



Multiple Pregnancy

Over the past 30 years, pregnancies with more than one **fetus** have become more common in the United States. This kind of pregnancy is called **multiple pregnancy**.

Multiple pregnancy increases the risk of certain complications. The risk of complications increases with the number of fetuses. Many of these complications can be managed or even prevented by taking good care of yourself during pregnancy and getting special **prenatal care**.

This pamphlet explains

- how multiple pregnancy can occur and how it is diagnosed
- what special care may be needed and possible complications that may occur
- how multiples may be delivered and caring for multiple newborns

How Multiple Pregnancy Occurs

If more than one egg is released during the menstrual cycle and each is fertilized by a sperm, more than one **embryo** may implant and grow in the **uterus**. This type of pregnancy results in **fraternal twins** (or more). When a single fertilized egg splits, it results in multiple identical embryos. This type of pregnancy results in **identical twins** (or more). Identical twins are less common than fraternal twins.

Causes of Multiple Pregnancy

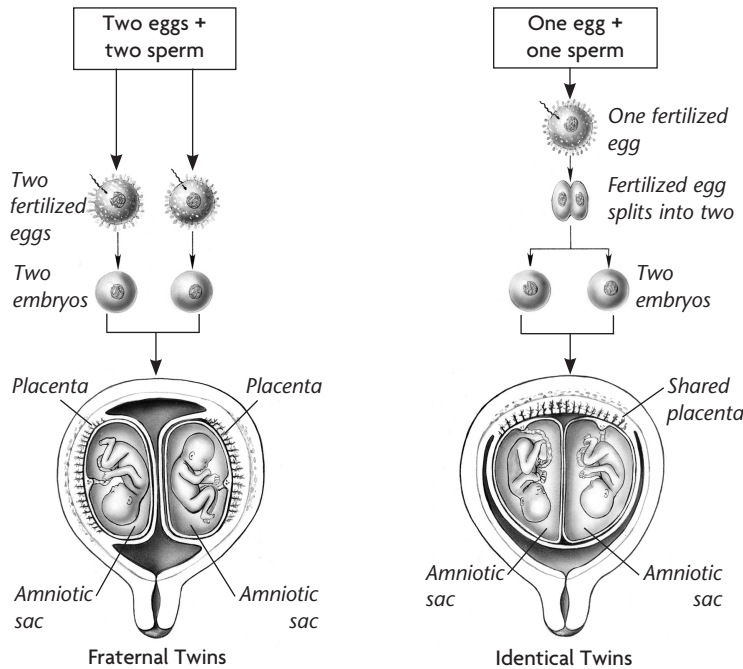
The increase in the number of multiple pregnancies over the past few decades is due mainly to the increased use of fertility treatments. The use of fertility drugs to

induce **ovulation** often causes more than one egg to be released from the **ovaries** and can result in twins, triplets, or more. **In vitro fertilization (IVF)** can lead to a multiple pregnancy if more than one embryo is transferred to the uterus. Identical multiples also may result if the fertilized egg splits after transfer.

Because multiple pregnancy increases the risk of complications for both mother and fetuses, steps can be taken to try to prevent multiple pregnancy during infertility treatments. For example, when ovulation-inducing drugs are used, the number of eggs that are developing inside of the ovaries can be monitored with an **ultrasound exam**. If too many develop, it may be advised to not attempt pregnancy during that cycle. With IVF, fewer embryos can be transferred to the uterus.

How Multiples Are Formed

Fraternal twins come from two eggs and have separate placentas (*left*). Identical twins come from one egg and may share the same placenta (*right*). Triplets and more can be fraternal, identical, or a combination.



Another factor behind the increase in multiple pregnancies is that more older women are becoming pregnant. Women older than 35 years are more likely to release two or more eggs during a single menstrual cycle than younger women. Therefore, they are more likely than younger women to become pregnant with multiples.

