

It takes three to tango: the placenta!

What is it?

- An organ attached to the lining of the womb
- The vital link between the mum and the baby during pregnancy

What does it do?

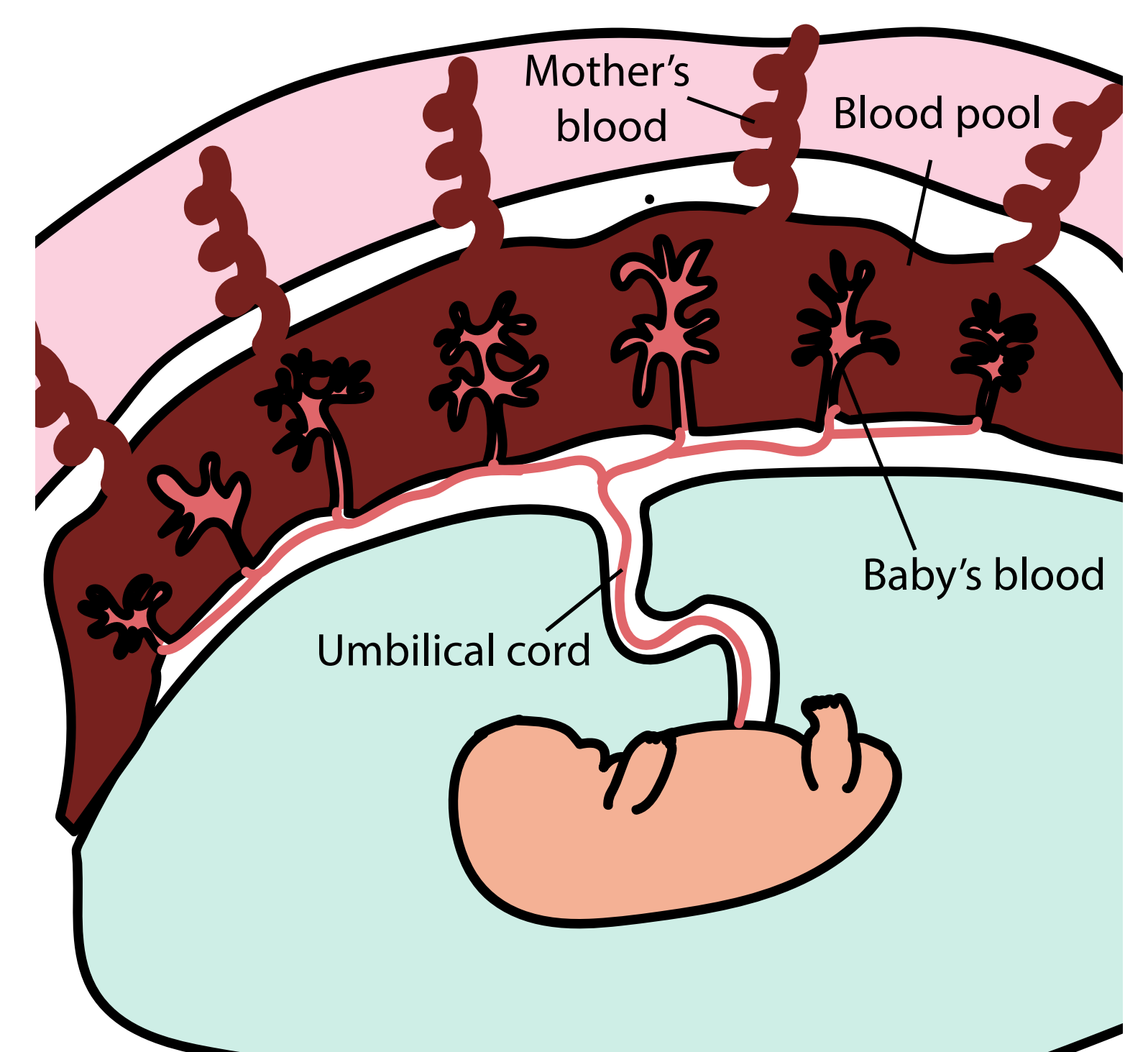
- Transfers oxygen and nutrients to the growing baby via the umbilical cord
- Removes carbon dioxide and waste products from the baby's blood
- Shields the baby against infections
 - Produces hormones which support the pregnancy

How to keep it healthy?

