
Twins and multiple births

Summary

- Twins account for more than 90 per cent of multiple births.
 - To form identical twins, one fertilised egg (ovum) splits and develops into two babies with exactly the same genetic information.
 - To form fraternal twins, two eggs (ova) are fertilised by two sperm and produce two genetically unique children.
 - Triplets are usually a combination of the types of twins, with a set of identical twins (two) and a fraternal (one) triplet.
 - If you are carrying more than one baby, it is best to give birth in hospital, rather than at home, as multiple births are higher risk.
-

Multiple births are more common than they used to be, due to the increased use of assisted reproductive techniques, in particular the use of fertility drugs. Older women are more likely to have a multiple pregnancy and, because the average age at which women give birth is rising, this is also a contributing factor. Twins account for more than 90 per cent of multiple births. There are two types of twins – identical (monozygotic) and fraternal (dizygotic).

To form identical twins, one fertilised egg (ovum) splits and develops two babies with exactly the same genetic information. This differs from fraternal twins, where two eggs (ova) are fertilised by two sperm and produce two genetically unique children, who are no more alike than individual siblings born at different times. Twins are equally likely to be female or male. Contrary to popular belief, the incidence of twins does not skip generations.

The likelihood of having twins

Some women are more likely than others to give birth to twins. The factors that increase the likelihood include the following:

- **age of the mother** – women in their 30s and 40s have higher levels of the sex hormone oestrogen than younger women, which means that their ovaries are stimulated to produce more than one egg at a time
- **number of previous pregnancies** – the greater the number of pregnancies a woman has already had, the higher her likelihood of conceiving twins
- **heredity** – a woman is more likely to conceive fraternal twins if she is a fraternal twin, has already had fraternal twins, or has siblings who are fraternal twins
- **race** – black African women have the highest incidence of twins, while Asian women have the lowest
- **assisted reproductive techniques** – many procedures rely on stimulating the ovaries with fertility drugs to produce eggs, which can result in several eggs being released per ovulation
- **IVF** – multiple embryos are often transferred to the woman's uterus to increase the chance of success.

Identical twins

Twins conceived from one egg and one sperm are called identical or 'monozygotic' (one-cell) twins. Identical twins occur when the fertilised egg divides in two while it is still a tiny collection of cells. The self-contained halves then develop into two babies, with exactly the same genetic information. Around one in three sets of twins is identical. What causes the fertilised egg to split in two remains a mystery.

Types of identical twins

Depending on when the fertilised egg divides in two, monozygotic twins may:

- each have their own placenta, inner membrane (amnion) and outer membrane (chorion)
-

- share one placenta and one outer membrane, but have two inner membranes
- share one placenta, one outer membrane and one inner membrane.

If the division of the fertilised egg is incomplete, the twins will be conjoined (previously known as ‘Siamese’ twins).

Approximately one-quarter of identical twins are mirror images of each other, which means the right side of one child matches the left side of their twin. It is not known what causes this.

Risks to mother and baby in multiple pregnancy higher

Twin pregnancies are associated with more frequent complications for both the mother and the babies. The mother might experience severe morning sickness that is persistent, diabetes in pregnancy, high blood pressure, or early onset of labour due to waters breaking prematurely giving rise to preterm delivery of babies. For the babies, the increased risks are due to being born prematurely or due to complications due to a shared placenta or blood vessels and due to uterine restriction.(1)

Antenatal care for women carrying identical twins

It is important to know whether your twins are sharing a placenta, as sharing a placenta also means sharing the blood supply from the mother. If the sharing of the blood supply is unequal, this can lead to complications. For this reason, women carrying twins sharing a placenta will need to have more frequent antenatal check-ups.

Twins sharing an inner membrane (which means they share the amniotic sac) carry an even higher risk of complications, as there is the potential for their umbilical cords to become tangled and to cut off their blood supply. In this case the pregnancy is monitored even more closely, and it may be recommended that your twins be delivered earlier.