Diagnosis

Women who are pregnant with multiples may have more severe morning sickness or breast tenderness than those pregnant with a single fetus. They also may gain weight more quickly. Most multiple pregnancies are discovered during an ultrasound exam.

Nutrition and Exercise

It generally is recommended that women who are pregnant with multiples gain more weight than women who are pregnant with one baby. An extra 300 calories a day is needed for each *fetus*. For instance, if you are pregnant with twins, you need an extra 600 calories a day. Table 1 shows the total weight gain recommended for a twin

pregnancy based on your pre-pregnancy weight. For triplets and more, weight gain should be individualized.

Your diet should include extra *folic acid* and iron, which are found in most prenatal vitamins. Before pregnancy and during pregnancy, getting at least 400 micrograms of folic acid daily can help prevent major *birth defects* of the baby's brain and spine called *neural tube defects (NTDs)*. Current dietary guidelines recommend that pregnant women get at least 600 micrograms of folic acid daily from all sources. It may be hard to get this amount of folic acid from food alone. For this reason, all pregnant women and all women who may become pregnant should take a daily vitamin supplement that contains folic acid.

Staying active during multiple pregnancy is important for your health, but you may need to avoid strenuous exercise. Try lower-impact exercise, such as swimming, prenatal yoga, and walking. You should

aim for 30 minutes of exercise a day. If problems arise during your pregnancy, it may be recommended that you avoid exercise.

Possible Complications

The risk of certain complications is higher in a multiple pregnancy. You most likely will have more frequent

Table 1. Weight Gain Recommendations for a Twin Pregnancy

Prepregnancy Body Mass Index	Category	Recommended Weight Gain for a Twin Pregnancy (in Pounds)
18.5–24.9	Normal weight	37–54
25.0–29.9	Overweight	31–50
30.0 and above	Obese	25–42

To calculate body mass index, visit www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm.

Source: Guidelines for Perinatal Care (8th edition). 2017. American Academy of Pediatrics and American College of Obstetricians and Gynecologists.

prenatal care visits with your **obstetrician–gynecologist (ob-gyn)** or other health care professional. Starting in your second trimester, you may have ultrasound exams every 4–6 weeks. If a problem is suspected, you may have special tests, such as a **nonstress test** or **biophysical profile**, and more frequent ultrasound exams.

Preterm Birth

The most common complication of multiple pregnancy is **preterm** birth. More than one half of all twins are born preterm. Triplets and more are almost always born preterm.

Babies born before 37 weeks of pregnancy may not be as developed as those who are born after 39 weeks of pregnancy. They may have an increased risk of short-term and long-term health problems, including problems with breathing, eating, and staying warm. Other problems, such as learning and behavioral disabilities, may appear later in childhood or even in adulthood. Very preterm babies (those who are born before 32 weeks of pregnancy) can die or have severe health problems, even with the best of care. Preterm multiples have a greater risk than single preterm babies of the same **gestational age** for serious complications that can lead to **cerebral palsy**. Children born with problems related to being preterm may need lifelong medical care.

There is no specific treatment to prevent preterm birth in a multiple pregnancy. If labor does start early, in some cases a type of medication called a **tocolytic** can be given to delay delivery for up to 48 hours. This can allow time for another type of medication called a **corticosteroid** to be given to help the babies' lungs and other organs mature. Corticosteroids may be used up to 34 weeks of pregnancy. **Magnesium sulfate** is a tocolytic given before 32 weeks of pregnancy that also helps reduce the risk of cerebral palsy in preterm infants.

Chorionicity and Amnionicity

Early in a multiple pregnancy, an ultrasound exam is done to find out whether each baby has its own **chorion (chorionicity)** and **amniotic sac (amnionicity)**. Types of twins are as follows:

- Dichorionic–diamniotic—Twins who have their own chorions and amniotic sacs. They typically do not share a **placenta** and can be fraternal or identical.
- Monochorionic–diamniotic—Twins who share a chorion but have separate amniotic sacs. They share a placenta and are identical.
- Monochorionic–monoamniotic—Twins who share one chorion and one amniotic sac. They share a placenta and are identical.

