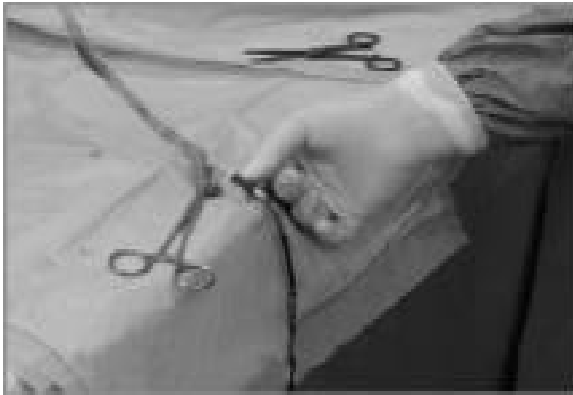


With stem cells being an international controversy, recent developments on umbilical cord stem cell banking seems to look very much beneficial for future generations. Unlike bone marrow, umbilical stem cells are easy to extract. The first step is to examine the placenta after birth. If the placenta passes an examination, the umbilical cord is deemed healthy. The cord is then treated with iodine. Once dry, the blood is then extracted using a needle with tube. The needle is inserted into the umbilical vein, and the blood fills the tube via gravity as shown...



### **Harvesting of the cells**

Once successfully extracted, the blood is simply bagged, and labeled.

Other benefits from the cord stem cells are that they are more tolerant to mismatches. Because stem cells are the base cell, these cells are more likely to be accepted. In addition, the patient would be using their own saved stem cells, and would not require a foreign donor. Since the cells are from a new born, there is a lower risk of transplant disease because the cells very rarely contain viruses.

Currently, the US, India, and the GCC countries have umbilical cord stem cell banking. The latest news on the topic is that India is acting slowly to have their facilities at regulation standards. In addition, there is a worry that impoverished women will have children merely to sell the umbilical cord. The IMCR (Indian Council of Medical Research) has assured the press that they are taking measures to bring their facilities up to FDA standards, and are working on the potential problem of cord sellers.

With this process being so easy & currently being worked to a standard, there is a positive outlook that many diseases including Parkinson's, Alzheimer's, and Leukemia, will have a cure in the future from a patients own harvested stem cells. Hopefully engineers and scientists can collaboratively work to cure at least one of them with this new practice. The total cost for the harvesting and a 21 year storage plan costs a one-time fee of \$1950.00, and there are good signs of most insurance companies covering this.

### **References**

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