Nutrition for Mother and Baby

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Licensed Functional Nutritionist

Information in this lecture is in no way intended to substitute for a medical assessment and treatment plan.
What is Naturopathic Medicine?

Philosophical Tenants

- 1st, do no harm
- Act in cooperation with the healing power of nature
- Address the fundamental cause of disease
- Heal the whole person thru individualized treatment
- Doctor as teacher – teach the principles of healthy living and preventative medicine
- Practice prevention with patients and the public
What is Functional Diagnostic Nutrition?

- An individualized approach to nutrition which addresses root causes of health complaints.
  - Customized diet to support each person’s unique biochemistry
  - Investigate functioning of hormonal, digestive, detoxification and immune pathways
  - Give the body what it needs to do its job
  - Remove blocking factors that impede function
    - Food intolerance, parasite, pathogen, heavy metals, incorrect diet, etc.
Overview

- Identify and treat underlying causes of infertility
- Optimize health of egg and sperm before conception
- Unique nutritional needs in pregnancy – for Mom and baby
- Natural treatments for common illnesses of pregnancy
- Safe herbs, homeopathics, and medicinal foods for Mom and baby
What is Infertility?

- Infertility
  - 1 year of trying to conceive without success
- Male:female ratio:
  - Female 40%, male 30%, and combined/unknown 30%
- In couples who conceive normally, 50% do so following 3 tries whereas about 92% conceive following 12 attempts.
Possible Female Causes

- Hormonal abnormalities
  - Thyroid, adrenals, hypothalamus/pituitary imbalance
- Functional/Structural abnormalities
  - Polyps, cysts, fibroids, endometriosis
- Pelvic Inflammatory Disease (usually secondary to Chlamydia)
- Timing
- Ovarian Age
- Previous abdominal surgeries (including uterine or cervical)
Possible Female Causes

- Timing
- Diet
- Hormonal abnormalities – thyroid, adrenals, hypothalamus/pituitary imbalance
  - Past use of OCP’s, depletion of B vitamins
- PCOS
- Functional abnormalities – polyps, cysts, fibroids
- Endometriosis
- Infection (i.e. Chlamydia, gonorrhea)
- Ovarian Age
- Previous abdominal surgeries (including uterine or cervical)
Hormonal imbalances

- “Estrogen dominant” conditions
  - Xenoestrogens, extra body fat, decreased liver clearance
  - Often women will have more severe PMS than other women
  - Creates relatively low progesterone
    → miscarriage

- Thyroid
  → Thyroid conditions often undiagnosed
  → Hypo
  → Hyper

- Adrenals –
  → Adrenal stress creates more hormonally active fat cells around the midline –
  → “fight or flight” mode not conducive to pregnancy
Multiple Miscarriages

- Progesterone: 60mg/day cream
- Bioflavonoids: Opti - Bioflavonoids 3000mg/day
  - Maintains blood vessel health
- Standard Process Utrophin - Uterine glandular: 1 tid
- Mother’s cordial: WWH: 2 droppers tid
- Acupuncture and herbs
Male contributors

- Sperm
  - Low sperm count
  - Decreased mobility
  - Altered viscosity
  - Morphology

- Impotency
  - Physiological
  - Psychological
Effects fertility but also unborn babies

- Plastics
- Mercury

- Organic – hormones in meats, chemicals that mimic hormones

- Many chemicals pass thru the placental barrier
- Many chemicals are “lip-o-philic,” fat loving, get excreted in breast milk

- Good idea to detox before conception, definitely not after

- Exercise is a critical part of detoxification
Unique nutritional needs: Diet

- Slight increase in calories, don’t need to seek them out. Eat when hungry.

