

# Fetal Tissue Research

Fetal tissue research has had a profoundly positive impact on human health. Research using cell lines derived from fetal tissue led to the discovery and development of life-saving vaccines for rubella, polio, Hepatitis A and varicella. These cells lines have also contributed to therapies for arthritis, cystic fibrosis and hemophilia.

Fetal tissue is currently being utilized to help find cures for diseases like Huntington's disease, spinal cord injuries, schizophrenia, HIV/AIDS, retinal diseases, cardiovascular disease and cancer.

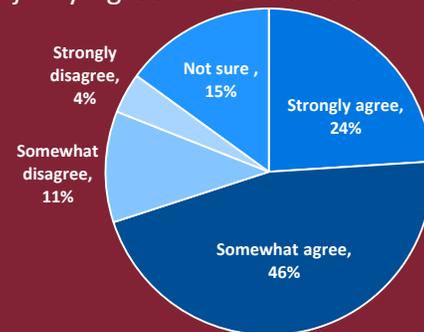
## Why is fetal tissue unique?

Cells derived from fetal tissue are unique from adult cells; they are able to easily differentiate into multiple cell types, adapt more rapidly to different conditions, and grow and divide quickly.

Cells derived from fetal tissue are also less likely to be rejected by the body, making them viable candidates for transplantation. Researchers are currently exploring transplantation of fetal tissue and cells to treat and cure devastating conditions like Parkinson's disease, juvenile (type I) diabetes, and amyotrophic lateral sclerosis (ALS).

## Public Opinion

### Majority Agree that Basic Research is Critical



Do you agree or disagree with the following statement?  
"Even if it brings no immediate benefits, basic scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government."

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2015

Type I diabetes, also known as juvenile diabetes, is caused by a faulty immune system that attacks and kills beta cells. Found within clusters of islet cells located on the pancreas, beta cells are tasked with creating insulin. Researchers discovered the role of beta and islet cells, and their relationship to producing and controlling insulin, by isolating and observing mesenchyme, a precursor to beta cells found in fetal tissue. The knowledge gained from understanding the role of mesenchyme in the normal development of a pancreas uncovered a completely novel approach to treat, and potentially cure, type I diabetes.

Clinical trials are now being conducted to study the effectiveness of islet cell transplants in restoring insulin production. If successful, this therapeutic intervention would mean a cure for type I diabetes, which affects as many as 3 million Americans.

## Hope for the Future