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## QUICK REFERENCE: FACT SHEETS

## Miscarriage

- Why do miscarriages occur?
- What are the symptoms of miscarriage?
- What treatment is needed if a woman has a miscarriage?
- What tests are done following a miscarriage?
- What causes repeat miscarriages?
- How long does it take to recover from a miscarriage?
- How long should a woman wait after a miscarriage before attempting another pregnancy?
- Resources
- References

A miscarriage is a pregnancy loss that occurs before 20 weeks, well before the fetus is able to survive outside the womb. About 10 to 15 percent of recognized pregnancies end this way (1, 2). As many as 40 percent of all pregnancies may end in miscarriage, because many losses occur before a woman realizes she is pregnant (3).

## Why do miscarriages occur?

The causes of miscarriage are not thoroughly understood. However, most miscarriages occur when a pregnancy is not developing normally. Usually, there is nothing a woman or her provider can do to prevent it.

Most miscarriages occur in the first trimester (first 13 weeks) of pregnancy. In many cases, the cause is unknown. However, a number of factors can contribute to first-trimester miscarriages:

- **Chromosomal abnormality in the fetus:** More than 50 percent of first-trimester miscarriages are caused by chromosomal problems in the fetus (3, 4). Chromosomes are the tiny, thread-like structures in each cell that carry our genes. Each person has 23 pairs of chromosomes, or 46 in all, with one chromosome per pair coming from the mother and one from the father.

Most chromosomal abnormalities result from a faulty egg or sperm cell that has too many or too few chromosomes. The resulting embryo has the wrong number of chromosomes, usually resulting in miscarriage. Chromosomal abnormalities become more common with increasing age, as does the risk of miscarriage.

- **Blighted ovum:** This is a pregnancy sac that contains no fetus. Either the embryo did not form, or it stopped developing very early. Blighted ovum is sometimes caused by chromosomal abnormalities.

In early pregnancy, the woman may notice that her pregnancy symptoms have stopped, and she may develop dark-brown vaginal bleeding. An ultrasound shows an empty pregnancy sac. A blighted



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ovum eventually results in miscarriage, though miscarriage may not occur for weeks.

- **Maternal health conditions:** Hormonal problems, infections, diabetes, thyroid disease, systemic lupus erythematosus and other autoimmune disorders can increase the risk of early miscarriage. Treatment of these conditions before and during pregnancy can sometimes help prevent miscarriage.
- **Lifestyle factors:** Women who drink alcohol, smoke or use illicit drugs may increase their risk of miscarriage (2). A recent study found that women who consume 200 milligrams (equal to about one 12-ounce cup of coffee) or more of caffeine every day are twice as likely as women who consume no caffeine to have a miscarriage (5). The March of Dimes recommends that women who are pregnant or trying to become pregnant consume no more than 200 milligrams of caffeine per day.

Second-trimester miscarriage is less common, occurring in 1 to 5 percent of pregnancies between 13 and 19 weeks (3). These later losses often are caused by problems with the uterus or by a weakened cervix that dilates prematurely. As with first-trimester losses, chromosomal abnormalities, maternal infections and health conditions can cause these losses.

*back to top*

#### What are the symptoms of miscarriage?

Vaginal bleeding, sometimes accompanied by menstrual-like cramps or more severe abdominal pain, can be a sign that a miscarriage is about to occur. However, many women experience spotting in early pregnancy, and most do not miscarry. A woman should contact her health care provider if she experiences any bleeding, even light spotting, in pregnancy. Her health care provider may do an internal examination to see if her cervix is dilated (a sign that a miscarriage is likely), an ultrasound and blood tests.

*back to top*

#### What treatment is needed if a woman has a miscarriage?

Most women who have an early miscarriage do not need treatment. The uterus empties itself like a heavy period. However, if an ultrasound shows that there is tissue remaining in the uterus or if the woman is bleeding heavily, the provider may recommend treatment to empty the uterus. This can be done with a surgical procedure called a dilation and curettage (D&C), in which the cervix is dilated and the tissue is removed with suction or with an instrument called a curette.

In some cases, the provider may offer the woman the option of using medication (misoprostol) to help pass the remaining tissue. Recent studies suggest that misoprostol is effective in about 84 percent of cases (6).

Because waiting for a miscarriage can be upsetting, health care providers often offer women with a blighted ovum or a missed miscarriage (ultrasound shows the embryo has died, but a miscarriage has not yet occurred) a D&C or misoprostol to empty the uterus. However, waiting for a miscarriage to occur naturally should not harm a woman's health or chances for a healthy future pregnancy. A woman and her health care provider choose the approach that is best for her.

*back to top*

#### What tests are done following a miscarriage?

Health care providers usually do not perform any tests following a first miscarriage that occurs in the first trimester. The cause of these early losses is often unknown, though chromosomal abnormalities are usually suspected.