- AVERAGE Weight gain ~25-35 lbs
  - Baby, placenta, uterus, breasts, blood, amniotic fluid, fat, tissue

- Protein: Increased protein needs
  - Choose high quality sources, pastured meat and eggs, small amounts of fermented soy, wild fish with chlorella

- Carbohydrates
  - Emphasize complex carbs like vegetables, green leafies, and fruit.
  - Some unprocessed whole grains okay for some, be cautious with gluten (some studies show increased chance of baby being gluten intolerant if mother’s gluten ingestion is high)

- Fats: must have fats for brain development – fish oils – Omega 3, high in EPA and DHA
  - Fish oil easier for the body to use than flax – even primarily vegan cultures eat fish during pregnancy
  - Saturated fats & cholesterol mandatory for cellular development such as butter, ghee, lard, coconut oil, egg yolks, & palm oil
Unique nutritional needs: Diet

- Eating well is important at every point in your life
  - Consequences of your choices are increasingly more important when you are trying to conceive or pregnant
- Learn what signals to listen to
  - You do not need to count calories, carbs, etc.
  - Follow the right diet for your biochemistry & know that it will likely change throughout your pregnancy
## Body Language Log

**Date:** ____________

### Breakfast

<table>
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<tr>
<th>What did you eat?</th>
<th>Ratio?</th>
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<tr>
<td></td>
<td>50% CHO 50% P/F</td>
</tr>
<tr>
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<td>25% CHO 75% P/F</td>
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<td>75% CHO 25% P/F</td>
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### Positive Reactions

- **Satisfaction**
  - Feel full and content
  - No sweet cravings
  - Not hungry at all
  - No need for a snack

- **Energy**
  - Feel recharged
  - Energy is even, not excessively high/low
  - No feelings of crashing

- **Mood**
  - Feel uplifted
  - Mind is clear with no fog
  - Can easily put words and thoughts together

### Negative Reactions

- Physically full, BUT still hungry (xs F/P)
- Desire for something sweet (xs F/P)
- Already hungry (insufficient cals, xs CHO)
- Need to snack (insufficient cals, xs CHO)
- Energy has not improved at all (xs F/P)
- Feel wired, but tired underneath (xs CHO)
- Crashed and burned. Need a nap. (xs CHO)
- Feel anxious and/or irritable (xs CHO)
- Brain is foggy (xs CHO)
- Gut feels heavy (xs F/P)

**Translation:** ____________
Healthy Diet Tips

- DO eat the best quality foods, avoid processed foods
  - Know the dirty dozen
  - Whole foods
  - Avoid chemicals, artificial sweeteners, flavor enhancers, refined salt, alcohol, vegetable oils, coffee in excess, soda, fast food
  - Understand cravings as a signal of what your body needs (not an excuse to binge), and make best choices available

- There is a high percent of false positive glucose tests
  - Opt for Hemoglobin A1C
  - Have protein & quality fats with your carbs
  - Learn your power carbs (charts)
Sugar/starch in fruits & grains

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>Food Items</th>
<th>Grams of Protein</th>
<th>Grams of Carbohydrates</th>
<th>Grams of Fat</th>
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<td>Watermelon</td>
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Whole Grains

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<th>Grams of Protein</th>
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<td>Amaranth</td>
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<tr>
<td>1/2 cup</td>
<td>Barley</td>
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<tr>
<td>1/2 cup</td>
<td>Buckwheat</td>
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<tr>
<td>1/2 cup</td>
<td>Kamut</td>
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<tr>
<td>1/2 cup</td>
<td>Millet</td>
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<td>1/2 cup</td>
<td>Oat</td>
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<tr>
<td>1/2 cup</td>
<td>Quinoa</td>
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<td>Rice (all types)</td>
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<tr>
<td>1/2 cup</td>
<td>Rye</td>
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<td>1/2 cup</td>
<td>Spelt</td>
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<td>1/2 cup</td>
<td>Triticale</td>
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<td>Wheat</td>
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<tr>
<td>1/2 cup</td>
<td>Wild Rice</td>
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Lowest sugar grain=wild rice

