



[Table of Contents](#)

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by Rebecca D. Williams

Healthy Pregnancy, Healthy Baby

Exercise, Good Food, And Prenatal Care Are the Keys

When I was pregnant with my third child, I had two friends who were also expecting. We would get together once a week and, over milkshakes, compare our growing bellies and laugh about our big maternity pants.

We would also share our fears. Together we obsessed about nearly everything that could go wrong in the 40 weeks of pregnancy. What are these pains? Why am I so tired? How much will labor hurt? Can I handle another child? And the big one: Will my baby be healthy?

Worries and pregnancy seem to go hand in hand. Fortunately, however, most women of childbearing age are healthy and most pregnancies are considered "low-risk." For most women, the surest way to have a healthy baby is to live a healthy lifestyle. The March of Dimes suggests the following precautions:

- Get early prenatal care, even before you're pregnant.
- Eat a well-balanced diet, including a vitamin supplement that contains folic acid.
- Exercise regularly with your doctor's permission.
- Avoid alcohol, cigarettes, and illicit drugs, and limit caffeine.
- Avoid x-rays, hot tubs, and saunas.
- Avoid infections.

Getting Good Care

When it comes to medical care and pregnancy, you can never start too early.

"The best start to having a healthy baby is to see your health-care provider before you conceive," says Richard Schwarz, M.D., an obstetrician and national consultant for the March of Dimes.

"There are lots of things you can do ahead of time," Schwarz adds. "You can make sure you're immune to rubella [German measles], you can know your blood type, you can stop smoking and make sure your diet is healthy, and you can get any illnesses you might have under control."

Once you're pregnant, your health professional--either an obstetrician, family practitioner, nurse-practitioner, or nurse-midwife--will have you begin with monthly visits that increase to once a week or more at the end.

At each visit, the physician or nurse will perform a series of examinations and tests to determine the health of the mother and baby. These include measuring the growth of the uterus, listening to the baby's heartbeat, taking the mother's blood pressure and weight, and checking her urine for evidence of protein or sugar, which could be symptoms of complications. The care provider will ask the mother if she has any concerns or problems such as blurred vision, leg cramps, abdominal cramps, or unusual headaches. The mother may also undergo ultrasound and genetic tests during the pregnancy.

Although prenatal visits may seem simple and even mundane, their importance can't be overestimated. Years of research have shown that pregnant women who get adequate prenatal care are more likely to have healthy babies and fewer complications during labor and recovery. Says Schwarz, "We know that pregnancy outcomes are better in women with early prenatal care."

Eating for Two

Good nutrition is another crucial step in having a healthy baby. A pregnancy takes about 300 extra calories a day to maintain, and an average-sized woman can expect to gain between 25 and 35 pounds overall.

Those extra calories should be nutritious ones, however. A pregnant woman needs a balanced diet complete with protein, fruits, vegetables, and whole grains, and a minimum of sweets and fats.

"Good nutrition is extremely important even before a pregnancy," says Shirley Blakely, Ph.D., a registered dietitian with the Food and Drug Administration's Center for Food Safety and Applied Nutrition. "If nature favors the growing fetus, the mother will suffer if she hasn't had a good diet."

According to the March of Dimes, a pregnant woman should increase her daily food portions to include:

- 6 to 11 servings of breads and other whole grains
- 3 to 5 servings of vegetables
- 2 to 4 servings of fruits
- 4 to 6 servings of milk and milk products
- 3 to 4 servings of meat and protein foods
- 6 to 8 glasses of water, and no more than one soft drink or cup of coffee per day to limit caffeine.

Some nutrients have been found to provide specific benefit to mother or child. For example, the B vitamins have been found to be especially important. One of them, folate, or its synthetic form, folic acid, can reduce the risk of birth defects of the brain and spinal cord, called the "neural tube." (See ["Folic Acid Awareness."](#))

Each year, an estimated 2,500 babies are born with neural tube defects. The most common of these is spina bifida, in which the spine is not closed. The exposed nerves are damaged, leaving the child with varying degrees of paralysis, incontinence, and sometimes mental retardation.

