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## Prepregnancy: Starting from a Healthy Place

There's no need to wait for a positive pregnancy test to start working on a healthy lifestyle. When a balanced diet and regular physical activity are part of your everyday routine, your future child will benefit at birth and for a lifetime.

Now is a good time for you, and your partner, to examine what improvements you can make before you try to have a baby. No matter how diligent you are in the pursuit of good health, there's probably room for improvement.

### A Plan for a Healthier Pregnancy

You may envision preconception care as nothing more than a single visit to your gynecologist, internal medicine physician, certified nurse-midwife, or nurse practitioner in the months before conception, but health experts see preparing for pregnancy differently. In 2005, the Centers for Disease Control and Prevention came out with recommendations for improving the health of the estimated sixty-three million American women of childbearing age before they conceive, whether it's their first child or their fourth.

For women in their childbearing years who can become pregnant, priming the body for pregnancy is an ongoing pursuit. In fact, your prebaby health and your health between pregnancies should be a high priority with your primary care provider (the doctor you see for yearly physicals and when you get ill). Being ready for pregnancy is considered so important that the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend that your primary care provider and your obstetrician gynecologist (ob-gyn) provide information about preconception care and risk reduction before and between pregnancies at every visit you have with them. You can prompt a discussion about your preconception care with your primary care provider, your dentist, and your registered dietitian by letting them know that you're planning for a child and asking what you should be doing to prepare yourself. Preconception care should be tailored to meet your needs and to account for any chronic conditions you have, such as a weight problem (either too much or too little), high blood pressure, diabetes, or a combination of factors.

The idea of having your body ready for pregnancy makes sense on many levels. More than half of all pregnancies in the United States are unplanned. Taking care of yourself reduces the risk of problems for your unborn baby, especially when pregnancy catches you off guard. Developing babies are highly susceptible to birth defects and other problems during the first eight weeks of pregnancy, when women often do not realize they are expecting or well before they have their first prenatal visit with a health-care professional.

It's especially important that women seek medical advice prior to conceiving in order to prevent problems with subsequent pregnancies if they've ever had the following problems: a low-birth-weight baby (a child who weighs less than five and a half pounds at birth); a preterm infant (born between the twentieth and thirty-seventh week of pregnancy); a child with a birth defect; or infant death.

## A Preconception To-Do List

In addition to having regular medical checkups and a thorough physical examination before conception, a mother-to-be can take several steps to improve her well-being.

## Check Your Weight

When you're trying to have a baby, your body weight takes on new meaning. For instance, the right weight makes it easier to get pregnant. That's because either too much or too little body fat interferes with a woman's fertility. There's even some evidence that it might be more difficult for overweight and underweight women to conceive by means of high-tech methods such as in vitro fertilization.

If both you and your partner are overweight, it could take even longer to conceive a child than if only one of you needs to shed some pounds. A 2007 *Human Reproduction* study found that excess body fat interferes with a man's fertility (see chapter 7 for more on this).

In addition to affecting fertility, excess body fat on a woman at the time of conception has been linked to a greater risk for certain birth defects known as structural defects, which include neural tube defects (NTDs). Many NTDs, such as spina bifida, are preventable by consuming adequate folic acid very early in pregnancy. Nevertheless, even folic acid might not protect overweight women from having a pregnancy affected by an NTD. Heart defects and omphalocele, a type of intestinal hernia, are also more likely in infants born to overweight women.

Carrying around extra pounds makes you prone to diabetes before, during, and after pregnancy, which could be problematic for you and your child. Animal and human studies suggest that women with diabetes before pregnancy deliver more babies with structural defects. In addition, women who enter pregnancy overweight tend to stay overweight for the duration of their pregnancy, which increases the likelihood of complications during pregnancy and delivery.

Starting pregnancy at a healthy weight gives your child a much better chance of developing normally. It also helps to lower the risk of the following complications for you during pregnancy:

- High blood pressure
- Gestational diabetes (diabetes during pregnancy)
- Induced labor (which can require more medication to get the job done and which can also lead to a longer labor)
- Cesarean section
- A larger baby who is more difficult to deliver

- A child who scores lower on the Apgar test, which measures a newborn's physical condition at one minute and five minutes after delivery
- Preterm labor and delivery
- A pregnancy that ends in stillbirth (death after the twentieth week of pregnancy)

How will you know what body weight is right for you? You're probably aware that suggested body weight is associated with how tall you are, but you might not know that there is no single weight that's considered the healthiest. Rather, there is a range for each height.