Lowest sugar fruit=rhubarb...but strawberries, watermelon, grapefruit & casaba melon are all very low (below 10 grams of carbs)
Sugar/starch in veggies

<table>
<thead>
<tr>
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<th>Grams of Protein</th>
<th>Grams of Carbohydrate</th>
<th>Grams of Fat</th>
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<td>Artichokes</td>
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<tr>
<td>Asparagus</td>
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<td>Bamboo Shoots</td>
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<td>Beets</td>
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<td>Brussel Sprouts</td>
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<tr>
<td>Jicama</td>
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Highest sugar greens = kale, dandelion & turnip

Lowest sugar veggies = mushrooms, zucchini, celery, tomatoes & sea vegetables
Physiology of Pregnancy - Weight

- Baby 6-8 pounds
- Placenta 1-2 pounds
- Uterus 2 pounds
- Amniotic Fluid 1.5-2 pounds
- Breasts 1 pound
- Blood Volume 2.5-3 pounds
- Fat 5 pounds
- Tissue, fluid 4-7 pounds
- Total: 24-35 pounds
Unique Nutritional Needs: Things to Avoid

- Extra emphasis on organic foods
  - Exposure to toxins have greatest risk in first 8 weeks
    - Damage can occur any time
- Avoid sugar, caffeine, alcohol, white grains, artificial sweeteners, trans fats, refined salt, vegetable oil
  - Sugar depletes zinc, magnesium, and vitamin C
  - Caffeine depletes the adrenals, zinc, magnesium, and B vitamins
- Avoid high mercury fish (tuna, albacore, swordfish, halibut, shark, mackerel, etc.)- chlorella
- Avoid known food allergies and/or sensitivities
- Avoid cat litter boxes ➔ Toxoplasmosis infection (cat litter should not be part of anyone’s diet, but pregnant woman should also avoid inhalation) 😊
Unique nutritional needs: Prenatal Vitamins

- Begin pre-pregnancy (up to 1 year before conception), continue throughout breastfeeding
- Well balanced diet often not as nutrient dense as we’d like so supplementation is recommended
- Key nutrients:
  - B vitamins – B6, B12, folic acid
    - B6 part of melatonin, serotonin, and thyroid regulation; depleted by OCPs
      - Food sources: whole grains, wheat germ, egg yolks, peas, carrots
    - B12 – deficiency may predispose baby to metabolic errors and possibly neural tube defects
      - Food sources: mostly meats, rare in plant sources
    - Folic acid – deficiency leads to neural tube defects; critical in early PG (at least 800mcg-1mg), so advised for all women of child-bearing age; depleted by OCPs and marijuana use
Unique nutritional needs: Prenatal Vitamins

Key Nutrients (Continued)

- Iron – baby relies on iron from mother’s breast milk for 4-6 mos supplement with caution → toxic dose potential
  - (more info in anemia section)
    - Decreased iron in children is associated with learning disabilities and ADHD
    - Beets, kidney beans, organic red meat, liver
- Calcium – baby uses about 300mg/day from Mom for bones; take with Mag and Vitamin D
  - Leafy greens, almonds, bone broth, organic grass-fed dairy
- Vitamin D – for bone and teeth development; supplement with caution → toxic dose potential
  - Sunshine ☀ activates Vitamin D in the skin, fish, liver
Unique Nutritional Needs: Other Nutrients

- **Vitamin A**
  - Important for healthy immune functioning
  - Use Mixed Carotenoids or Beta Carotene ONLY
  - Straight Vitamin A (Palmitate) has been shown to be TOXIC to unborn babies in amounts above 8,000 IU
  - Food Sources: yellow and orange fruits and veggies, liver

- **Vitamin C**
  - Important for nerve, gums, teeth, adrenal health, and infection prevention
  - Food Sources: cabbage, cucumbers, all fruits (especially citrus), tomatoes

- **Vitamin E**
  - Important for pre-eclampsia prevention, scar prevention (oral, not topical)
  - Food Sources: brown rice, parsley, wheat germ, sunflower seeds
Unique Nutritional Needs: Other Nutrients

