

Preconception: Improving Your Health and Enhancing Your Fertility When Planning for Pregnancy

By Janelle Durham, Birth Educator, Parent Trust for Washington Children. www.transitiontoparenthood.com

The 5 most important things to do:

If you want to start with just a few basic steps, the Center for Disease Control recommends these steps as the top 5 priorities:

- Take 400 mcg of folic acid a day.
- If you have a medical condition (e.g. asthma, diabetes, epilepsy, or obesity), be sure it's under control.
- Talk to your doctor or pharmacist about any medicines or supplements you take.*
- Stop smoking and drinking alcohol.*
- Avoid exposures to toxic substances or potentially infectious materials.*
* these items are important for dads-to-be too!

I will add one essential recommendation: Decide if you're really ready for a baby in your life!

Pre-conception Period:

A key thing to remember is that the health of both the mother AND the father is important for healthy egg and sperm, and thus for a healthy pregnancy and a healthy baby! The ideal period for improving your health is 4 months prior to when you'll start trying to conceive, as sperm development and egg maturation both take about 100 – 120 days. The sooner you start to get healthier, the better.

Nutrition and Fitness

Pre-Conception Nutrition:

Women planning a pregnancy are encouraged to take 400 mcg of folic acid per day (1 mg if you have diabetes or epilepsy, or are obese). Folic acid has a huge impact on reducing the risk of certain birth defects, and the risk of miscarriage. It may be best to get folic acid in supplement form; the Institutes of Medicine say the body absorbs about 50% of the folate in foods, 85% of the folic acid in fortified foods (e.g. bread and cereal) and 100% of the folic acid in vitamin supplements.

Improving your diet overall, including choosing healthy, whole foods, organic if possible, with few additives and hormones will be helpful. The Fertility Diet by Chavarro and Willett recommend these steps: Avoid trans-fats, use more unsaturated vegetable oils, eat more vegetable protein (beans and nuts) and less animal protein, choose whole grains and "slow carbs", have a serving of dairy products each day that has its full fat content (e.g. whole milk instead of skim), take a multivitamin*, and get plenty of iron (but not from red meat). They also recommend that you aim for a healthy weight, exercise, and drink plenty of water, caffeine and alcohol in moderation, but avoid sugared sodas. If you suspect you have food allergies, intolerances and mal-absorption problems, it's important to diagnose those before starting a pregnancy.

*Many care providers also recommend starting prenatal vitamins during the preconception period.

For more nutrition recommendations, read about nutrition for pregnancy. Almost all recommendations for pregnancy will be helpful for you, just don't add extra calories in until you're pregnant!

Pre-Conception Health: Get to a healthy weight before conceiving.

Ideally, before pregnancy, your BMI (body mass index) should be between 20 and 26. Under 18 is considered underweight. Over 35 is considered overweight. (Look online for BMI calculators.)

If you are underweight: that may reduce your fertility – your ovaries may still be producing and releasing eggs, but the lining of the uterus may not be adequate for a healthy pregnancy. If you are severely underweight, you may not be menstruating and may be infertile. Beginning pregnancy

underweight increases your chances of pre-term birth and low birth weight. If you have a history of anorexia, work with a counselor and your physician to address this prior to pregnancy. If dad-to-be is underweight or has lost significant weight recently, he may have decreased sperm count or function. If you are overweight or obese (BMI over 30): it may be harder to conceive; you have a higher risk of gestational diabetes, pregnancy induced high blood pressure, preterm labor, complications during pregnancy and birth, and cesarean delivery; your baby is more likely to be big, have birth defects, and experience childhood obesity.

So, do what you can to reach a healthy weight, and maintain that weight prior to becoming pregnant.

Pre-Conception Fitness: Exercise

Moderate exercise (2 – 6 hours per week) can enhance fertility by regulating hormones, improving circulation to ovaries, uterus, testes. It also improves mood and reduces stress.