Determining your body mass index (BMI) is the most accurate way to know whether your weight falls within the healthy range. BMI indicates body fat based on a (nonpregnant) adult's height and weight. Measure your height in stocking feet (with no shoes on). For the greatest accuracy, jump on the scale naked, first thing in the morning, after using the bathroom and before eating or drinking. Then consult the chart on pages 12–13 to determine your BMI.

You can also find your BMI with the BMI calculator from the National Heart, Lung, and Blood Institute (NHLBI) at [www.nhlbisupport.com/bmi/](http://www.nhlbisupport.com/bmi/).

Now that you know where you stand, should you lose weight, put on some pounds, or stay the same? No matter what your goal, you'll need a healthy eating plan to follow. See chapter 3 to create a balanced diet.

## Fill the Nutrient Gaps in Your Diet

You may look great and generally feel good, too, but if you're like many American women, you might be marginally deficient in several nutrients that could prevent you from conceiving in tip-top condition, even when your weight is in the healthy range.

The Dietary Guidelines for Americans 2005 (DGA), a joint effort of the U. S. Department of Agriculture and the U.S. Department of Health and Human Services, serve as the blueprint for healthy eating and exercise for Americans over the age of two.

According to the DGA, adults do not get a sufficient amount of the following nutrients in their diet:

- Calcium
- Fiber
- Magnesium
- Vitamin E

- Vitamin C
- Carotenoids, such as beta-carotene (used by the body to make vitamin A)
- Potassium

In addition, women are encouraged to be sure to get the following two nutrients during their childbearing years:

- Iron
- Folic acid

It's important to have adequate levels of these nutrients in your diet before, during, and after pregnancy. For example, dietary iron helps you to maintain the proper iron levels in your body. Iron is critical for transporting oxygen in the body, among other functions. Several studies suggest that iron stores at the time of conception are a strong indicator of your risk for iron-deficiency anemia later in pregnancy, when iron needs increase dramatically. Iron deficiency during pregnancy can increase the risk for preterm delivery. It's difficult to replenish depleted iron stores once pregnancy has begun.

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### Focus on Folate

Folate, along with its synthetic cousin, folic acid, is not one of the major problem nutrients identified by the Dietary Guidelines for Americans 2005, but it is mentioned as a nutrient to which women in their childbearing years should pay particular attention. Women whose diets fall short of fruits, vegetables, legumes (beans), and fortified grains (and who do not take dietary supplements) might not consume the recommended amounts of folate. Folate and folic acid help to prevent neural tube defects (NTDs) within the first month or so of pregnancy, when the neural tube forms. The neural tube eventually develops into your baby's spine and brain. Women who have had a pregnancy affected by an NTD need about ten times more than the recommended 400 micrograms of folic acid every day very early in their pregnancy. You may require additional folic acid if you're carrying multiple fetuses or have diabetes or epilepsy. Folic acid can prevent miscarriage, along with helping the developing fetus with other important functions. Read up on folic acid and folate in chapter 2.

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Body Mass Index																		
	Normal						Overweight					Obese						
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Height (inches)	Body Weight (pounds)																	
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295

Body Mass Index																		
	Obese			Extreme Obesity														
BMI	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Height (inches)	Body Weight (pounds)																	
58	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Although multivitamin and mineral pills are no match for a balanced diet, they are highly beneficial for women in their childbearing years, especially those who don't eat well or who avoid animal products. Multivitamin and mineral pills help to fill any gaps in essential nutrients in your diet.

Dietary supplements are just that, however—supplements. They are missing appreciable amounts of several of the nutrients identified as problematic by the DGA (see page 10), including potassium and calcium as well as the carbohydrate, protein, and fat that are required to produce the energy that fuels all of your bodily functions. Nevertheless, taking a multivitamin pill is a low-risk, relatively low-cost approach to improving the chances of having the healthiest baby possible. Here are some additional reasons to take a daily supplement:

- Taking a multivitamin every day prior to conception reduced the risk of preterm birth by about half in a group of about two thousand women in a study from the University of North Carolina at Chapel Hill.
- Another study from the same university suggests that there is a beneficial relationship between multivitamin use during pregnancy and a 30 to 40 percent reduced risk of neuroblastoma, a tumor of the nervous system. Though relatively rare, according to the American Cancer Society, neuroblastoma is the most common type of cancer in infants and the fourth most common type of cancer in children.
  - Women who took multivitamins before and during pregnancy reduced the risk of delivering children with congenital (present at birth) heart defects by 24 percent, according to researchers at the Centers for Disease Control and Prevention. The heart forms in the first trimester of pregnancy, when a woman might not be aware of her pregnancy and might not be getting the nutrients she needs.
  - An analysis of forty-one studies suggests a strong link between taking multivitamins before and throughout the first trimester of pregnancy and a reduction in NTDs, heart defects, limb deformities, and cleft palates.

#### WORDS OF

#### *Motherly Wisdom*

"As soon as we decided to have a baby, I started taking a multivitamin every day. My husband did, too! I've taken vitamins ever since."

—Sarah

Stores offer a slew of multivitamin pills. Look for these qualities when making your choice:

- **No more than 100 percent of the Daily Value (DV) for the nutrients the multi contains, including iron and folic acid.** Since you're eating, you will get nutrients from your food, so there's no need to overdo it with supplements. The DVs are recommended intakes for adults who are neither pregnant nor nursing. They are useful guidelines for women trying to conceive.
- **Fewer than 3,000 International Units of vitamin A, with the majority of it in the form of beta-carotene.** Consuming excessive amounts of vitamin A as retinol (the preformed variety that is often found in dietary supplements and called *vitamin A acetate* or *palmitate*) increases the chances for birth defects in a developing baby. In addition, too much vitamin A from retinol is toxic to the liver and bad for your bones. Beta-carotene, the raw material the body converts to vitamin A, is safer. Supplemental beta-carotene is not known to increase the risk of birth defects.
- **A knockoff of a big-name brand.** Store brands typically cost less and contain the same nutrients as name brands. Stay away from special formulations, such as a women's multivitamin, which tend to cost more and supply nutrients you don't need, including herbs and other botanicals. Herbs and other botanicals add to the cost of multivitamins and have not been proven safe for pregnant women.
- **The U.S. Pharmacopia symbol.** The USP symbol ensures that the supplement has been tested for product safety and quality—that you are getting what you are paying for and that it is dissolving in your body so it can be absorbed.

## Get Medical Checkups

It's important to be checked for certain conditions, such as iron-deficiency anemia and diabetes, during your regular preventive health appointments with your primary care physician, nurse practitioner, ob-gyn, or certified nurse-midwife. Regular screening, such as a yearly blood test (often referred to as a complete blood count, or CBC) may turn up problems that you can deal with well before pregnancy. Taking control of medical

conditions before pregnancy will produce the healthiest outcomes once you're expecting.

### *Iron*

You may be one of the estimated eight million women of childbearing age with an iron deficiency that's severe enough to cause anemia, and you might not even know it. It's harder to correct iron-deficiency anemia during pregnancy, when the demand for iron skyrockets, so it's beneficial

to catch the condition before conception and try to correct it.

Simply testing for iron in your blood may not be enough to determine if you are at risk for iron-deficiency anemia. Have your health-care provider test for ferritin, a reflection of stored iron in the body. Checking your ferritin level is a better way to gauge your chances for iron-deficiency anemia. A low ferritin level in the bloodstream means that you might have the condition.

#### WORDS OF *Motherly Wisdom*

"I had anemia with my first pregnancy, so I was careful about getting enough iron before I got pregnant with my other children."

—Kara

### *Diabetes*

According to the American Diabetes Association, about 54 percent of the U.S. population is at risk for developing diabetes because they have prediabetes: a blood glucose concentration that registers outside the normal range but is not yet elevated enough for a diagnosis of diabetes. Prediabetes can be a sign of what's to come. Elevated blood glucose concentrations now translate into a greater chance for developing gestational diabetes and type 2 diabetes later on. Women with prediabetes and diabetes during pregnancy tend to have more complicated pregnancies, and they often give birth to larger infants who may require a cesarean delivery.