Because neural tube defects develop in the first 28 days after conception, "Once you know you're pregnant it's too late to do anything about [them]," says Blakely.

Because half of all pregnancies are unplanned, the U.S. Public Health Service recommends that all women of childbearing age get 400 micrograms of folic acid each day. If all women received that amount daily, the incidence of neural tube defects might be reduced by an estimated 45 percent, studies suggest. To help reach this goal, FDA now requires that all flour products, such as breads, buns and bagels, be fortified with extra folic acid.

Natural sources of folic acid include green leafy vegetables, nuts, beans, and citrus fruits. It's also in many fortified breakfast cereals and some vitamin supplements.

Calcium and iron are also especially important during pregnancy. Getting enough calcium will help prevent a new mother from losing her own bone density as the fetus uses the mineral for bone growth. Iron helps both the mother and baby's blood carry oxygen. Most women need supplements to maintain adequate levels of these minerals. A daily vitamin supplement, while not an adequate substitute for a healthy diet, helps fill in the gaps on days when a woman's diet is less than perfect.

Avoid Infections

Many infections during pregnancy can be dangerous to an unborn child. Urinary tract infections and any sexually transmitted diseases need to be treated immediately.

Cat litter and raw meat may contain the parasite *Toxoplasma gondii*, which can cause toxoplasmosis infection. It's rare for a pregnant woman to get the infection, but if she does, her baby could be at risk for serious illness or death. Get someone else to change the kitty litter if possible, or wear a face mask and rubber gloves for protection.

Problems also may arise when a pregnant woman eats undercooked or raw foods, or cooked foods that have been cross-contaminated with bacteria from raw food nearby. Food poisoning can cause meningitis, pneumonia, or even death to an unborn child, plus the vomiting and diarrhea involved leave the mother exhausted and dehydrated. (See "On the Home Front" in the November-December 1997 FDA Consumer.)

The 'Naughty' Stuff

Nearly everyone knows pregnant women shouldn't take illicit drugs, but it's the legal ones--alcohol and tobacco--that are more commonly the source of pregnancy problems.

"I think if women truly understood the adverse impact smoking and drinking have on their babies, they would quit," says Jeffrey King, M.D., the director of the division of maternal and fetal medicine at Wright State University School of Medicine, and the author of a recent study on substance abuse in pregnancy.

Smokers put their babies at a significantly higher risk of preterm birth, low birth weight, and stillbirth compared with nonsmokers. After birth, the babies of mothers who smoked during pregnancy are more likely to have poor lung development, asthma and respiratory infections, and to die of sudden infant death syndrome (SIDS).

If a woman quits smoking early in pregnancy, however, she can still improve her chances of having a healthy baby. Expectant fathers or other members of the family should quit, too, because studies suggest breathing second-hand smoke may be dangerous as well.

Alcohol, too, can damage a developing fetus. Alcohol travels rapidly to the bloodstream, so when an expectant mother drinks, her baby drinks also.

Alcohol is known to cause mental retardation and facial abnormalities in babies, a condition called fetal alcohol syndrome. The Institute of Medicine estimates some 12,000 children with fetal alcohol syndrome are born in the United States each year. No one knows what amount of alcohol is safe during pregnancy; therefore, the U.S. Surgeon General recommends pregnant women avoid alcohol altogether.

A few other activities are known to be dangerous during pregnancy. X-rays can expose the fetus to radiation and potentially cause birth defects. Hot tubs and saunas can raise the core temperature of a pregnant woman's body and could potentially harm the fetus. Warm baths, however, are fine if the water is kept at body temperature.

Medications

Many drugs are appropriate for use in pregnancy, if really needed. But a pregnant woman shouldn't take any medication, even an over-the-counter one, unless she checks with her doctor first. If possible, she should avoid taking drugs in the first trimester or taking more than one medication at a time. She can also ask for the lowest dose possible to treat her condition.