“Extreme” exercise (e.g. running 100 miles a week) can decrease fertility through reduced sperm counts for men, impaired ovulation for women.

Manage medical conditions and improve overall health

Dental Check-Up: Have a dental check-up before conception. Have any fillings that need to be done, but ask for fillings without mercury (there’s no need to remove existing mercury fillings). It is important to treat any existing gum disease, as that can increase risk of miscarriage or preterm birth.

Medical Check-Up:

Have a Pre-Conception appointment with your physician. They should screen both mom-to-be and dad-to-be for HIV, syphilis, and other sexually transmitted infections, as those can increase risk of infertility, miscarriage, and disabilities including retardation and blindness.

Vaccinations: Get up-to-date on vaccinations. Rubella and varicella, which are live-virus vaccines, should be given at least one month before conception. If you’ve never had chicken pox, get varicella vaccine. You can be tested for immunity to rubella and if you’re not immune (10% of US women are not), get vaccinated, as rubella during pregnancy can cause miscarriage, stillbirth, and birth defects. Women who have not received the hepatitis B vaccine should be considered for immunization if they are at risk of sexually transmitted disease or blood exposure.

Genetic screening: may be recommended, depending on the age and ethnicity of the parents-to-be. Here are diseases that may be screened for, and how common they are, for each ethnic background.

- African: sickle cell (10%), beta-thalassemia (5%). European Jewish: Tay-Sachs (4% are carriers). French-Canadian: Tay-Sachs (5%). Mediterranean: alpha-, beta-thalassemia (10-20%). Southeast Asian: alpha-, beta-thalassemia (20-40%). Indian, middle Eastern: sickle cell, alpha, beta-thalassemia.

A family history that is positive for certain diseases, such as cystic fibrosis and congenital hearing loss, also indicates the need for additional screening.

For more info: www.marchofdimes.com/pnhec/4439_15008.asp and www.childbirthconnection.org/article.asp?ck=10310&ClickedLink=486&area=27

Medical conditions: At your pre-conception check-up, also address any medical conditions that could complicate conception, pregnancy, or birth. For chronic conditions, try to optimize control of condition and optimize medication levels before pregnancy. Each of these conditions can cause health problems for mom and baby if they are not well-controlled prior to pregnancy.

Medications: Talk to your doctor or pharmacist about any medications you are taking. Several are known to cause birth defects or otherwise affect pregnancy and healthy fetal development.

- Diabetes: optimize control (uncontrolled diabetes = 7x greater risk of birth defects; higher risk of miscarriage, preterm birth, macrosomia, hypertension, cesarean). May need to switch from

oral meds to insulin. See www.aafp.org/afp/20020615/2507.html or www.marchofdimes.com/professionals/19695_1197.asp

- Hypertension: improve blood pressure thru diet, exercise, quitting smoking. (Poorly controlled hypertension can lead increased risk of prematurity, low birth weight, placental abruption.) Avoid ACE inhibitors, angiotensin II receptor antagonists, thiazide diuretics.
- Epilepsy: optimize control, take 1 mg folic acid daily. Avoid Lamictal.
- Depression/anxiety: seek counseling and support; avoid Paxil and benzodiazepines which may increase birth defects. Tricyclic antidepressants and some SSRI's are OK.
- Hypothyroid: need to increase medication dosage early in pregnancy
- Anti-coagulants: switch from Warfarin / Coumadin which cause birth defects to heparin
- Acne: avoid Accutane
- Ulcers: avoid Cytotec / Misoprostol
- Birth control: Stop birth control pills 6 months before planned conception, Depo Provera 6-9 months before planned conception.

Always let your doctor or pharmacist know that you are planning to conceive, so they can assess new medications, herbs and supplements for any potential risks, and make substitutions as needed.

Limit Exposure to Harmful Substances and Environmental Hazards

Reduce or Eliminate Use of Harmful Substances

Both men and women who are planning to conceive in the next four months should reduce their use of caffeine, alcohol, tobacco, and illegal substances. This chart summarizes the potential risks of each.

