⁱ Canola and Soybeans are commonly genetically modified so buy organic whenever possible.

ⁱⁱⁱ Pesticides often gather in fats and oils, so buy organic whenever possible.

^{iv} Be sure to buy fatty acid supplements made by established companies, such as Nordic Naturals, who use independent laboratories to certify that their products are free of any detectable amounts of heavy metals such as mercury.

^v Tips from "Fishing for the safest seafood". www.doh.wa.gov/fish