During pregnancy, the extra glucose in your blood can result in your baby's growing too large. Large babies at birth run a greater risk of becoming overweight and developing type 2 diabetes later in life. In addition, when a baby is "fed" extra glucose in utero, the pancreas produces additional insulin, the hormone that helps glucose to gain entry to cells. After delivery, it can be difficult for a child's pancreas to stop making the

surplus insulin that was needed before birth, which often results in low blood sugar levels in newborns. Once born, a baby no longer receives surplus glucose from the mother. Yet, the baby's body is still producing too much insulin, which makes for low blood sugar levels.

Jaundice, a buildup of old red blood cells, is also more common in babies delivered by women with diabetes, and these children are more likely to have low supplies of iron in their livers, which can result in iron-deficiency anemia.

It's possible to have prediabetes and not know it, because the condition is often symptom-free. Measuring your glucose level as part of a blood test after fasting is a great way to find out if you're at risk. (A fasting level is obtained after going nine hours without eating.) A normal blood glucose value is below 100 milligrams per deciliter (mg/dl). If you have prediabetes, your fasting blood glucose level will measure between 100 and 125 mg/dl. When the fasting blood glucose level rises to 126 mg/dl or above, you have diabetes.

The good news is that even when your blood glucose level is higher than normal, the chances are that it will drop when you lose weight and exercise regularly. Changing your diet and physical activity for the better significantly delays or prevents the onset of type 2 diabetes. For some people with prediabetes, getting control of a high blood glucose level can reverse the condition and return the glucose level to within a healthy range. For example, losing just ten to fifteen pounds can mean the difference between unhealthy and normal blood glucose concentrations.

A fasting blood glucose level is typically part of the blood test in a complete physical examination, but ask for it anyway, especially if you are overweight and have any of the following risk factors for diabetes:

- High blood pressure
- Low levels of high-density lipoprotein cholesterol (the "good" cholesterol) and elevated triglycerides (fat) in the blood
- A family history of diabetes
- A history of gestational diabetes or giving birth to a baby weighing more than nine pounds
- Belonging to an ethnic group that is at high risk for diabetes: African Americans, Latinos, Native Americans, and Asian Americans/Pacific Islanders

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## Diagnosis: Diabetes

If you have diabetes, you've got company. According to the Centers for Disease Control and Prevention, diabetes (type 1 and type 2) affects about 1.85 million American women ages eighteen to forty-four. Women with either type of diabetes are three times more likely than women without diabetes to deliver a baby with a birth defect, to miscarry, or to have a pregnancy end in infant death. The infants of women who had diabetes throughout pregnancy are also prone to higher blood pressure and to becoming overweight in childhood.

Nevertheless, there is good news. Getting control of your glucose level greatly increases your chances of having a healthy baby. The American Diabetes Association recommends that you have an A1C (also known as glycated hemoglobin) level of less than 1 percent above normal range, which is considered to be 4 to 6 percent, before you attempt conception. Your A1C concentration reflects the average of your blood glucose levels for the past few months and provides a better picture of blood glucose control than any single blood glucose test. It's important to strive for good blood glucose control at all times during your childbearing years, since you might not know you're expecting for two weeks or more after conception occurs, which is a critical time for a baby's organ development.

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### *Cholesterol and Blood Lipids*

Excessive blood cholesterol is not good for your heart and brain, and it can influence the health of your growing child, too. During pregnancy, high levels of blood lipids (fats) suppress a substance in the body called *prostacyclin*, which results in the narrowing of blood vessels as well as blood clotting in the vessels that transport oxygen and nutrients to the womb. Experts say that an expectant mother's elevated blood lipids (such as cholesterol) can also boost her child's risk of heart disease as an adult. Elevated cholesterol levels during pregnancy have also been linked to preeclampsia, a dangerous medical condition marked by elevated blood pressure and protein in the urine.

According to the NHLBI, people age twenty and older should have their lipids measured at least once every five years. Request a lipoprotein

profile to get the best idea of where you stand. This blood test is done after you have fasted for at least nine hours. A lipoprotein profile provides information about the following:

- Total cholesterol
- Low-density lipoprotein (LDL) cholesterol, the main source of the cholesterol that contributes to buildup and blockage in the arteries
- High-density lipoprotein (HDL) cholesterol, which helps to keep cholesterol from accumulating in the arteries and blocking the blood flow
- Triglycerides, the fat in the blood that has been linked to heart disease

Compare your lipoprotein profile to the following NHLBI goals for adults:

Total cholesterol: 200 mg/dl or less

LDL cholesterol: 100 mg/dl or less

HDL cholesterol: 40 mg/dl or more

Triglycerides: 150 mg/dl or less

Although your diet, body weight, and physical activity influence blood lipid levels, heredity also plays a role. To reduce blood lipids and keep them in check, follow an eating plan that is low in total and saturated fat. Lose weight, if necessary, to reduce total and LDL cholesterol. Exercise on a regular basis to boost HDL cholesterol and reduce total and LDL cholesterol.