○ Vitamin K
  ● Important for bone health and to prevent pg related nausea
  ● Necessary to prevent clotting disorders in newborns, many states require Vit K injections to be administered immediately after birth. Often midwives will offer an liquid oral drop alternative.
  ● Food Sources: squash, green leafies, parsley, brown rice, kelp; nettle tea & alfalfa tea; grass-fed raw dairy

○ Magnesium
  ● Important for fetal and maternal help both before and after delivery
  ● May help to prevent pre-eclampsia
  ● Food Sources: almonds, barley, dried fruits, chocolate, potatoes; alfalfa tea, dandelion tea

○ Zinc
  ● Important for fetal growth and immunity, may be helpful to prevent birth complications
  ● Food Sources: Meat, pumpkin seeds, beets, broccoli, fish, lentils, wheat bran and germ
Unique Nutritional Needs:
Other Nutrients

- Probiotics
- Fish oil
December 29, 2006 — Intake of fish oil supplements by pregnant women is safe for the fetus and infant and may benefit the infant's hand and eye coordination, according to the results of a double-blind, randomized trial reported in the December 21 Online First issue of the *Archives of Diseases in Childhood, Fetal & Neonatal Edition*.

"During gestation, large amounts of docosahexaenoic acid (DHA; 22:6n-3) and arachidonic acid (20:4n-6) are deposited in the fetal retina and brain, and these fatty acids seem to be critical for normal neuronal and visual development," write J. A. Dunstan, MD, from the University of Western Australia, Princess Margaret Hospital in Perth, Australia, and colleagues. "The composition of long-chain polyunsaturated fatty acids (LC PUFAs) influences membrane stability, fluidity and function of many cell types through its effects on gene expression and tissue differentiation. Deficiencies in LC PUFAs could have implications for wide-ranging effects on health and development."
In this study, 98 pregnant women were randomized to receive supplementation with n-3 LC PUFA (2.2 g of DHA and 1.1 g eicosapentaenoic acid [EPA]/day) or placebo (olive oil) from 20 weeks' gestation until delivery. A total of 83 women (n = 40 in the fish-oil–supplemented group; n = 43 in the placebo group) and their infants completed the study, with 10 infants lost to follow-up. The infants (n = 72) were evaluated at age 2-1/2 years. The main endpoints were effects on infant growth and developmental quotients (Griffiths Mental Development Scales), receptive language (Peabody Picture Vocabulary Test), and behavior (Child Behaviour Checklist).

Compared with children in the placebo group (n = 39), children in the fish-oil–supplemented group (n = 33) had a higher mean score for eye and hand coordination (114 ± 10.2 vs 108 ± 11.3; \( P = .021 \), adjusted \( P = .008 \)). Eye and hand coordination scores were correlated with n-3 PUFA levels in cord blood erythrocytes (EPA: \( r = 0.320 \) and \( P = .007 \); DHA: \( r = 0.308 \) and \( P = .009 \)) and were inversely correlated with n-6 PUFA (arachidonic acid: \( r = 20.331; P = .005 \)). At age 2-1/2 years, both groups had similar growth measurements.
Vegan Diets for Pregnancy

- Drawbacks
  - Problem getting enough protein - has to eat a LOT of beans, a LOT of nuts, etc.
  - Problem getting enough protein variety
  - May not get enough nutrients such as iron, calcium, vitamin B12, vitamin D, vitamin B6, zinc
Vegan Diet Recommendations

- Focus on high calcium from leafy greens like kale, fortified orange juice, tofu, almonds, broccoli, enhanced soy milk.