Some medications have a long history of being used in pregnancy without problems. A pregnant woman shouldn't be deprived of drug therapy she really needs, says Sandra Kweder, M.D., the co-chair of FDA's task force on pregnancy labeling. She adds that women with pre-existing medical conditions such as epilepsy, lupus, asthma, or high blood pressure shouldn't quit their drugs because of pregnancy. Safer drugs can be used if necessary, but those medical conditions still need to be treated.

Kweder explains, "A common thing with patients is that they'll say, 'I know I'm supposed to take medication, but I'm worried about my baby, so I'll take less of it instead.' They'll take it every other day, or half as much. That's not wise."

The risks of a drug have to be weighed against its benefits. For example, some epilepsy drugs are known to cause birth defects, but an epileptic seizure can cause brain damage to the fetus. Most experts agree that the benefits of medication in such cases outweigh the risks.

Other drugs, however, are not so clear-cut. "It's really hard because there aren't easy answers," says Kweder. "For a baby to be healthy, it needs a mother who's healthy." However, most drugs have not been tested scientifically in pregnant women. Reliable scientific information about medication use in pregnancy is often incomplete or nonexistent. FDA is trying to change that.

The agency has begun a comprehensive review about how it regulates drugs for pregnant women and how safety information is communicated on the label. The present system is not as helpful as the agency would like. "The system has been criticized, and rightly so," says Kweder. "It is complicated to interpret data for medications used in pregnancy. We're making progress, but it's slow."

A new system is needed, she says, but it will be difficult to create. Drugs can't be tested in pregnant women the same as in other groups of people. Animal studies, while helpful, don't necessarily show what a drug will do to a woman and developing fetus.

In the meantime, a woman who has taken a drug and discovers she is pregnant should consult her doctor and avoid making decisions about her pregnancy in panic. While about 80 percent of approved drugs lack adequate scientific evidence about use in pregnancy, that doesn't necessarily mean they can harm the fetus or are harmful in the doses prescribed.

Only a very few drugs definitely known to be extremely bad for a human fetus are clearly labeled or, in one case, have special requirements attached to their approval. The drug thalidomide, which was recently approved by FDA to treat leprosy and is being explored for other uses, is devastating to developing fetuses and causes severe deformities of the arms and legs. FDA is requiring that patients who take the drug enroll in a national registry that will track their progress monthly and record the occurrence of any pregnancy. The hope is that this process will discourage physicians from prescribing the drug to women who might become pregnant and keep patients from "sharing" the drug with a woman of childbearing age.

Exercise

There's increasing medical evidence to show that exercise, even a vigorous workout, is healthy during pregnancy. An October 1998 study published in the American Journal of Public Health found that exercise is usually safe during pregnancy, and that women who exercised vigorously were more likely to carry their babies to full term compared with women who exercised less or not at all.

A pregnant woman should check with her doctor before exercising, however. If she gets the OK to work out, she should do so at least three times a week for 20 minutes each time, recommends the American College of Obstetrics and Gynecology.

Walking, swimming, riding a stationary bicycle, and joining a prenatal aerobics class are all excellent exercise choices for a pregnant woman. Exercises that require jerky, bouncy movements and being

outside in hot weather are not good choices. Don't try deep knee bends, sit-ups (or any exercise that requires you to lie on your back after the first trimester), and toe touches. Other sports to avoid include downhill skiing, rock climbing, and horseback riding.

Wear a supportive bra and properly fitting athletic shoes while exercising. Stop if you feel dizzy, faint, overheated, or in pain. Drink plenty of water.

Staying in shape will help you keep up your stamina during your own impending marathon--labor! And, afterward, the more muscle mass you have, the quicker you'll regain your pre-pregnancy shape and be able to pack away those maternity pants.

