

CONCEIVING ONE CHILD TO SAVE ANOTHER

Certain diseases affecting the blood or immune system—such as leukemia, Hodgkin’s disease, sickle cell disease, etc.—can, in some instances, be cured by way of a stem cell transplant, typically from the bone marrow or umbilical cord. The main problem, however, is *immunological compatibility*.

The National Marrow Donor Program lists 6.5 million names, leaving a roughly **1 in 400 chance** of a match, depending on the patient’s ethnic group. The best results are obtained when the cells are from sibling donors. If there are no siblings, parents have roughly a **1 in 4 chance** of naturally conceiving a suitable donor—clearly better odds than the donor bank, but still a gamble. So what are the alternatives?

TWO METHODS

Prenatal Diagnosis

In many cases, prenatal diagnosis can inform parents both regarding whether the child *suffers* from the disease in question, and whether the child would constitute a good immunological *match*. Combined with selective abortion, screening can, thereby, enable the parents to produce a donor for the first child in the form of a second child.

Likelihood of Success: Equal to the likelihood of normal conception, combined with a great likelihood of a suitable donor, given screening and selective abortion.

Moral Worry: Since the cells typically are taken from the umbilical cord, the procedure will not harm the second child. However, is the welfare of the second child compromised given the *reasons* for which it’s being conceived? That depends on the situation.

(a) In cases where the parents were already planning to have a second child, the welfare of the child doesn’t seem to be compromised.

(b) Even if the parents were *not* already planning to have a second child, the fact that they are willing to conceive another child to protect the first suggests that they are highly committed to their children.

(c) If the transplant cures the first child, the second child is likely to be praised. If the transplant does not cure the first child, the second child is not likely to be blamed.

(d) If the parents do not intend to keep the second child, does that make it wrong to bring it into life? It seems that it does, unless we can expect the child to have a decent chance of a good life in another family. It is questionable, however, whether such a practice should be encouraged.

Preimplantation Genetic Diagnosis (PGD)

PGD can be used to determine both whether an embryo is affected with the disease and whether it would constitute a good match as a donor. Selecting the right embryo for implantation can, thereby, help the parents produce a suitable donor.

Likelihood of Success: For women under 35, the success rate is about 30%. Consequently, several cycles of treatment may be necessary.

Availability: Few centers provide PGD. More than that, since PGD is not covered by health insurance, the couple typically has to pay about \$15,000 - \$20,000 per cycle.

Moral Worry #1: Because the use of PGD permits the transfer of only the selected embryos, it also involves the intentional creation of embryos that will be discarded. This is problematic, in so far as embryos have a right to life.

However, does an embryo have a right to life? They don’t seem to even come close to what we think of moral agents, worthy of moral respect.

Moral Worry #2: If we open the door for PGD, we will slide down a slippery slope towards morally reproachable eugenics, where parents choose, exclude or alter genomes as they choose.

There are (at least) two problems with this idea: (a) Some cases of genetic alteration might turn out to be ethically acceptable, e.g., germline therapy to remove major malformations. (b) Even if all alterations turned out to be morally unacceptable, they can be banned without also stopping otherwise justifiable forms of genetic selection, such as immunological matching.