- Attend antenatal check-ups regularly
- Avoid smoking, drinking alcohol and using illegal drugs during pregnancy
- Consult your doctor before taking any medicines or supplements during pregnancy

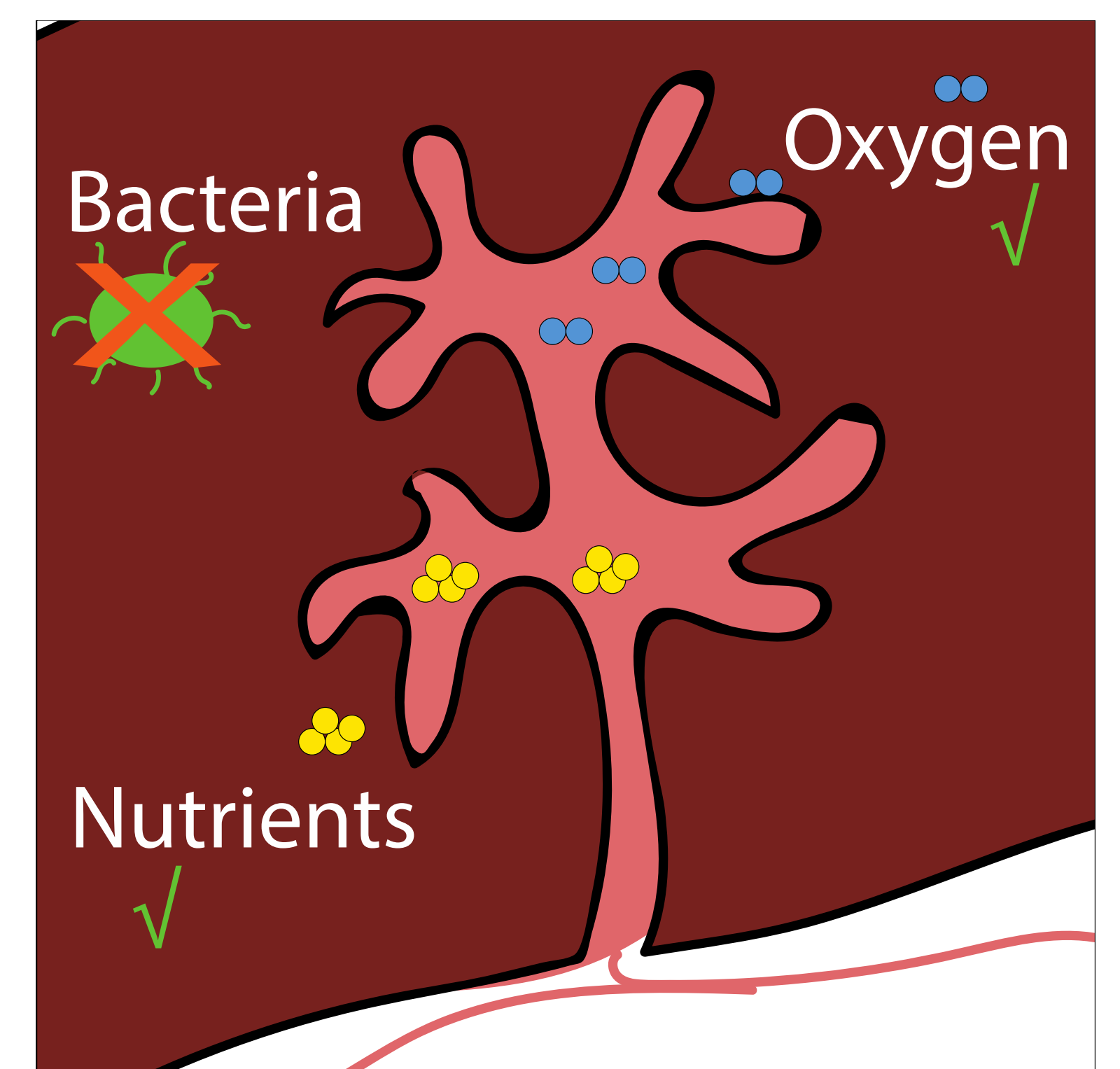
First trimester

- The placenta is formed
- Some cells from the embryo will form the baby's side of the placenta, by attaching to the wall of the uterus
- The umbilical cord is formed. It provides a connection between the baby and the placenta
- On the mother's side, there is an increased blood flow to certain "blood pools"
- The baby's and mother's blood will actually never mix. They will be separated via blood vessel walls in these "blood pools". The vessel wall will, however, allow small substances, like oxygen and sugar, to pass between the mother to the baby
- At end of the first trimester, the baby gets a full blood supply from the placenta



Second trimester

- The baby will now receive essential substances, such as oxygen and nutrition, via the placenta and the umbilical cord
- Larger substances, like most bacteria, cannot pass from the mother to the baby, which means that the baby is protected to pathogens even if the mother gets infected
- Waste products from the baby are transported via the placenta to the mother, and are then processed further in the mother's organs.