Rebecca D. Williams is a writer in Oak Ridge, Tenn.

Home Pregnancy Tests

Think you might be pregnant? A home pregnancy test is simple to do and can give you an accurate answer in 2 to 5 minutes.

Improved technology has made the urine home pregnancy test about as accurate as blood tests--99 percent under perfect conditions--although in actual use it may be less than that.

Using a woman's urine, a home pregnancy test detects the presence of human chorionic gonadotropin (hCG), a hormone produced only during pregnancy. The tests contain monoclonal antibodies, which are molecules coated with a substance that bonds to the pregnancy hormone. If the hormone is present, a colored stripe, dot, or other symbol appears in the test windows. The tests also contain "control" windows to indicate whether the device has functioned properly.

Although the makers of today's tests say their products can detect hCG as soon as the very day a missed period was supposed to begin, they also advise taking the test again a few days later to confirm the result. If the result is positive, see a doctor as soon as possible.

--R.D.W.

Testing for Birth Defects

Many women undergo tests during pregnancy to check for birth defects, genetic disorders, and other problems. A few of the most common tests are ultrasound scans, the alpha-fetoprotein (AFP) test, amniocentesis, and chorionic villi sampling (CVS). Each of these can be helpful in diagnosing problems, but the tests are not necessary for every pregnancy. Check with your doctor about what tests, if any, are appropriate for you.

Ultrasound--Ultrasound technology uses high-frequency sound waves to form pictures of the fetus on a computer screen. The test can verify a due date, determine causes of bleeding, check the overall health,

development, sex and position of the baby, measure the amniotic fluid, and check the condition of the placenta. There are no known risks from the tests, and many women have one or two ultrasounds in routine pregnancies. However, there is little scientific evidence that normal pregnancies benefit from ultrasound tests.

Alpha-fetoprotein Screening (AFP)--A simple blood test that poses no risk to the fetus, AFP screening measures the levels of alpha-fetoprotein in the mother's blood. Abnormal levels can indicate a brain or spinal cord defect, the presence of twins, a miscalculated due date, or an increased risk of Down syndrome. Because AFP levels can be elevated for a number of reasons, a positive test is usually repeated or followed up by other tests before a diagnosis is made. Very few women with elevated AFP levels are found later to have babies with birth defects.

Amniocentesis--This test examines the cells shed by the fetus into the surrounding amniotic fluid. Performed about 16 weeks into pregnancy, the test involves inserting a long, thin needle through the mother's abdomen to extract fluid from the womb. The cells must be cultured in a laboratory and it may take up to a month for test results to be ready. The test is a reliable indicator of chromosomal abnormalities such as Down syndrome or genetic disorders such as Tay-Sachs disease, Hunter's syndrome, and others. While usually safe, amniocentesis can trigger cramping, leakage of amniotic fluid, and vaginal bleeding, and it may increase the risk of miscarriage by about 0.5 to 1 percent. The test is only done on women at increased risk of having babies with genetic disorders or to assess the maturity of the baby's lungs in the last trimester.

Chorionic Villi Sampling (CVS)--Performed between 10 and 12 weeks of pregnancy, CVS can detect the same genetic abnormalities as amniocentesis. It involves inserting a catheter or needle into the womb and extracting some of the chorionic villi (cells from the tissue that will become the placenta). The chorionic villi contain the same chromosomes as the fetus. The test is relatively safe but it has a greater risk of miscarriage than amniocentesis. While there has been some concern that the test itself may be associated with limb deformities, many geneticists believe that CVS performed between 10 and 12 weeks of pregnancy does not increase that risk.

--R.D.W.

More About Pregnancy

March of Dimes

(Organization devoted to healthy pregnancies and preventing birth defects.)

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FDA Publications

"Important Patient Information on Thalidomide"

www.fda.gov/cder/news/thalidomide.htm

"Decreasing the Chance of Birth Defects"

FDA Consumer article

www.fda.gov/fdac/features/996_bd.html