If a woman has a miscarriage in the second trimester or has two or more miscarriages in the first trimester, the provider usually recommends tests to help determine the cause. Tests can include:

- Blood tests to check for chromosome abnormalities in both parents (called a karyotype) and certain hormonal problems and immune-system disorders in the mother
- Testing for chromosomal abnormalities in tissue from the miscarriage (if tissue is available)

- Ultrasound of the uterus
- Hysteroscopy (viewing the uterus through a special scope inserted through the cervix)
- Hysterosalpingography (an X-ray of the uterus)
- Endometrial biopsy (suctioning a small piece of uterine lining to check hormone effects)

*back to top*

#### What causes repeat miscarriages?

While miscarriage usually is a one-time occurrence, about 1 percent of couples experience two, three or more miscarriages in a row (1, 2). In some cases, these couples have an underlying problem that is causing the miscarriages.

Couples who have experienced two or more miscarriages should have a complete medical evaluation. However, testing reveals the cause of repeat miscarriages in no more than 50 percent of couples (1, 2).

Known causes of repeat miscarriage include:

- **Chromosomal problems:** Chromosomal problems usually occur only once. However, in about 2 to 4 percent of couples with repeated miscarriage, one parent has a chromosomal rearrangement that does not affect his or her health but can cause chromosomal abnormalities in the fetus (1). Both parents should have a karyotype to check for these chromosomal rearrangements.
- **Uterine or cervical abnormalities:** Abnormalities of the uterus cause 10 to 15 percent of repeated miscarriages (1, 2). These miscarriages can occur in the first or second trimester. Some women are born with a uterus that is abnormally shaped or partly or completely divided. Others develop noncancerous tumors (fibroids) or have scars in the uterus from past surgery. These abnormalities can limit space for the growing fetus or interfere with the blood supply to the uterus. Some uterine abnormalities can be surgically corrected, improving the outlook for future pregnancies.  
  
A weakened (sometimes called incompetent) cervix (opening of the uterus) can lead to miscarriage, usually in the second trimester of pregnancy. Repeated miscarriage due to a weakened cervix sometimes can be prevented by placing a stitch around the cervix early in the next pregnancy (a procedure called cerclage).
- **Antiphospholipid syndrome:** This immune system disorder increases the risk of blood clots that can clog blood vessels in the placenta. Studies suggest that antiphospholipid syndrome causes 5 to 10 percent of repeat miscarriages (2). This condition can be diagnosed with blood tests. Treatment with low doses of aspirin and the blood-thinning drug heparin result in a healthy baby in 70 to 75 percent of affected women (1).
- **Hormonal causes:** When the body produces too much or too little of certain hormones, the risk of miscarriage may increase. Some researchers believe that low levels of the hormone progesterone, which is crucial to support an early pregnancy, cause between 25 and 40 percent of early miscarriages, though this remains unproven (1). Women who have low levels of progesterone in repeated menstrual cycles, diagnosed by blood tests and endometrial biopsy, have what is called a luteal phase defect. Providers may recommend treatment with natural progesterone suppositories or clomiphene citrate; however, studies have not yet proven that these treatments are effective. Women with polycystic ovary syndrome, which is characterized by hormonal abnormalities and multiple cysts on the ovaries, also are at increased risk. Treatment with the diabetes drug metformin may help reduce the risk (2).
- **Inherited blood-clotting disorders (thrombophilias):** This group of disorders, which includes the factor V Leiden and prothrombin gene mutations, may play a role in repeat miscarriages (1, 2). Researchers are investigating whether treatment with aspirin and heparin may

help prevent these losses.

- **Infections and other factors:** Certain symptomless infections of the genital tract may play a role in a small number of repeated miscarriages. However, routine testing (in women with no symptoms) for infections is not currently recommended (1, 2). Workplace exposure to certain industrial solvents, by the pregnant woman or her partner, may cause miscarriage. Couples should discuss chemicals in their workplace with their health care provider.

Even if the cause of their repeated miscarriages cannot be found, couples should not lose hope. Even without treatment, about 60 to 70 percent of women with repeated miscarriages have a successful next pregnancy (1, 2).

[back to top](#)

#### How long does it take to recover from a miscarriage?

It takes weeks to a month or more for a woman to recover physically, depending upon how long she was pregnant. For example, some pregnancy hormones remain in the blood for 1 to 2 months after a miscarriage. Most women experience a menstrual period 4 to 6 weeks after a miscarriage.

It may take much longer to recover emotionally. Women and their partners may experience intense grief as they mourn their loss. A woman may experience many emotions, including numbness, sadness, guilt, depression and anger as well as difficulty concentrating.

She and her partner may handle their grief in different ways, creating tension between them at a time when they need each other most. They should not hesitate to ask their health care provider for a referral to a counselor who is experienced with dealing with pregnancy loss. Many couples also benefit from support groups.

[back to top](#)

#### How long should a woman wait after a miscarriage before attempting another pregnancy?

A woman should not attempt to become pregnant again until she is physically and emotionally ready and she has completed any tests recommended to determine the cause of the miscarriage. Medically, it appears safe to conceive after a woman has had one normal menstrual cycle (if she is not undergoing tests or treatments for the cause of her miscarriage). However, it may take much longer before a woman feels emotionally ready to attempt pregnancy.

[back to top](#)

#### Resources

Parents or other family members who have experienced the loss of a pregnancy may want to read the bereavement information provided on this Web site.