	Effects sperm count / motility	Causes sperm malformation	Reduces fertility	Increases miscarriage	Increases birth defects	Increases pre-term or low birth wt
Caffeine	X		X	X		X
Alcohol	X	X	X	X	X	
Tobacco/Smoking	X		X	X	X	X
Illegal substances	X	X	X	X	X	X

All effects are dose-related. This means that if you only consume a small amount of a substance, the potential of these side effects is small. The more you use, the higher your risks.

- Caffeine: Consumption of caffeine up to 200 - 300 mg per day (two cups of coffee or three cups of tea or 72 ounces of caffeinated soda) is considered safe for pre-conception and pregnancy by many authorities. However, some studies indicate that drinking even one cup of regular coffee per day can decrease your chance of conceiving by up to 50%, and have shown a correlation between miscarriage and small amounts of caffeine. ([Bolumar](#); [Hatch & Bracken](#))
- Alcohol: Drinking as few as five drinks a week can significantly reduce fertility. ([Jensen et al](#))
- Smoking: Smokers are more than 3 times as likely to take more than a year to get pregnant. ([Hassan & Killick](#); [Sepaniak](#); [Baird & Wilcox](#))
- Second-hand smoke: Even when the mother does not smoke, if her partner smokes over 10 cigarettes a day, she is 2.5 times more likely to have a child with birth defects.
- Nicotine patches or gum may be helpful before conception, but most authorities recommend avoiding them during pregnancy. Bupropion (Zyban) may be used during pregnancy.
- For more on substances, and resources to help you quit using: www.childbirthconnection.org/article.asp?ck=10299&ClickedLink=486&area=27

Reduce Exposure to Environmental Hazards

Both men and women who are planning a pregnancy should reduce exposures to these hazards.

- Heavy Metals - linked to infertility, miscarriage, and birth defects.
 - Lead - avoid traffic fumes, lead-based paint, home demolition.
 - Mercury— avoid high mercury fish, amalgam fillings, tattoo inks, and manufacturing.
 - Cadmium - Avoid cigarette smoking and second-hand smoke.
 - Aluminum – avoid food or beverages cooked or stored in aluminum, use aluminum free baking powder and antacids.
 - For all – Filter your water. Take garlic, vitamins C, B1, B12, calcium, magnesium, iron, zinc and manganese to combat heavy metal toxicity.
- Solvents, pesticides, chemical fumes from paints, thinners, wood preservatives, glues, benzene, dry cleaning fluids, etc.
- Bisphenol-A (BPA) plastics.
- Carbon monoxide, anesthetic gases.
- Ionizing Radiation – from x-rays and radioactive materials.
- Infections
 - Toxoplasmosis and food-borne illness: Wash hands after contact with raw meat, produce, cat feces, soil. Cook foods thoroughly.
 - CMV and parvovirus: health care workers and child care workers – use gloves, hand-washing, and other universal precautions.
- High temperatures – issue for men only, because of effects on sperm production (e.g. limit hot tub use to <10 minutes, <102°)

If you have workplace exposures to hazards, shower after work, and wash your work clothes separately. Ask employer for Material Safety Data Sheets, good ventilation, and protective gear.

Improve Emotional Well-Being, Relationship Skills, Finances

Emotional / Mental Health: Many of us have experienced challenging situations in our lives that have left us with some emotional baggage and things that challenge our coping mechanisms. Counseling, journaling, workshops, support groups, and self-help books are all ways to explore these issues, and do some processing and learn new coping skills before baby is born.

Reduce Stress: There is no clear evidence that stress can reduce fertility; however, stress *can* depress your immune system, raise your blood pressure and alter your hormonal function. Stress *does* increase the risk of miscarriage. Steps to reducing stress: Identify things that cause stress for you. Eliminate those that you can. Find coping techniques: journaling, counseling, relaxation techniques, etc. Do things that help you feel good: exercise, sleep well, eat well, and spend time with friends.