### *The Thyroid*

The thyroid gland produces thyroxine, a hormone that controls the pace of all bodily processes, which are collectively called *metabolism*. When the thyroid is sluggish, a condition called *hypothyroidism*, the thyroxine level falls. As a result, you might feel colder, tire more easily, have drier skin, become forgetful or depressed, and have bouts of constipation. In *hyperthyroidism*, excess thyroxine speeds up the metabolism, causing an array of symptoms such as irritability, increased heart rate, anxiety, weight loss in spite of a good appetite, and irregular menstrual periods.

Hypothyroidism is one of the most common thyroid disorders. About 2 to 3 percent of Americans have pronounced hypothyroidism, and as

many as another 15 percent have a milder form that can be symptom-free. Hypothyroidism is more prevalent in women than in men, and it's particularly common in women in their childbearing years. More than half of all people with hypothyroidism are not aware that they have it, according to the American Thyroid Association.

There is no consensus of opinion regarding screening all women for hypothyroidism during pregnancy. However, some physician groups, including the American Association of Clinical Endocrinologists, recommend checking a woman's thyroid function before she conceives or as soon as pregnancy is confirmed. This is especially true for women at high risk for thyroid disease, such as those who have previously been treated for hyperthyroidism or who have a positive family history of thyroid disease.

Testing your thyroid is important. By the end of the first trimester, your child's thyroid will be making its own thyroid hormones. Until then, the baby will be completely dependent on you for the correct balance of compounds that maximize brain development. Babies born to mothers whose bodies don't produce enough of the thyroid hormone thyroxine are prone to shorter attention spans and lower IQ scores as children.

A baby who has started to produce thyroid hormones requires iodine, a mineral that serves as a raw material for thyroid hormones. Your diet supplies the iodine your child needs. See chapter 2 for more about iodine.

### *Vaccinations*

Women in their childbearing years should keep their vaccinations up-to-date. According to the American College of Obstetricians and Gynecologists and the March of Dimes, women should make sure that they are current with the following vaccinations before they try to conceive:

- Tetanus-diphtheria booster
- Measles, mumps, and rubella
- Varicella (chicken pox)
- Human papillomavirus (HPV)
- Meningococcal

Some of these shots are live viruses, which should be avoided during pregnancy. Wait a month after receiving any vaccine to try to conceive.

You may also need the following shots (check with your health-care provider):

- Hepatitis A
- Hepatitis B
- Influenza (flu) vaccine (made from an inactivated virus)
- Pneumococcal
- Rabies

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### Feeling Blue?

Your emotional well-being is just as important as your physical health. If you have felt sad or hopeless lately or you derive little pleasure in life, you could be depressed. Talk with your doctor about being screened for depression.

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### Pay a Visit to Your Dentist

An attractive smile is more than a reflection of your mood. Your mouth serves as a gateway to the rest of the body, including germs that can put your pregnancy at risk. Untreated mouth infections are linked to complications for women and their infants.

An analysis of seventeen published scientific articles in the *American Journal of Obstetrics & Gynecology* concluded that there's probably an association between preterm birth or low-birth-weight infants and periodontal disease (PD) in their mothers. PD is a chronic infection of the gums, caused by the bacteria present in plaque, the colorless film that forms on teeth. The most likely culprit is a labor-inducing chemical called *prostaglandin*. Women with severe PD have very high levels of prostaglandin in their mouths.

Gingivitis is the mildest type of PD. It causes red, swollen gums that bleed easily. Gingivitis is usually painless, and it is reversible with professional treatment and vigilant at-home oral hygiene. A normal pregnancy can cause the gums to swell or bleed in a condition called *pregnancy gingivitis*, which often shows up in the second or third month of pregnancy.

WORDS OF  
*Motherly Wisdom*

"I am so glad that my dental hygienist pointed out how important it was to take good care of your mouth prior to pregnancy. I got regular checkups and took care of any problems before I got pregnant."