- Vitamin D relies on sun exposure and supplements

- MUST take B12 supplement

- Iron - eat raisins, molasses, cook in cast iron, take extra iron in supplement (some iron in most pre-natals)

- May eat too many CHO

- May eat too much soy - high allergen, missing methionine

  Can lead to bloating and GI distress, even if no allergy

- May be low in EFA
Vegetarian diet during pregnancy

- A balanced vegetarian diet *can* provide all the nutrients you need for a healthy pregnancy, however, many women find themselves craving meat while pregnant even though they haven’t eaten it in years.

- Must pay special attention to getting enough protein, vitamin B12, calcium, vitamin D, zinc, and iron while pregnant and breast-feeding.
  - These nutrients are vital to fetus's cellular growth, brain and organ development, and weight gain.

- A vegan diet places both mother and fetus at risk of being poorly nourished during your pregnancy.
Nutrition for (almost) Daddies

- Decreased nutritional status in father’s can also lead to birth defects
  - i.e. fathers with low vitamin C status are more likely to have children who develop leukemia
  - “Genetic” conditions are partly nutritional deficiencies thru the generations
    - Certain nutrients (especially B vitamins) essentially turn genes on and off
  - For up to a year before conception, fathers should be just as focused on nutrition as mothers – a good quality MVM is recommended
Common illnesses in pregnancy

- Anemia
- Constipation
- GI regurgitation
- Nausea
- Hemorrhoids
- Gestational Diabetes
- Pre-eclampsia and Eclampsia
- Vaginal strep B infection
Common illnesses in pregnancy:

Iron deficiency Anemia

- Due to hemodilution
- Signs/Symptoms: pallor, fatigue, SOB, pale conjunctiva
- Risks: LBW baby, pre-term, complicates blood loss during birth
- Solution: supplement iron (30-60 mg citrate, w/ Vita C), increase iron rich foods
  - Red meat, raisins, prunes, spinach, molasses, beets (including beet greens) cook in cast iron skillet
Common illnesses in pregnancy: Constipation

- Due to increased nutrient and water absorption
- Possible Solutions:
  - Fiber not necessarily the answer: what is root cause?
    - Food intolerance?
    - Fine-tune diet (experiment with ratios of protein, fat & carb)
    - **Beans**, peas, legumes, flax, psyllium, whole grains, fruits & veggies, stewed prunes are high fiber foods
  - Alpha-galactosidase enzyme for bean digestion
  - “5 P’s”
    - Prunes, plums, peaches, pears & aPricots
  - Increase water intake,
    - Begin day with warm water and lemon juice
  - Exercise
- Avoid laxative/purgative herbs which may stimulate uterine contraction
Common illnesses in pregnancy: Esophageal Regurgitation (GERD)

- Due to increase in progesterone → decreased tone and motility of smooth muscle
- Possible Solutions:
  - Eat well before lying down, elevate bed
  - Warm water with lemon before meals
  - Avoid “trigger foods”
    - No coffee, mints, peppermint tea, soda, chocolate, spicy foods, or known food sensitivities
  - Herbal treatments (i.e. slippery elm gruel), licorice chews, marshmallow tea
Common illnesses in pregnancy: Nausea

- Usually 1st trimester only
- Possible Solutions:
  - Vitamin B6
  - Vitamin K1
  - Ginger: capsules, tea, tincture
  - Peppermint tea
  - Chamomile tea
  - Avoid greasy, fried foods, watch spicy, sweet
  - Carbonated beverage like club soda with lemon, non-acidic juices (grape, apple)
  - Small frequent meals
  - Take all nutritional supplements with food
  - Sea-bands
Common illnesses in pregnancy: Hemorrhoids

Many women get hemorrhoids with pregnancy due to increase in downward pressure

Possible Solutions:

- Avoid straining or lifting heavy items
- Try to move around and not sit or stand too long at one time
- Regulate bowel movements
- Nutrients: Rutin (bioflavinoid), B6
- Herbal astringent suppositories (i.e. witch hazel)
- Anal exercises: Lie on back with knees bent and pillow under hips and hold anal muscles tight for several seconds at a time, relax, repeat 10-15 times.
- Gentle exercise – walking, swimming
- Homeopathic topical ointments
Common illnesses in pregnancy:

