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WHAT ARE UMBILICAL CORD STEM CELLS?

Umbilical cord blood collected at birth is a rich source of stem cells that can be used in research and in the clinic to treat diseases of the blood and immune system.

With the consent of the parents, blood can be collected from the umbilical cord of a newborn baby shortly after birth. This does not hurt the baby or the mother in any way, and it is blood that would otherwise be discarded as biological waste along with the placenta (another rich source of stem cells) after the birth.

The umbilical cord blood contains **haematopoietic stem cells** - similar to those found in the bone marrow - and which can be used to generate red blood cells and cells of the immune system. Cord blood stem cells are currently used to treat a range of blood disorders and immune system conditions such as leukaemia, anaemia and autoimmune diseases. These stem cells are used largely in the treatment of children but have also started being used in adults following chemotherapy treatment.

Another type of cell that can also be collected from umbilical cord blood are **mesenchymal stromal cells**. These cells can grow into bone, cartilage and other types of tissues and are being used in many research studies to see if patients could benefit from these cells too.

Umbilical cord blood can be collected and stored in a **cord blood bank** either in public and private cord blood banks around Australia.

To learn more about umbilical cord blood and banking please watch [Banking on cord blood](#), [Cord blood - banking and uses](#), [Cord blood transplantation - how stem cells can assist in the treatment of cancer](#) in our video library.

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