

## Health issues in a child and cord blood banking

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Umbilical cord is cut after the birth of the baby. The cord contains 50 to 100 ml of the baby's blood and is usually thrown off. However, these days there is an option of preserving the cord blood in private banks formed for the purpose. The cord blood contains stem cells which can be used to transplant in an individual for treatment of some diseases like aplastic anemia, thalassemia and cancers. Stem cells are basic cells which can grow into many specific types of cells, e.g. blood cells. This is similar to bone marrow transplantation as bone marrow also contains stem cells. The facility of banking cord blood for use in the future for a child of the family is available at a cost. A family may find the cost as reasonable or very high depending on the economic status of the family. Because of the high cost and **projected** very high utility of cord blood banking the families face a great dilemma about whether to do cord blood banking of the child or not.

The family who is waiting for the birth of a child may find the following realistic information useful while taking decision about banking the cord blood of their baby.

### Utility of cord blood banking

1. The stem cells of the **cord blood can not be used to treat thalassemia or other genetic disorders in the child**; as the stem cell also have the same genetic defect.
2. There is **no scientific evidence of successful treatment with stem cell transplantation in many other genetic diseases like muscular dystrophy, mental retardation**, cerebral palsy, neurodegenerative diseases, etc.
3. The stem cells may be useful to treat thalassemia, aplastic anemia, immunodeficiency disorders etc in the sibling. But the number of stem cells in cord blood may not be sufficient for older children and adults.
4. The recent reports say that the possibility of the same child requiring stem cells in future is very low and may be in the range on 1 in 1000 to 1 in 2 lac.
5. A great deal of research is going on the stem cell therapy in various disorders but is found to be useful in a very small number of diseases.
6. The method of collection and storage of cord blood may not be validated in many cord blood banks.
7. If a family can not afford cord blood banking for the child then they need not feel guilty as **stem cell banking is NOT a biological / medical insurance** for all medical disorders.
8. Sometimes inaccurate and confusing information is provided to the families about utility of cord blood banking
9. Donation of cord blood to public cord blood bank is likely to be more useful for treatment of an unrelated individual. Worldwide 5500 or more unrelated cord blood transplantation have been done.
10. For more information:

<http://pediatrics.aappublications.org/content/119/1/165.full>