- Stretch Marks

  - Not an illness but usually an undesired occurrence

  - Possible Solutions:
    - Hydration – the more water we consume the more supple the skin will become, avoid diuretics (caffeine)
    - Plenty of well-tolerated dietary fats
    - “Skin friendly” nutrients – Vitamin A, C, E
    - Moisturize – vitamin E oil, collagen-creams, “belly butters”
    - Massage – brushing skin to improve circulation
Common illnesses in pregnancy: Pre-eclampsia

- Pre-eclampsia is hypertension that arises during pregnancy

- Signs/symptoms:
  - Hypertension (140/90+), swelling, proteinuria

- Possible solutions:
  - PREVENTION is key as often this is incurable until the baby is born
  - Nutrients – pre-eclampsia is most associated with deficient protein intake, low magnesium, and low antioxidant status
Common illnesses in pregnancy: Eclampsia

- Eclampsia = Pre-eclampsia + increased protein in urine and brain swelling → convulsions
- MEDICAL EMERGENCY, labor must be induced
- Key is prevention of pre-eclampsia
Common illnesses in pregnancy:

Gestational Diabetes

- Non-diabetic women become glucose intolerant during pregnancy
- Predisposing factors:
  - Hispanic, Asian, African, Native American, Pacific Islander; BMI > 27 before PG; being > 25 yrs old; family history DM2; previous GDM experience
- Possible Solutions:
  - Prevention is key
  - Healthy diet (low processed grains, increased protein:carb ratio), variety of nutrients
  - Exercise – ideally an exercise routine is established before pregnancy
  - Multiple, Fish Oil, EPO oils, Chromium, DB-7
  - Cinnamon, green tea, ALA, Biotin, Fenugreek
Gestational Diabetes

- Screening at 24-28 weeks
- Early diagnostic tool: Low SHBG
  - High insulin levels lower SHBG
  - Can test in 1st trimester
- Predisposing factors: Hispanic, Asian, African, Native American, Pacific Island; BMI > 27 before pregnancy; being > 25 years old; family history DM2; previous GDM experience
Gestational Diabetes

- Increased in estrogens, progesterone, other hormones cause promotion of fat deposition, delayed gastric emptying, increased appetite

- As gestation progresses, insulin sensitivity steadily decreases, the pregnant woman must make more insulin to overcome that to keep blood sugar levels normal
Gestational Diabetes

- Increased risk of later NIDDM
  - 40% within next 10 years

- 30-69% more likely to have GDM with additional pregnancy

- Increased risk of HTN during pregnancy

- Fetal complications: Macrosomia (infant weighing more than 9 pounds); shoulder dystocia (leading to fetal injury or uterine hemorrhage); Neonatal hypoglycemia (causing coma or death)
Strep B infection

- Strep B prone to grow in vaginal canal and poses serious risks for babies coming through the birth canal
- Treatments: probiotics – orally and vaginally
- Garlic, other pregnancy safe anti-microbials
Urinary Infections

- Prevention:
  - Void as necessary
  - Drink plenty of water
  - Cranberry capsules prn or 100% cranberry or cranberry combo juice daily

- D-mannose: Vital Nutrients, Pure
  - Works only against E.coli
  - 1/2tsp. per day q 3-4 hours

- Look at products such as Cranberry Forte (NF) to check for Vitamin A content

Any infections, look at gestational DM
Chemicals and Drugs in Pregnancy
NOT An Exhaustive List

- What pregnant woman can take:
  - Acetaminophen, antibiotics, antiemetics, antihistamines, antihypertensives, bronchodilators, guaifenesin (cough mucous medicine), natural progesterone
Chemicals and Drugs in Pregnancy
NOT An Exhaustive List

- What pregnant woman can not take:
  - androgens, anticoagulants, antidepressants, antithyroid drugs, aspirin or ibuprofen, barbiturates, benzodiazepines, chemotherapy agents, DES (diethylstilbestrol), estrogens, isotretinoin, lithium (except natural lithium), DHEA
Chemicals

- Avoid common chemicals/toxins in home and workplace - dry cleaners, pesticides and fertilizers, carbon monoxide (stuck in traffic jam), hair dyes, cleaning products, solvents (no new carpets or cabinets), heavy metals (lead paint, water from old pipes), etc.