Fraternal twins

Around two in three sets of twins are fraternal. Two separate eggs (ova) are fertilised by two separate sperm, resulting in fraternal or ‘dizygotic’ (two-cell) twins. Dizygotic twins each have their own placenta, inner membrane and outer membrane.

These babies will be no more alike than siblings born at separate times. The babies can be either the same sex or different sexes.

Higher order multiples – triplets, quadruplets, quintuplets, sextuplets or more

Triplets and more can be a combination of both identical and fraternal multiples. Triplets are most commonly a combination of monozygotic and dizygotic, with a set of identical twins (two) and a fraternal (one) triplet. Triplets or more require a closely monitored pregnancy.

Gestation time for twins

The normal length of gestation (period of time spent developing in the womb) for a single baby is around 40 weeks. However, gestation for twins, either identical or fraternal, is usually around 38 weeks. This shorter time is due to the increased demands on the mother’s body, and the inability of the babies to receive all the nutrients they need in the womb.

As twins are usually premature, they are more likely to have lower birthweights. Prematurity is associated with increased risk of a number of disorders, including jaundice.

Looking after yourself when expecting twins or multiple babies

Like in any pregnancy, if you are pregnant with twins or multiple babies, eating well and getting enough rest are the cornerstones of good self-care.

Aim for healthy, balanced meals and drink plenty of fluids, ideally at least eight large glasses of water a day. Sugary snacks can give you highs and lows, which may feel unpleasant. ‘Slow-burning’ foods (foods that take longer for your body to turn into energy, also known as low glycaemic index or low GI foods) will keep your blood sugar more stable and will probably keep you satisfied longer – try introducing more wholegrain breads, vegetables, beans, oats, brown rice and wholegrain pasta into your diet.

Your body will be needing extra protein, calcium, iron, iodine, vitamin D,(2) folic acid and vitamin B12 than if you were only having one baby, so make sure your diet is varied. Try to eat little and often. Fresh foods will meet more

of your body's nutritional needs than processed foods. Speak with your doctor or midwife about taking a pregnancy supplement too.

Giving birth to multiple babies

Childbirth can give rise to complications when just one baby is being born, so twins or other multiples present extra potential for difficulties. If you are carrying more than one baby it is best to give birth in hospital, rather than at home. The babies can be delivered vaginally, but caesarean section delivery may be considered a better alternative in some circumstances.

Mothers of multiple births face higher rates of postpartum depression (3) Talk to your doctor or other health professional if you feel you may be experiencing this.

Zygosity testing – identical or fraternal twins

It is difficult to tell if twins are identical or fraternal at birth. Fraternal twins are born with individual sets of membranes, but some identical twins can also be.

One way to tell the difference is to have the twins DNA-tested (this is also known as zygosity testing). Identical twins share the same genetic information, while fraternal twins share around half.

DNA testing can be done with a sample of cheek cells, collected painlessly, or by performing blood group examinations, which require a blood sample to be taken.

While the distinction may not seem important if you have two (or more) healthy babies, it can be useful to know for health reasons because identical twins have a high likelihood of experiencing the same illnesses or having the same health condition. Identical twins are also compatible for organ transplantation, should it be required.

Where to get help

- Your doctor
- Midwife
- Obstetrician

This page has been produced in consultation with and approved by:

Better Health Channel

Content on this website is provided for information purposes only. Information about a therapy, service, product or treatment does not in any way endorse or support such therapy, service, product or treatment and is not intended to replace advice from your doctor or other registered health professional. The information and materials contained on this website are not intended to constitute a comprehensive guide concerning all aspects of the therapy, product or treatment described on the website. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions and to ascertain whether the particular therapy, service, product or treatment described on the website is suitable in their circumstances. The State of Victoria and the Department of Health & Human Services shall not bear any liability for reliance by any user on the materials contained on this website.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2020 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.