Like twins, triplets can be fraternal or identical. Sometimes, two fetuses are identical and the other is fraternal. Triplets can have their own placentas and amniotic sacs, or two of the triplets may share a sac, a

placenta, or both. Rarely, triplets and more share one placenta and one amniotic sac.

Monochorionic babies have a higher risk of complications than those with separate placentas. One problem that can occur in monochorionic–diamniotic babies is **twin–twin transfusion syndrome (TTTS)**. In TTTS, the blood flow between the twins becomes unbalanced. One twin donates blood to the other twin. The donor twin has too little blood, and the recipient twin has too much blood. The earlier TTTS occurs in the pregnancy, the more serious the outcomes for one or both babies. More frequent ultrasound exams usually are done to monitor for this complication in these types of multiple pregnancies. Treatment is potentially available for TTTS if it is diagnosed during pregnancy.

Although monochorionic–monoamniotic babies are rare, this type of pregnancy is very risky. The most common problem is an **umbilical cord** complication. If the umbilical cords become tangled, it can block blood flow to one or both fetuses. Women with a monoamniotic–monoamniotic pregnancy are monitored more frequently and are likely to have a **cesarean birth**.

Preeclampsia

Preeclampsia is a blood pressure disorder that usually starts after 20 weeks of pregnancy or after childbirth. It occurs more often in multiple pregnancies than in singleton pregnancies. It also tends to occur earlier and is more severe in multiple pregnancies. Preeclampsia can damage many organs in a woman's body, most commonly the kidneys, liver, brain, and eyes. Preeclampsia that worsens and causes seizures is called **eclampsia**. When preeclampsia occurs during pregnancy, the babies may need to be delivered right away, even if they are not fully grown.

Gestational Diabetes

Women carrying multiples have a higher risk of **gestational diabetes**. This condition can increase the risk of preeclampsia and of developing diabetes mellitus later in life. Newborns may have breathing problems or low blood sugar levels. Diet, exercise, and sometimes medication can reduce the risk of these complications.

Growth Problems

Multiples are more likely to have growth problems than single babies. Multiples are called **discordant** if one fetus is much smaller than the others. Discordant growth is common with multiples. It does not always signal a problem. Sometimes, though, a fetus's restricted growth may be caused by an infection, TTTS, or a problem with the placenta or umbilical cord. If growth restriction is suspected in one or both fetuses, frequent ultrasound exams may be done to track how the fetuses are growing. If a problem is found, special tests also may be done, such as **Doppler velocimetry**.

Birth Defects

A birth defect is a physical problem that is present at birth. Some birth defects are noticed right away. Others

may not be noticed until later in life. Many birth defects are caused by problems with the baby's *genes* or *chromosomes*. The risk of having a baby with an *aneuploidy*—an abnormal number of chromosomes—increases as a woman ages. In a multiple pregnancy that results from separate eggs, this risk is multiplied because each baby carries a risk.

A number of prenatal tests are available that can screen for or diagnose certain genetic disorders. *Screening tests* can assess the risk of having a child with an aneuploidy. Having these tests poses no risks to the fetuses, but they have limitations in multiple pregnancies. Screening tests that use a sample of the mother's blood (serum screening tests) are not as sensitive in multiple pregnancy. It is possible to have a positive screening test result when no problem is present in either fetus.

Diagnostic tests for birth defects include *chorionic villus sampling (CVS)* and *amniocentesis*. Unlike screening tests that can show only the possibility of a problem, diagnostic tests are able to detect specific problems. These tests are harder to perform in multiples because each fetus must be tested. There also is a small risk of loss of one or all of the fetuses. Results of these tests may show that one fetus has a disorder, while the others do not.