- Increase antioxidants if cannot avoid exposure.
Herbs that prepare the uterus for delivery

For use during the last trimester or last month

○ Partridge berry
○ False unicorn
○ Blue cohosh
○ Raspberry (great as a tea)
Galactogogues (herbs that promote breast milk flow)

- Borage (leaf)
- Fennel
- Motherwort
- Vervain
- Chaste Tree
- Anise
- Vitanica product – “Lactation Blend”
- Mother’s Milk Tea
Pre and post birth

- Perineum care pre-birth – almond oil or nice salve massage on perineum nightly during last tri
- Bruised sensation – arnica
- Pelvic heaviness or bogginess – sepia
- For perineum tears – staphysagria
Good foods to nourish a post partum mom (these help promote nursing)

- Plenty of purified water
- Wild salmon
- Organic chicken or beef and vegetable soup with plenty of fresh herbs
- Greens!! Fresh salad greens, dark leafy greens, and green smoothies
- Sweet vegetables (yams, squash, carrots, beets)
- Raw nuts and seeds (almonds, walnuts, pumpkin seeds, sunflower seeds)
- Raw almond butter
- Whole grains (quinoa, amaranth, oats, sweet brown rice, millet, teff)
- Organic berries
- Sea vegetables
- Lentils
- Carminative herbs and spices (cumin, cardamom, fenugreek, ginger, mint, fennel seeds)
- Raspberry leaf tea (raspberry leaf along with fennel help to contract the uterus)
- Nettle tea enriches and increases milk production
- Healthy fats (avocado, extra virgin olive oil, virgin coconut oil, fresh flax or fish oil)
Foods to avoid during the post partum period (may cause upset in newborn baby)

- Any food Mom may be sensitive to
  - Look for signs baby is sensitive (uncontrollable crying worse after eating, constipation, rash, etc)
- Refined foods
- Processed sugar
Safe exercise

- If you were previously sedentary, now isn’t the time to undertake a hardcore fitness regimen
  - Light walking, calisthenics, light weights, avoid exercises in supine after 12 weeks
  - Make sure to listen to your body & avoid exhaustion during and post workout
  - Stay hydrated
Safe exercise

- If you’re currently active
  - Continue to do what you’re doing unless or until it doesn’t feel good anymore
  - Strength training throughout pregnancy associated with less back pain during pregnancy, shorter and easier labor, and quicker post-partum recovery.
    - Rows, squats, wall pushups, light stretching
Safe exercise

- Keep heart rate within a range you can still talk, don’t worry about BPM
- Impact is fine if you are used to it and it doesn’t feel painful
- Avoid over stretching
  - Relaxin & oxytocin relax joints, less stability
- Stay hydrated
- Don’t exercise on an empty stomach, have snack nearby if feel lightheaded
- [www.nourishingmeals.com](http://www.nourishingmeals.com)
  - Delicious healthy recipes, many vegan and gluten free

- [www.nutritiondata.com](http://www.nutritiondata.com)
  - Nutrition facts on any food you can think of; find out if you are getting enough proteins/carbs/fats for babies development

- [Women’s Bodies, Women’s Wisdom](http://www.nourishingmeals.com)
  - By Christianne Northrup
  - An awesome resource for any woman!

- [Real Food for Mother and Baby](http://www.nourishingmeals.com)
  - By Nina Planck
Dr. Holly German

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  - Available at New Leaf & all local book stores, my website & on Amazon.