



**National Institutes of Health  
Osteoporosis and Related  
Bone Diseases ~  
National Resource Center**

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# Pregnancy, Breastfeeding, and Bone Health

Both pregnancy and breastfeeding cause changes and place extra demands on a woman's body. Some of these may have an affect on her bones. The good news is that most women do not experience bone problems during pregnancy and breastfeeding. And if their bones are affected during these times, the problem is often easily corrected. Nevertheless, taking care of one's bone health is especially important during pregnancy and when breastfeeding – for the good health of both the mother and her baby.

## Pregnancy and Bone Health

During pregnancy, the baby growing in its mother's womb needs plenty of calcium to develop its skeleton. This need is especially great during the last 3 months of the pregnancy. If the mother does not get enough calcium, her baby will draw what it needs from its mother's bones. So, it is disconcerting to realize that most women of child-bearing years are not in the habit of getting enough calcium. Fortunately (unless a mother is still a teenager), pregnancy appears to help protect a woman's calcium reserves in several ways:

- Pregnant women absorb calcium better from food and supplements than women who are not pregnant. This is especially true during the last half of pregnancy, when the baby is growing quickly and has the greatest need for calcium.
- During pregnancy, women produce more estrogen, a hormone that protects bones.
- Any bone mass lost during pregnancy is typically restored within several months after the baby's delivery (or several months after breastfeeding is stopped).

Some studies suggest that pregnancy may be good for bone health overall. There is some evidence that the more times a woman has been pregnant (for at least 28 weeks), the greater her bone density and the lower her risk of fracture.

In some cases, women develop osteoporosis during pregnancy and/or breastfeeding, although this is rare. Osteoporosis is bone loss that is serious enough to result in fragile bones and increased risk of fracture.

In many cases, women who develop osteoporosis during pregnancy and breastfeeding will recover lost bone after their pregnancy ends or they stop breastfeeding. It is less clear whether teenage mothers recover lost bone and are able to go on to optimize their bone mass.

**Teen pregnancy and bone health:** Teenage mothers may be at especially high risk for bone loss during pregnancy and for osteoporosis later in life. Unlike older women, these mothers are still building much of their total bone mass during their teenage years. The unborn baby's need to develop its skeleton may compete with the teenage mother's need for calcium to build her own bones, compromising her ability to achieve optimal bone mass that will help protect her from osteoporosis later in life. Pregnant teens should be especially careful to get enough calcium during and after their babies are born to minimize any bone loss.

## **Breastfeeding and Bone Health**

Breastfeeding also has an affect on a mother's bones. Studies have shown that women often lose 3 to 5 percent of their bone mass during breastfeeding, although it is rapidly recovered after weaning. This bone loss may be caused by the growing baby's increased need for calcium, which is drawn from the mother's bones. The amount of calcium the mother needs depends on the amount of breast milk produced and how long breastfeeding continues. Bone loss may also occur during breastfeeding because the mother produces less estrogen – the hormone that protects bones. The good news is that like the bone lost during pregnancy, bone lost during breastfeeding is usually recovered within 6 months after breastfeeding ends.

## **Tips to Keep Bones Healthy During Pregnancy, Breastfeeding, and Beyond**

Taking care of your bones is important throughout life, including before, during, and after pregnancy and breastfeeding. A balanced diet with adequate calcium, regular exercise, and a healthy lifestyle are good for mothers and their babies.

**Calcium:** Although this important mineral is important throughout your lifetime, your body's demand for it is greater during pregnancy and breastfeeding, because both you and your baby need it. The National Academy of Sciences recommends that women who are pregnant or breastfeeding consume 1,000 mg (milligrams) of calcium each day. For pregnant teens, the recommended intake is even higher: 1,300 mg a day.

Good sources of calcium include:

- low-fat dairy products, such as milk, yogurt, cheese, and ice cream
- dark green, leafy vegetables, such as broccoli, collard greens, and bok choy
- canned sardines and salmon with bones
- tofu, almonds, corn tortillas
- foods fortified with calcium, such as orange juice, cereals, and breads.

In addition, your doctor will probably prescribe a vitamin and mineral supplement to take during your pregnancy and while breastfeeding to ensure that you get enough of this important mineral.

**Exercise:** Like muscles, bones respond to exercise by becoming stronger. Regular exercise, especially weight-bearing exercise that forces you to work against gravity, helps build and maintain strong bones. Examples of weight-bearing exercise include walking, climbing stairs, dancing, and lifting weights. Being active and exercising during pregnancy can benefit your health in other ways, too. According to the American College of Obstetricians and Gynecologists, it can:

- help reduce backaches, constipation, bloating, and swelling
- help prevent or treat gestational diabetes
- increase energy
- improve mood
- improve posture
- promote muscle tone, strength, and endurance
- help you sleep better
- help you get back in shape after your baby is born.

It is important to talk to your doctor about your plans before you begin or resume an exercise program.

**Healthy lifestyle:** Smoking is bad for your baby, bad for your bones, and bad for your heart and lungs. Talk to your doctor about quitting. He or she can suggest resources to help you. Alcohol also is bad for pregnant and breastfeeding women and their babies, and excess alcohol is bad for bones. So, be sure to follow your doctor's orders to avoid alcohol during this important time.

## Resources for Pregnant and Breastfeeding Women

**National Women's Health Information Center:** Designed for expectant mothers, this Web site provides resources about each trimester of pregnancy, family planning, preparing for the new baby, childbirth, postnatal and postpartum care, and financial assistance. Available at: [www.4woman.gov/Pregnancy/index.htm](http://www.4woman.gov/Pregnancy/index.htm). Information also available by calling 800-994-9662 (toll-free) or 888-220-5446 (TDD) (toll-free).

**National Institute of Diabetes and Digestive and Kidney Diseases Weight-Control Information Network:** publishes a brochure titled *Fit for Two: Tips for Pregnancy*. Available at: [www.niddk.nih.gov/health/nutrit/pubs/fit4two/fitfortwo.htm](http://www.niddk.nih.gov/health/nutrit/pubs/fit4two/fitfortwo.htm) or by calling 877-946-4627 (toll-free) or 202-828-1025.

**National Institute on Alcohol Abuse and Alcoholism:** publishes the brochure *Drinking and Your Pregnancy*. This brochure lists problems associated with Fetal Alcohol Syndrome, answers some questions about alcohol and drinking during pregnancy, and provides a list of resources. Available at [www.niaaa.nih.gov/publications/brochure.htm](http://www.niaaa.nih.gov/publications/brochure.htm) or by calling 301-443-3860.

**U.S. National Library of Medicine MedlinePlus<sup>®</sup>:** provides access to extensive information about specific diseases and conditions, and has links to consumer health information from the National Institutes of Health, dictionaries, lists of hospitals and physicians, health information in Spanish and other languages, and clinical trials. Available at [www.medlineplus.gov](http://www.medlineplus.gov).

**National Institute of Child Health and Human Development:** provides various publications on healthy pregnancy. Available at [www.nichd.nih.gov](http://www.nichd.nih.gov) or by calling 800-370-2943 (toll-free).

**March of Dimes Pregnancy and Newborn Health Education Center:** provides various publications on pregnancy and breastfeeding. Available at <http://www.modimes.org> or by calling 888-663-4637 (toll-free).

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### For Your Information

For updates and for any questions about any medications you are taking, please contact the U.S. Food and Drug Administration at 1-888-INFO-FDA (1-888-463-6332, a toll-free call) or visit their Web site at [www.fda.gov](http://www.fda.gov).