—Sarah

It's important to make every effort to complete any necessary dental work, such as fillings or crowns, before conception. Confirm that you are not pregnant before having dental X-rays and local anesthetic, neither of which is good for the baby. Here are some other dental hygiene tips for mothers-to-be:

- See your dentist immediately if you are having any dental problems, such as bleeding gums, whether you are pregnant or not.
- Brush after every meal, floss at least once a day, and use a fluoride rinse daily.
- If you're at risk for gum disease, have frequent dental visits. Discuss with your dentist how often you should be seen.
- Eat carbohydrate-rich foods, such as bread and crackers, with meals and have sweet desserts soon after, if at all. Consider eating cheese at the end of a meal instead of having cookies, cake, or ice cream. Cheese neutralizes detrimental mouth bacteria, whereas carbohydrates energize them.
- Drink milk. The calcium in milk strengthens the bone in your jaw that helps to hold your teeth in place, and the vitamin D helps your body to absorb the calcium.

## Mind Your Medications

Many medications that you use without a second thought are safe for you, but they could have dire consequences for your unborn child, especially during the first trimester when the organs are forming. Illicit drugs, including marijuana and cocaine, could also be harmful.

Excessive levels of vitamin A in acne medications such as Accutane (isotretinoin) should be avoided by women who are pregnant or who may become pregnant because of the risk of miscarriage and birth defects. It is extremely important for sexually active women who could become pregnant and who take vitamin A-based acne medications to use an effective method of birth control. Women of childbearing age who take these medications are advised to undergo monthly pregnancy tests to make sure they are not pregnant.

Even seemingly harmless over-the-counter medications, such as common pain relievers, can be detrimental before and during pregnancy. A *British Medical Journal* study found a connection between miscarriage and taking aspirin, ibuprofen, or other nonsteroidal anti-inflammatory drugs around the time of conception or in early pregnancy. The link was stronger when women took those medications for more than one week. Acetaminophen, however, was not associated with greater miscarriage risk. Taking aspirin in the third trimester is linked to excessive bleeding in the mother and the baby at delivery. This doesn't mean that all medications for chronic conditions are off-limits during pregnancy. For example, women with an underactive thyroid must continue on levothyroxine throughout pregnancy to ensure proper neurological development in their children. The dose will probably change once you conceive, however.

Talk with your doctor and your pharmacist about what medications are safe when you're trying to conceive, when you are pregnant, or when you're nursing. You might think that because herbs and other dietary supplements are made from plants, they're okay to take, but that's not necessarily true. There's no guarantee that herbal products are safe, especially during pregnancy. Herbal products are not regulated by the Food and Drug Administration, the government organization that oversees drug safety. This means that many herbs and botanicals do not have to adhere to the same standards for safety and effectiveness that drugs do. In addition, because herbs and botanicals are not regulated, you can't always be sure of what you are buying. That's why it's best to avoid herbs and botanical supplements altogether when you're trying to conceive or are pregnant or nursing.

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### Herbal Tea Alert

Although herbal teas are caffeine-free, there is simply too little scientific data about the safety of teas made from many herbs. The chances are that the types of herbal teas in filtered bags that are available on supermarket shelves, such as chamomile and peppermint, are safe in reasonable amounts. Avoid herbal teas that are not commercially produced, however. For more information about herbal teas and dietary supplements, visit the Natural Medicines Database at [www.therapeuticresearch.com](http://www.therapeuticresearch.com). Click on the Natural Medicines Comprehensive Database, which provides information for consumers.

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## Assess Alcohol Intake

No alcohol intake is the recommendation during pregnancy, but how about when you're trying to conceive? It seems to be okay to enjoy a glass of wine or a cocktail when you think you're not pregnant. Nevertheless, experts, including the March of Dimes and the Centers for Disease Control and Prevention, say otherwise. They contend that drinking alcohol and trying to conceive do not mix.

Although moderate drinking—defined as no more than one drink per day for women—is often touted as beneficial to your health when you're not pregnant or nursing, it can make it more difficult to conceive a child. You could also be pregnant and not know it. Alcohol is never good for a developing baby, but it's particularly problematic during the first trimester. When you drink, your baby drinks, too. Alcohol passes easily and swiftly through the placenta to your child. An unborn baby's body cannot process alcohol as swiftly as an adult's body can. This means that your child's blood alcohol concentration will be higher than yours and will stay elevated longer.