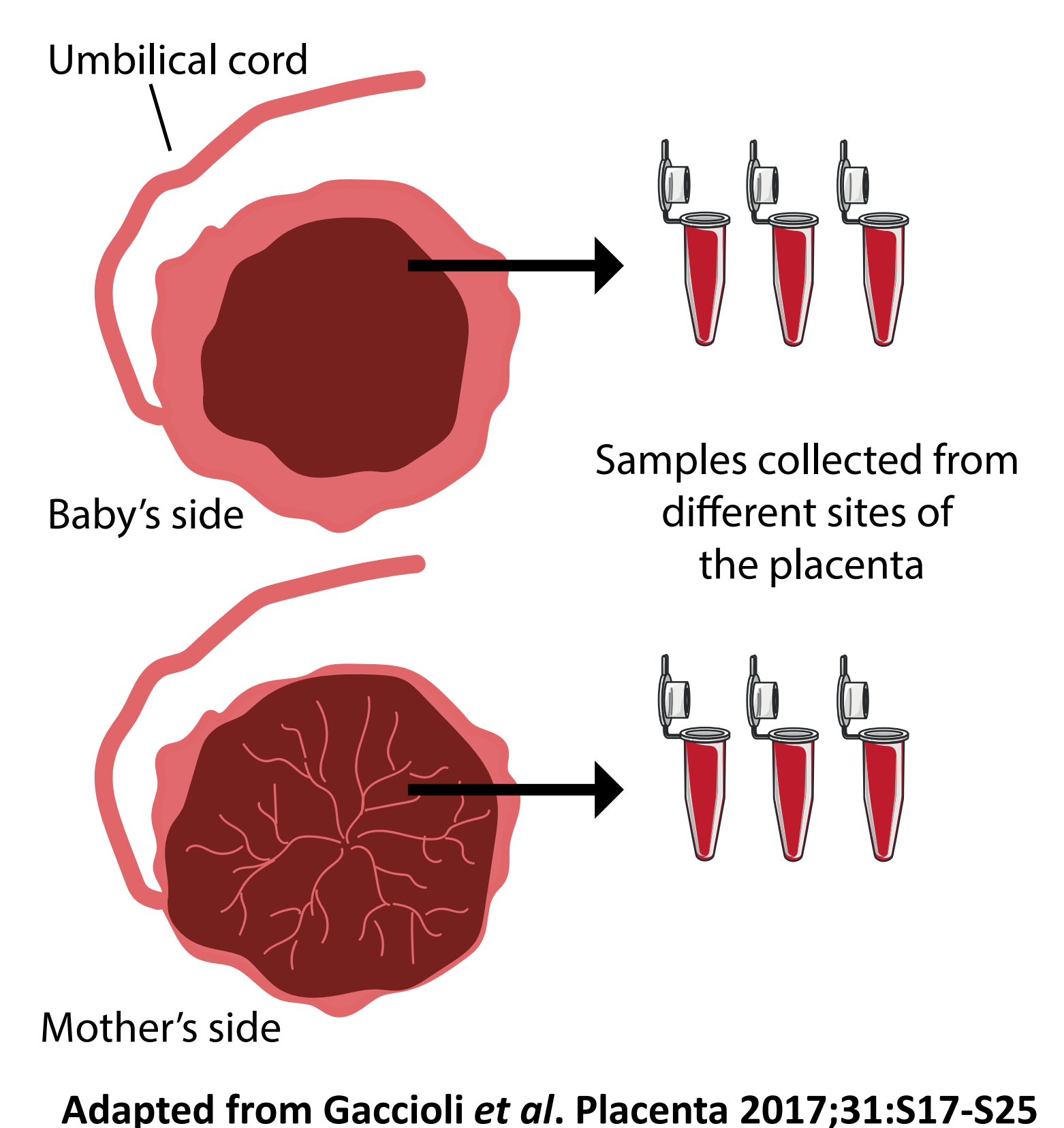


Third trimester

- Immunoglobulin G antibodies can pass from the mother to the baby. These antibodies can help the baby's immune system to recognise and destroy pathogens
- At end of pregnancy, the placenta weighs around 500 g (or 1lb)

Delivery

- The placenta detaches from the uterus and is delivered after the baby is born
- The placenta is usually disposed afterwards. However, sometimes placentas are collected for research purposes. The examination of the placenta can help researchers to better understand placental function and the role the placenta plays in a healthy pregnancy, and to develop new tests and therapies to prevent any placenta-related problems in pregnancy.



Read more



NHS:
<https://www.nhs.uk/common-health-questions/pregnancy/what-is-the-placenta/>



Cambridge University:
<https://www.cam.ac.uk/research/news/understanding-the-placenta-the-key-to-healthy-life>



BBC:
<https://www.bbc.co.uk/bitesize/guides/z9fgr82/revision/5>