Work on your Relationship: The stronger your relationship is before baby is born, the more easily it will weather the challenges of parenting. Read When Baby Makes Three, or take a "Bringing Baby Home" workshop (www.bbhonline.org) or Becoming Parents workshop <http://becomingparents.com/> Read other books or attend other workshops on relationship skills: Try any by Gary Chapman, Lyons and Psaris, or Gay and Kathryn Hendricks. Consider couples' counseling.

Financial Well-Being: www.americanpregnancy.org/planningandpreparing/affordablehealthcare.html and www.childbirthconnection.org/article.asp?ck=10304&ClickedLink=486&area=27

Planning Pregnancy: Are you ready for a baby? Questions to ask yourself.

Here are some questions to consider. Please do not feel like you have to say yes to all these questions before having a baby! If that was true, we might never make the choice...

Do you want a child? Do you really want a child to be part of every day of your life for the next 18 years? Will it be fun? Do you like doing child-focused activities? Are you patient enough to deal with the noise, chaos, and 24 hour a day responsibility of parenting? Do you enjoy teaching and guiding others? Did you enjoy your own childhood?

Are you both equally committed to becoming parents? If only one partner is ready for a baby, then you as a couple aren't ready yet! Parenting will take a lot of work from both of you, and lots of mutual support. [Note: if you plan to single parent, then you should explore whether your support people are committed to helping you when you need them.]

Health of your relationship: Do you bicker constantly? Often fail to see eye to eye? Quarrel over housework? Have you learned positive ways for working out conflicts? Do you trust, respect, and love your partner? Are you ready to share your partner and give up lots of couple time and intimacy?

Compatible parenting values: If you have different religious beliefs, have you discussed how you will handle them with your child? Do you have similar perspectives on discipline? On education? Do you have compatible views about how you will divide up parenting and household responsibilities?

Community of support: How well do you get along with your parents? Do you have other friends or family around who would support you? Are there good resources for parents in your community?

Environment: Is the house, neighborhood, and community where you live now the place where you want to raise your child? How will you take care of your child's health and safety? Are your work and home environment (and your partner's) safe from environmental hazards that could harm baby?

Health and Healthy Lifestyle: Are you both in good health? Are you at a healthy weight? Are you ready and willing to make healthy changes in your lifestyle, such as improving your diet, exercising, giving up smoking and drug use, and limiting alcohol consumption?

Finances: Examine your current income and what your income may be after baby. On that income can you afford diapers, clothes, carseats, and child care? Do you have health insurance that will cover prenatal care and birth? Will you be able to take time off from your work? Do you have life insurance, long-term disability insurance, and a will? Do you have debts that you could pay off before baby?

Crisis management: How do you manage your temper and high-stress situations? How well do you control emotions when you're tired? Can you provide consistent parenting if you're having a bad day?

Career Goals: What do you want out of your life? Could you handle a child and a job or school at the same time? Will having a child block you from achieving your goals, and would you resent that?

What would you have to give up? Are you ready to give up the freedom to do what you want when you want? Would you resent losing your free time and privacy? Are you ready to give up sleeping in on weekends? Partying with friends? Will it change the lifestyle you're able to afford?

Are you choosing to have a baby for the wrong reasons? People who chose parenthood for these reasons often regret it further down the road when they didn't get the results they hoped for. You may want to re-consider pregnancy if any of these describe your motivation for having a baby:

- Everyone else is doing it.
- You hope it will "fix" your relationship.
- You hope it will help your partner become a nicer person.
- Because it might help you give up your bad habits.
- Because your biological clock is ticking and you feel like it's now or never.
- Because your family is pressuring you.
- To prove that you can be a better parent than your parents were.
- You want a child because you want someone to love you and make you happy.