The Maternal and Child Health Library at Georgetown University provides information on infant death and pregnancy loss.

[back to top](#)

#### References




1. American College of Obstetricians and Gynecologists (ACOG). *Management of Recurrent Early Pregnancy Loss. ACOG Practice Bulletin, number 24, February 2001 (reaffirmed 2008).*
2. Reddy, U.M. *Recurrent Pregnancy Loss: Nongenetic Causes. Contemporary Ob/Gyn, June 2007, pages 63-71.*
3. Michels, T.C. and Tiu, A.Y. *Second Trimester Pregnancy Loss. American Family Physician, volume 76, number 9, November 1, 2007, pages 1341-1346.*
4. American College of Obstetricians and Gynecologists (ACOG). *Repeated Miscarriage. ACOG Patient Education Pamphlet AP100, Washington, DC, September 2005.*
5. Weng, X., et al. *Maternal Caffeine Consumption During Pregnancy and the Risk of Miscarriage: A Prospective Cohort Study. American Journal*

*of Obstetrics and Gynecology, published online, January 21, 2008.*

6. Zhang, J., et al. A Comparison of Medical Management with Misoprostol and Surgical Management for Early Pregnancy Failure. *New England Journal of Medicine*, volume 358, number 8, August 25, 2005, pages 761-769.

[back to top](#)

October 2008

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## Quick Reference

### Pregnancy

[Caffeine in Pregnancy](#)

[Environmental Risks and Pregnancy](#)

[Fitness for Two](#)

[Folic Acid](#)

[Food-borne Risks in Pregnancy](#)

[Low Birthweight](#)

[Multiples: Twins, Triplets and Beyond](#)

[Peanut Allergies, Children and Pregnancy](#)

[Pregnancy After 35](#)

[Preconception Health Care](#)

[Fact Sheet: Premature Birth](#)

[Stress and Pregnancy](#)

[Stress and Prematurity](#)

[Teenage Pregnancy](#)

[Umbilical Cord Abnormalities](#)

[Umbilical Cord Blood](#)

### Things to Avoid During Pregnancy

[Accutane and Other Retinoids](#)

[Drinking Alcohol During Pregnancy](#)

[Illicit Drug Use During Pregnancy](#)

[Smoking During Pregnancy](#)

[Thalidomide and Pregnancy](#)

### Infections and Diseases During Pregnancy

[Amniotic Fluid Abnormalities](#)

[Asthma During Pregnancy](#)

- [Marfan Syndrome](#)
- [Neurofibromatosis](#)
- [PKU \(Phenylketonuria\)](#)
- [Rh Disease](#)
- [Sickle Cell Disease](#)
- [Spina Bifida](#)
- [Tay-Sachs and Sandhoff Diseases](#)
- [Thalassemia](#)
- [Newborn Information](#)
  - [Breastfeeding](#)
  - [Newborn Jaundice](#)
  - [Newborn Screening Tests](#)
  - [Recommended Newborn Screening Tests: 29 Disorders](#)
- [Pregnancy Loss and Other Concerns](#)
  - [Ectopic and Molar Pregnancy](#)
  - [Miscarriage](#)
  - [Neonatal Death](#)
  - [Stillbirth](#)
- [Polio](#)
  - [Polio](#)
  - [Post-Polio Syndrome](#)

## Medical Reference

- [Quick Reference and Fact Sheets](#)
  - [Influenza: H1N1 \(Swine\), Seasonal, Avian and Pandemic](#)
- [Genetics & Your Practice Web Site](#)
- [Perinatal Pediatrics](#)
- [Clinical Tools](#)
  - [Preconception Checklist](#)
- [Scientific Publications and Reports](#)
  - [Prematurity](#)
  - [Genetics](#)
  - [Nutrition](#)
  - [Contemporary Ob-Gyn Updates](#)

Chickenpox in Pregnancy
Cytomegalovirus Infection in Pregnancy
Diabetes in Pregnancy
Fifth Disease in Pregnancy
Genital Herpes and Pregnancy
Group B Strep Infection
High Blood Pressure During Pregnancy
HIV and AIDS in Pregnancy
Liver Disorders in Pregnancy
Placental Conditions
Rubella (German Measles)
Sexually Transmitted Infections in Pregnancy
The Thrombophilias and Pregnancy
Toxoplasmosis
Prenatal Screening
Amniocentesis
Chorionic Villus Sampling
Fetal Fibronectin (fFN)
Maternal Blood Screening
Ultrasound During Pregnancy
Birth Defects and Genetics
Achondroplasia
Autism
Birth Defects
Cerebral Palsy
Chromosomal Abnormalities
Cleft Lip and Cleft Palate
Clubfoot and Other Foot Defects
Congenital Heart Defects
Cystic Fibrosis
Down Syndrome
Fragile X Syndrome
Genital and Urinary Tract Defects
Hearing Impairment

[Perinatal Statistics](#)

---

[Post-Polio Syndrome](#)

---

[Prenatal Care](#)

---

[Public Policy Studies](#)

---

[Sickle Cell Treatment Guidelines](#)

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