Alcohol can cause irreversible harm even before you realize you're expecting, by depriving the baby of the oxygen and nutrients that are required for the development of every organ.

Heavy drinking during pregnancy—including the regular consumption of beer, wine, or spirits (the vodka used in martinis or the gin in a gin and tonic, for example)—increases the risk of mental retardation, learning disabilities, birth defects, and emotional and behavioral problems, such as those included in fetal alcohol syndrome (FAS).

FAS is the leading preventable cause of mental retardation in the United States. FAS tends to be associated with regular heavy drinking during pregnancy, but even moderate alcohol intake has been linked to impaired fetal growth and lower Apgar scores. Newborns are given the Apgar test at one minute and five minutes after delivery to measure their physical condition and their need for medical attention.

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### The Definition of a Drink

The size of “a drink” might be smaller than you think. Twelve ounces of regular beer, five ounces of wine, or one and a half ounces of 80-proof distilled spirits (such as rum, vodka, or whiskey) is considered a drink.

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It's clear that even some drinking of alcohol during pregnancy is dangerous. A 2002 study found that fourteen-year-old children whose mothers had as little as one drink a week were significantly shorter and more likely to be underweight than children of women who did not drink at all. A 2001 *Pediatrics* study found that six- and seven-year-old children of mothers who sipped just one drink a week during pregnancy were more likely than children of nondrinkers to have behavior problems, such as aggressive and delinquent behaviors.

Consuming alcohol during pregnancy also increases the risk of miscarriage, low birth weight (less than five and a half pounds), and stillbirth. A 2002 Danish study found that women who consumed five or more drinks a week were three times more likely to have a stillborn baby than women who had less than one drink a week.

If you took an occasional drink before you knew you were pregnant, the chances are that no harm was done. Discuss any concerns you have with your doctor or nurse-midwife.

## Consider Caffeine Intake

As anyone with a caffeine habit knows, caffeine is a stimulant that increases alertness.

Reasonable amounts of caffeine, which are considered to be less than 200 milligrams (mg) a day, probably have little effect on fertility, but consuming 500 mg or more—about the amount found in sixteen ounces of regular Starbucks coffee or two cans of diet cola—every day might delay conception and cause other problems with a pregnancy. Perhaps you should kick your caffeine cravings when you want to conceive.

The major source of caffeine is coffee, but it can also be found in tea, soft drinks, energy drinks, candy, gum, ice cream, and some medications. See chapter 2 to tally your daily caffeine intake and see if you should cut down.

## What to Do If You Have Difficulty Getting Pregnant

Perhaps you're doing everything you should to get pregnant, but to no avail. If you've been trying to conceive (that is, having unprotected intercourse) for at least twelve months or you are older than thirty-five and have been trying for at least six months, you could be experiencing

infertility (see chapter 7 for the causes of infertility as well as how diet and lifestyle affect the chances of conception).

## Stop Smoking

Smoking jeopardizes your health and makes you less able to tolerate the rigors of pregnancy. It can also put a damper on fertility. Studies show that women who smoke often have more trouble conceiving than non-smokers do.

Smoking during pregnancy does irreparable harm to the baby. Cigarette smoke contains thousands of chemicals in addition to nicotine. Although it's uncertain exactly which chemicals harm a developing fetus, one thing is certain: nicotine and carbon monoxide reduce the supply of oxygen your child needs to grow and develop properly. This could be why smoking cigarettes increases the risk of a smaller baby, a preterm baby, and infant death. Smoking during pregnancy is also linked to mental retardation and nicotine addiction in children. Some studies have shown that smoking increases the risk of facial deformities, such as cleft palate.

According to the U.S. Public Health Service, if all pregnant women in the United States stopped smoking, there would be an estimated 11 percent reduction in stillbirths and a 5 percent reduction in newborn deaths. If you're a smoker who is planning to quit once you're pregnant, don't wait till then. It's unwise to put off kicking the cigarette habit. Only about 20 percent of women successfully give up cigarettes during pregnancy, so start now. It often takes several attempts before you give up cigarettes for good.

If you quit smoking but your partner does not, your baby's growth and birth weight can still be affected by your exposure to secondhand smoke during pregnancy. Avoid exposure to other people's smoke as much as possible in order to limit harm to your child. Encourage your partner to quit or at least not to smoke when you're around. You're more likely to stay off cigarettes when you get support from your friends and your family.

