

Twin to Twin Transfusion Syndrome

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A diagnosis of Twin-to-Twin Transfusion Syndrome (TTTS) can be an upsetting and emotional time for you and your family. TTTS is a complication that occurs in around 10-15% of pregnancies to twins that share a placenta (monochorionic). It can occur at any time during your pregnancy but is most likely to occur in the early to middle stages of your pregnancy before 26 weeks.

This leaflet has been produced to give you a bit more information about TTTS and can be used alongside the advice and support you will receive from the Liverpool Multiple Pregnancy Team

What is TTTS?

TTTS occurs when there are abnormal connections between the babies' blood vessels on the surface of the placenta. This then causes blood to be transferred (shunted) from one twin (called the donor) to the other (the recipient).

By donating some of its blood supply to its sibling, the donor has less oxygen in its blood. As the donor has less oxygen it prioritises the flow of blood to the brain. This may mean that other organs such as the kidneys do not receive as much blood which will reduce urine production and lead to a small bladder and less fluid around the baby. We can see this on ultrasound.

The recipient twin has an increase in blood volume from the donor which can sometimes put strain on the baby's heart as it must pump harder. The recipient will compensate for the extra blood by producing more urine, increasing the amount of fluid around the baby.

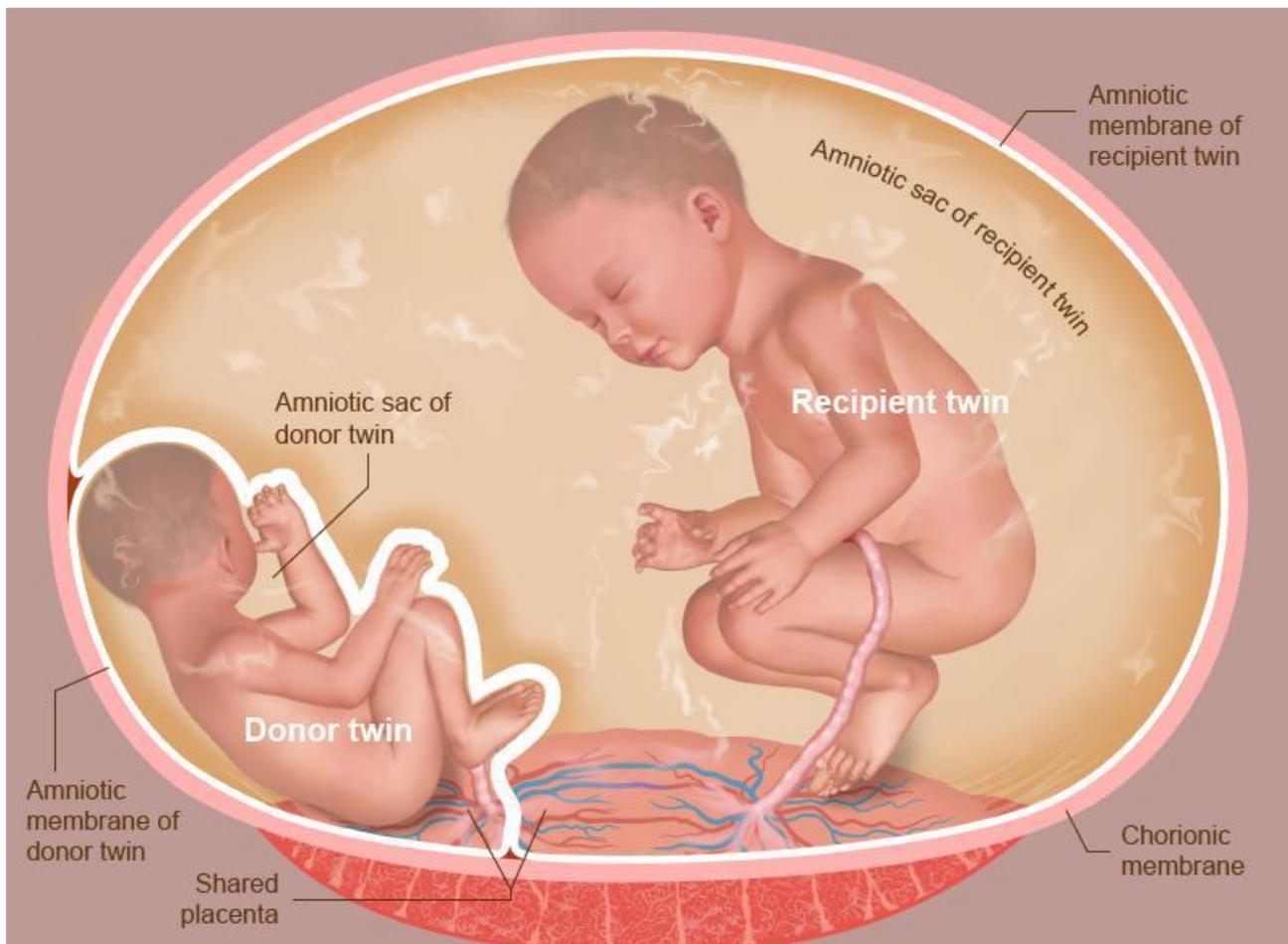


Figure 1: Diagram of Twin-to-Twin Transfusion syndrome

<https://www.childrensmn.org/services/carespecialtiesdepartments/fetalmedicine/conditionsandservices/twintotwintransfusionsyndrome/>

How is TTTs diagnosed?

TTTS is diagnosed by ultrasound scan and divided into stages. Early ultrasound scanning is important to determine the type of twin pregnancy and whether the babies share a placenta.

You will have regular ultrasound scans in pregnancy to screen for TTTS. The diagnosis is made by measuring the amount of fluid around each baby, the size of their bladders, the baby's weight and the baby's blood flows (Dopplers).

There are a few warning symptoms to keep an eye out during your pregnancy but often you will have no symptoms at all:

- Sudden weight gain