Delivery

The chance of cesarean birth is higher with multiples. In some cases, twins can be delivered by vaginal birth. How your babies are born depends on the following:

- Number of babies and the position, weight, and health of each baby
- Your health and how your labor is going
- The experience of your ob-gyn or other health care professional

Twins may be born vaginally if the first baby is in a *vertex presentation* (head-down). In a very small number of twin pregnancies, the first baby is born vaginally and the second baby by cesarean delivery. When the first twin is not vertex, the babies usually are delivered by cesarean birth. Babies who share an amniotic sac are delivered by cesarean birth to prevent umbilical cord problems during labor. Triplets and more usually are delivered by cesarean birth.

If there are no pregnancy complications, twins usually are delivered early, typically around 38 weeks of pregnancy. If the fetuses share a placenta or a sac, or if problems arise during the pregnancy, delivery may be earlier. Triplets and more also are delivered earlier.

Caring for Your Newborns

Caring for multiples can be challenging, especially if they are born preterm. Having help and support will make life with multiples go much more smoothly. Multiples of America can help you find a local group to join. Visit www.multiplesofamerica.org to learn more.

The “baby blues” are common after pregnancy. About 2–3 days after childbirth, some women begin to feel depressed, anxious, and upset. These feelings usually go away after a week or two. If they do not, or if they get worse, it may be a sign of a more serious condition called *postpartum depression*. Having multiples might increase your risk of this condition. If you have intense feelings of sadness, anxiety, or despair that prevent you from being able to do your daily tasks, let your ob-gyn or other member of your health care team know.

Many women wonder if they can breastfeed more than one baby. Breastfeeding any baby takes practice, and the same goes for multiples. Breast milk has the right amount of all the nutrients the babies need and adapts as your babies' needs change. When you breastfeed, your milk supply will increase to the right amount. You will need to eat healthy foods and drink plenty of liquids.

Lactation specialists are available at many hospitals and in your community to help you work out any problems you may have. If your babies are born preterm, you can express and store your milk until the babies are strong enough to feed from the breast.

Finally...

You can give your multiples the best possible start in life by taking good care of yourself during pregnancy. Talk to your ob-gyn or other member of your health care team about your questions and concerns. You can find books and websites with more information, and there even are organizations that provide services for parents of multiples.

Glossary

Amniocentesis: A procedure in which amniotic fluid and cells are taken from the uterus for testing. The procedure uses a needle to withdraw fluid and cells from the sac that holds the fetus.

Amnioncity: The number of amniotic (inner) membranes that surround fetuses in a multiple pregnancy. When multiple fetuses have only one amnion, they share an amniotic sac.

Amniotic Sac: Fluid-filled sac in a woman's uterus. The fetus develops in this sac.

Aneuploidy: Having an abnormal number of chromosomes. Types include trisomy, in which there is an extra chromosome, or monosomy, in which a chromosome is missing. Aneuploidy can affect any chromosome, including the sex chromosomes. Down syndrome (trisomy 21) is a common aneuploidy. Others are Patau syndrome (trisomy 13) and Edwards syndrome (trisomy 18).

Biophysical Profile: A test that uses ultrasound to measure a fetus's breathing, movement, muscle tone, and heart rate. The test also measures the amount of fluid in the amniotic sac.

Birth Defects: Physical problems that are present at birth.

Cerebral Palsy: A disorder of the nervous system that affects movement, posture, and coordination. This disorder is present at birth.

Cesarean Birth: Birth of a fetus from the uterus through an incision made in the woman's abdomen.

Chorion: The outer membrane that surrounds the fetus.

Chorionic Villus Sampling (CVS): A procedure in which a small sample of cells is taken from the placenta and tested.

Chorionicity: The number of chorionic (outer) membranes that surround the fetuses in a multiple pregnancy.

Chromosomes: Structures that are located inside each cell in the body. They contain the genes that determine a person's physical makeup.

Corticosteroid: A drug given for arthritis or other medical conditions. These drugs also are given to help fetal lungs mature before birth.