Don't plan on lighting up again once the baby is born. Babies who are exposed to secondhand smoke suffer more than other babies from lower-respiratory illnesses (such as bronchitis and pneumonia), asthma, and ear infections, and they run a greater risk of sudden infant death syndrome.

## Consider Safety Issues

When you're trying to conceive, it's important to educate yourself about the foods that could cause health problems later on when you're expecting or nursing, including certain seafood, undercooked meat and raw fish, and contaminated water. There are many safety issues to consider when you're preparing for pregnancy (see chapter 6 for more information on what to avoid).

## Move Often

You know the many benefits of exercise, so perhaps you're active nearly every day of the week. Maybe you're too tired or too busy, or working out is boring. Whatever the case, it pays to know how exercise influences your future child's health.

The following benefits of exercise may motivate you to work out on a regular basis:

- Easier weight control
- Less stress, depression, and anxiety
- A reduced risk of colon cancer
- A stronger heart and a lower pulse rate
- Better muscle tone, more flexible joints, and stronger bones
- A reduced risk of type 2 diabetes and better management of blood glucose levels in type 1 and type 2 diabetes
- Lower levels of total and LDL (low-density lipoprotein) cholesterol and improved levels of HDL (high-density lipoprotein) cholesterol in the bloodstream
- Healthy blood pressure
- Improved circulation
- Clearer thinking

Research suggests that regular physical activity is good for your baby, too. A study published in the *Maternal and Child Health Journal* found that physically active women had a 30 to 50 percent lower risk for pregnancies affected by neural tube defects even when they did not take multivitamins prior to conception and regardless of their weight. In addition, researchers at the University of Washington who surveyed 688 mothers found that those who performed the most vigorous exercise

during the year before pregnancy were 81 percent less likely to develop gestational diabetes—a condition linked to abnormally large babies and difficult labor—than their sedentary peers were; moderate exercisers had a 59 percent lower risk. Furthermore, the benefit held up even when the women were overweight.

How much exercise is enough to reap the health benefits? According to the DGA, adults require a minimum of thirty minutes of exercise on most days for weight maintenance (provided that calorie intake is equivalent to calories burned); sixty minutes to manage body weight and prevent gradual weight gain; and sixty to ninety minutes to maintain weight loss.

It's harder to stick with a fitness regimen than it is to start one: witness the millions of people who join gyms every year (usually in January!) only to go for a few weeks and then never go again. Maintaining an exercise regimen can be tough; maintaining an active lifestyle is often easier. Here are some tips for making physical activity part of your everyday life. Check with your doctor before beginning any exercise program.

- **Break it down.** Combining short bouts of exercise during the day can be beneficial. For example, park your car at least a ten-minute walk away from your destination, instantly guaranteeing twenty minutes of exercise; add another ten-minute walk at lunchtime, and you've got thirty minutes covered. Invest in a pedometer and work your way up to taking ten thousand steps every day, as long as your doctor, nurse practitioner, or certified nurse-midwife says it's okay.
- **Schedule exercise.** Treat working out like an important client who should not be left waiting.
- **Keep a log.** Write down your activities to see how often you exercise. Aim for at least three days a week to start, and work up to a minimum of five.
- **Get support.** Enlist a workout buddy, such as your spouse, partner, friend, or coworker; join a walking group; or take an exercise class.
- **Have an alternate plan.** Keep exercise videos on hand for when inclement weather keeps you indoors. Consider investing in a treadmill or a stationary bike for inside exercise, too. Walk with a few friends; then if one friend cancels, you'll still have other companions to motivate you.

- **Shake it up.** Boredom can spell doom for your exercise routine. Pick at least two activities, such as walking, Pilates, or yoga, and alternate them. Include weight training twice a week for stronger bones, toned muscles, and a more efficient metabolism.

## Pregnancy Takes Preparation

Now that you've made it through this information-packed chapter, you have a better understanding of what you and your partner should do to shape up before you try to have a baby, including achieving and maintaining a healthy weight, getting a checkup from your health-care provider, and exercising regularly. Now, it's time to put healthy eating into practice. Chapter 2 builds your nutrition knowledge, focusing on the role that many important nutrients play in having a healthy baby, even well before conception.