Are you delaying a baby for the wrong reasons? Just as some people may jump into parenting too quickly, some may delay for longer than they need to because they just can't stop thinking it through. Some couples have a hard time moving past these questions, and deciding to take the plunge into parenthood. They continue to find more reasons why "now is not a good time to have a baby." Things like "Well, once I finish that project at work..." or "Once we've bought a house..."

If you're feeling bogged down, or paralyzed by indecision, fear, or anxieties about parenting, it's important to realize that there's never a *perfect* time to have a baby. Sometimes it just requires a leap of faith – a willingness to surrender control and trust that it will work out.

If one member of a couple is feeling ready, and the other isn't, it's worth asking each other what fears are holding you back, and then deciding whether they are fears that can be resolved, or whether the only way forward is to take a big leap of faith.

Fertility Issues: Increasing Your Chances of Conception

- It is *Normal* to take 6 months to conceive. (For younger adults, chance of conceiving on any monthly cycle is 20%. For a couple in their forties, the chance is 5% per month. (ASRM))
 - Not considered to have fertility issues till trying for more than 1 year.
- Optimum fertility can be an issue of timing.
 - Once an egg is released, it is viable for 12 – 24 hours... sperm lives three days. So, it's important to know when ovulation occurs. Timing frequent intercourse for three days prior to ovulation, and one day after significantly increases your chance of conceiving.
 - Go to www.fertilityfriend.com to learn fertility awareness methods (monitoring cervical position, and cervical mucus) and ovulation detection (through temperature charting, and tests such as saliva testing or ovulation predictor kits).
- Infertility is often due to an imbalance that can be corrected.
 - Paying attention to your overall nutrition and fitness level, and minimizing exposure to hazards, as described above, can enhance fertility.
 - Certain nutrients are especially helpful (for mom-to-be and dad-to-be), especially antioxidants: vitamin B6, vitamin E, vitamin C, zinc, and selenium, and anti-inflammatory omega-3 fatty acids. Plus amino acids L-arginine and L-carnitine for men.
 - There are also herbal supplements that can enhance fertility: vitex (chaste tree berry), Siberian ginseng, red clover blossom, red raspberry leaf. With all supplements, it is best to consult with a trained provider before beginning to take.
- Many personal lubricants reduce sperm motility or weaken sperm (ASRM). Pre-Seed is a brand that claims to enhance fertility, by providing an environment similar to fertile cervical mucus.
- Acupuncture can aid in conception. <http://americanpregnancy.org/infertility/acupuncture.htm>

Planning for Prenatal Care and Birth

Before you conceive, you can research and choose your maternity care provider (doctor or midwife), and your birthplace (hospital, birth center or home). Your choice depends on your health status, your preference for care provider style, your philosophy of birth, and your finances. Your choice is very important, as both your safety and your satisfaction with the birth experience depend a great deal on how you are cared for by your care provider and by the staff at your birthplace.

More resources

March of Dimes Preconception Information: www.marchofdimes.com/pnhec/173.asp

American Academy of Family Physicians. Preconception Care. www.aafp.org/afp/2002/0615/p2507.html

Center for Disease Control Resources for Preconception: www.cdc.gov/ncbddd/preconception/

Optimizing Natural Fertility by the American Society for Reproductive Medicine: [http://asrm.org/uploadedFiles/ASRM_Content/News_and_Publications/Practice_Guidelines/Committee_Opinions/optimizing_natural_fertility\(2\).pdf](http://asrm.org/uploadedFiles/ASRM_Content/News_and_Publications/Practice_Guidelines/Committee_Opinions/optimizing_natural_fertility(2).pdf)

Natural Solutions to Infertility: www.marilynglennville.com/infertility.htm

Monitoring Fertility: www.fertilityfriend.com and/or Taking Charge of Your Fertility by Toni Wechsler.

Thinking about Fertility Treatment: www.marchofdimes.com/pnhec/173_14308.asp