- Feeling of increased pressure in your tummy
- Feeling like your tummy is tight

Quintero Stage	Key Features	Treatment indicated
1	Low liquor around the donor and high around the recipient	No
2	No urine in the donor baby's bladder	Yes
3	Abnormal blood flow (Doppler) in either baby	Yes
4	Heart failure or hydrops (fluid inside the baby's tummy) in the recipient baby	Yes

How is TTTS managed?

If you are diagnosed with TTTS, you and your babies will be monitored very closely. Every pregnancy is different, and a specialised plan will be made with you and the Liverpool Multiple Pregnancy Team.

If the TTTS is mild (stage 1) and the babies are stable, you may not need any treatment. You will be regularly monitored and if the situation gets worse, doctors may intervene.

If the TTTS is more advanced you will be advised about treatment options. If no treatment is performed the outcome for the pregnancy can be poor with an 80% chance of losing at least one baby. The most effective treatment is Laser Ablation of the blood vessels of the placenta which connect the babies. It involves a needle being inserted into your uterus (womb). The laser will burn the connecting blood vessels stopping the shunting which causes the TTTS. Both babies will still be connected to the placenta by their umbilical cords so will still receive nutrients and blood.

Laser for TTTS is our most effective treatment with a 75% chance of taking home one or both babies, 50% chance of taking home both. However, there are complications associated with laser, such as; preterm labour, rupture of membranes and have learning difficulties after birth.

How and when will my babies be delivered?

TTTS is associated with premature labour and therefore your babies may need to spend some time on the neonatal unit. If the TTTS is fully resolved the pregnancy may carry on as normal with delivery planned as for any other monochorionic twin pregnancy and a vaginal delivery may be possible.

Key websites to visit

Twins Trust (formerly TAMBA)

twinstrust.org

YouTube Video

<https://youtu.be/XhKJiaZyke0>

This leaflet can be made available in different formats on request. If you would like to make any suggestions or comments about the content of this leaflet, then please contact the Patient Experience Team on 0151 702 4353 or by email at pals@lwh.nhs.uk

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