

Benefits of Stem Cell Research

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Believe it or not, the benefits of stem cell research are not fully known. However, there is plenty of evidence to strongly suggest that stem cells are the "magic bullet" many doctors and scientists have been looking for. This is because of the special nature of stem cells. The stem cell is like a part in a machine that can literally be used in any other part of the machine--it is that versatile.

First off, what are stem cells? Putting it simply, stem cells are where your body begins. They are the very first cells that eventually grow into every part of your body. The theory is that these cells, if harvested from a few different sources, can be induced to grow new cells for your ailing body.

In other words, if scientists can determine exactly how stem cells work, they can in theory, grow replacement parts for your body. If your kidney is failing, you wouldn't need someone to donate their own--stem cells could be used to grow you a new kidney. As with all "magic bullet" theories, this one has a catch.

The reason you probably have heard so much in the news about stem cell research is because of the source of stem cells. While it is possible to get stem cells from adults and umbilical cords, scientists believe those stem cells found in a human embryo show the best potential for providing the most versatile cells. The reality is not some ghoulish procedure where people are paid to fertilize eggs that are then sold into experimental procedures. Nothing could be further from the truth.

Couples participating in fertility programs create these embryos. Embryos are created in a lab and then are implanted into the mother's womb. When one embryo is carried to term, the others are discarded. Those embryos are used because they would have been destroyed otherwise.

Where Do Stem Cells Come from?

Generally, stem cells come from three places: embryos, as mentioned above, bone marrow, and umbilical cords. However, scientists have recently found that adult stem cells can be found throughout the body. However, these findings are very recent and it will likely be years before they can be fully explored. In the meantime, adult stem cells that come from bone marrow have been used in treating certain types of cancer for 30 years.

Adult stem cells can work to treat cancer and other diseases thanks to their nature. They are not believed to be as versatile as embryonic stem cells, however. They exist in your body in order to provide quick replacements to cells that die off. In a sense, this strongly suggests that they can be used elsewhere, in other ways, to replace cells and even organs.

Finding Stem Cells

It's much easier to get stem cells from umbilical cords than it is to get them from any other source. This is because umbilical cords are so common. In fact, there are even a few umbilical cord donation programs and firms that specialize in saving the umbilical cord from your child. The cords are frozen and kept safe in case a disease or other medical problem arises that only stem cells can solve.

Despite the controversy stem cells generate, the benefits of stem cell research may be limited by time alone. With enough time, many scientists and doctors believe that they will unlock the secrets of stem cells and be able to cure, or at the very least, treat a great many diseases. Some of the problems that may be treatable with stem cell treatments are Parkinson's disease, Alzheimer's, spinal cord injuries, strokes, burns and osteoarthritis.