

MULTIPLE GESTATION

Multiple gestation means that the pregnant person is carrying **more than one fetus**. This can include **twins, triplets, and more**. The **majority of this handout will specify details of twin pregnancies**.

Twins are quite common. Approximately 1 in every 80 pregnancies in Canada are twin pregnancies and the rate is increasing. People are more likely to have twins when the birthing parent is older or if they use fertility medicine/treatments. **Most patients with twin pregnancies will have a healthy pregnancy and deliver healthy babies**, though there is a higher risk of complications. Twin pregnancies require more monitoring.

DID YOU KNOW?

Patients who are pregnant with multiples **may have more severe symptoms of early pregnancy**, including morning sickness or breast tenderness. Twin pregnancies are **diagnosed on ultrasound** as early as the first trimester.

TYPES OF TWIN GESTATIONS

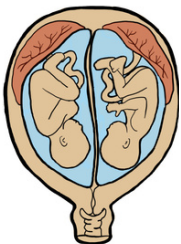
DIZYGOTIC

Dizygotic twins occur when **two eggs** are fertilized by **two different sperm cells**. Dizygotic twins are colloquially called "**fraternal twins**." Each twin has their **own placenta** and their **own amniotic sac** (see the "dichorionic-diamniotic" diagram below). Genetically, they are just as similar as any set of siblings would be, unlike monozygotic twins. **Dizygotic twins are the most common type of twin.**

MONOZYGOTIC

Monozygotic twins occur when **one fertilized egg splits into two embryos**. Due to the fact that they originated from one fertilized egg, they share the same genetics. This type of twin is colloquially referred to as "**identical twins**." However, **based on the timing of the split into two embryos**, they may or may not share features like the placenta and/or the amniotic sac. There are several types of monozygotic twins:
(**Note:** conjoined twins not pictured below)

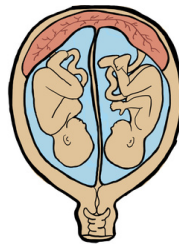
DICHORIONIC- DIAMNIOTIC (DC/DA)



These twins have separate placentas ('dichorionic') and separate amniotic sacs ('diamniotic').

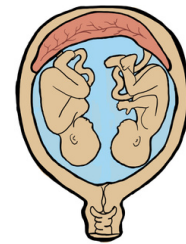
Most common type of monozygotic twins.

MONOCHORIONIC- DIAMNIOTIC (MC/DA)



These twins share a placenta ('monochorionic') but have separate amniotic sacs ('diamniotic').

MONOCHORIONIC- MONOAMNIOTIC (MC/MA)



These twins share a placenta ('monochorionic') and also share an amniotic sac ('monoamniotic').

Least common type of twin gestation; requires more monitoring.

MONITORING OF TWIN GESTATIONS

If you are having twins, your pregnancy will be more closely monitored. This includes more frequent prenatal visits and more frequent ultrasounds.

During your ultrasounds, we are checking to make sure that both babies are growing appropriately. For **monochorionic twin pregnancies**, we are monitoring to ensure there is not a significant difference in size or blood flow between both babies. Otherwise, there can be serious complications for both babies (table below).

RISKS OF MONOCHORIONIC TWIN GESTATIONS

There are **three main risks** that we monitor for during a monochorionic twin pregnancy. All three of these risks are rare, however, twin-twin transfusion syndrome is the most common of the three.

1) TWIN-TWIN TRANSFUSION SYNDROME

2) TWIN ANAEMIA/POLYCYTHAEMIA SEQUENCE

3) TWIN REVERSED ARTERIAL PERFUSION SEQUENCE

Twin-twin transfusion syndrome (TTTS) is a rare but serious complication of monochorionic (single placenta) twin pregnancies where there is abnormal blood flow between the two twins. This occurs in 10-15% of monochorionic (single placenta) twin pregnancies. TTTS results in a '**donor twin**' and a '**recipient twin**'.

The **donor twin** will have less blood and amniotic fluid, and the **recipient twin** will have more than required. While TTTS can be mild and may not require treatment, both the donor and recipient twin can have unique and dangerous complications that may require specialized monitoring and treatment.

DO I NEED TO HAVE A CAESAREAN DELIVERY IF I'M HAVING TWINS?

Not necessarily! Many people with twins have a vaginal birth.

Your health care provider will help you decide what is right for you. Typically, in order to consider a vaginal birth, the presenting twin ("Twin A") must be in the vertex presentation (head down). The second twin ("Twin B") should not be much bigger than Twin A.

Depending on specific details related to your pregnancy, your health care provider may also suggest a Cesarean delivery to ensure a safe delivery for both babies.



References

Royal College of Obstetricians and Gynaecologists. Multiple pregnancy: having more than one baby. RCOG. 2021. Available from: <https://www.rcog.org.uk/for-the-public/browse-our-patient-information/multiple-pregnancy-having-more-than-one-baby/>

Lee H, Abbasi N, Van Mieghem T, et al. Guideline No. 440: Management of Monochorionic Twin Pregnancies. J Obstet Gynaecol Can. 2023;45(8):587-606.

Mei-Dan E, Jain V, Melamed N, et al. Guideline No. 428: Management of Dichorionic Twin Pregnancies. J Obstet Gynaecol Can. 2022;44(7):819-834

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