Diagnostic Tests: Tests that look for a disease or cause of a disease.

Discordant: A large difference in the size of fetuses in a multiple pregnancy.

Doppler Velocimetry: A test that measures the flow of blood in a blood vessel.

Eclampsia: Seizures occurring in pregnancy or after pregnancy that are linked to high blood pressure.

Embryo: The stage of development that starts at fertilization (joining of an egg and sperm) and lasts up to 8 weeks.

Fetus: The stage of human development beyond 8 completed weeks after fertilization.

Folic Acid: A vitamin that reduces the risk of certain birth defects when taken before and during pregnancy.

Fraternal Twins: Twins that have developed from two different fertilized eggs.

Genes: Segments of DNA that contain instructions for the development of a person's physical traits and control of the processes in the body. The gene is the basic unit of heredity and can be passed from parent to child.

Gestational Age: How far along a woman is in her pregnancy, usually reported in weeks and days.

Gestational Diabetes: Diabetes that starts during pregnancy.

Identical Twins: Twins that have developed from a single fertilized egg that are usually genetically identical.

In Vitro Fertilization (IVF): A procedure in which an egg is removed from a woman's ovary, fertilized in a laboratory with the man's sperm, and then transferred to the woman's uterus to achieve a pregnancy.

Magnesium Sulfate: A drug that may help prevent cerebral palsy when it is given to women in

preterm labor who may deliver before 32 weeks of pregnancy.

Multiple Pregnancy: A pregnancy where there are two or more fetuses.

Neural Tube Defects (NTDs): Birth defects that result from a problem in development of the brain, spinal cord, or their coverings.

Nonstress Test: A test in which changes in the fetal heart rate are recorded using an electronic fetal monitor.

Obstetrician–Gynecologist (Ob-Gyn): A doctor with special training and education in women's health.

Ovaries: Organs in women that contain the eggs necessary to get pregnant and make important hormones, such as estrogen, progesterone, and testosterone.

Ovulation: The time when an ovary releases an egg.

Placenta: An organ that provides nutrients to and takes waste away from the fetus.

Postpartum Depression: A type of depressive mood disorder that develops in the first year after the birth of a child. This type of depression can affect a woman's ability to take care of her child.

Preeclampsia: A disorder that can occur during pregnancy or after childbirth in which there is high blood pressure and other signs of organ injury. These signs include an abnormal amount of protein in the urine, a low number of platelets, abnormal kidney or liver function, pain over the upper abdomen, fluid in the lungs, or a severe headache or changes in vision.

Prenatal Care: A program of care for a pregnant woman before the birth of her baby.

Preterm: Less than 37 weeks of pregnancy.

Screening Tests: Tests that look for possible signs of disease in people who do not have signs or symptoms.

Tocolytic: A drug used to slow contractions of the uterus.

Twin–Twin Transfusion Syndrome (TTS): A condition of identical twins in which one twin gets more blood than the other during pregnancy.

Ultrasound Exam: A test in which sound waves are used to examine inner parts of the body. During pregnancy, ultrasound can be used to check the fetus.

Umbilical Cord: A cord-like structure containing blood vessels. It connects the fetus to the placenta.

Uterus: A muscular organ in the female pelvis. During pregnancy, this organ holds and nourishes the fetus.

Vertex Presentation: A presentation of the fetus where the head is positioned down.

This information was designed as an educational aid to patients and sets forth current information and opinions related to women's health. It is not intended as a statement of the standard of care, nor does it comprise all proper treatments or methods of care. It is not a substitute for a treating clinician's independent professional judgment. Please check for updates at www.acog.org to ensure accuracy.

Copyright November 2018 by the American College of Obstetricians and Gynecologists. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, posted on the internet, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher.

This is EP188 in ACOG's Patient Education Pamphlet Series.

ISSN 1074-8601

American College of Obstetricians and Gynecologists
409 12th Street, SW
PO Box 96920
Washington, DC 20090-6920