Nasal stem cells allow paralyzed man to walk again

Darek Fidyka, a 38-year-old Bulgarian man, is believed to be the first person in the world to recover from a complete severing of the spinal nerves, thanks to a pioneering transplant treatment that took cells from his nose. Note: these are not embryonic stem cells, so no lives were sacrificed in this cure.

Following 19 months of treatment, Fidyak can now walk with braces. He has been able “to resume an independent life, even to the extent of driving a car; sensation has returned to his lower limbs,” according to Reuters.

Geoff Raisman, chair of neural regeneration at University College London’s Institute of Neurology, who led the British research team working on the joint project explained, “What we’ve done is establish a principle–nerve fibers can grow back and restore function–provided we give them a bridge,” he told Agence France-Presse. “To me, this is more impressive than a man walking on the moon.”

Thirty-eight-year-old Mr. Fidyka has regained feeling in his lower limbs after doctors transplanted olfactory ensheathing cells (OECs) from his nose into his spinal cord. OECs are what allow the sense of smell to return when nerve cells in the nose are damaged. A few months after the transplant, Fidyka’s thigh muscles began to grow, and two years later he can walk with the help of a Zimmer frame.

The actual surgery was performed by a Polish team led by Dr. Pawel Tabakow, from Wroclaw Medical University, one of the world’s top spinal repair experts.

Put briefly, they transplanted “what are known as olfactory ensheathing cells into the patient’s spinal cord and constructing a ‘nerve bridge’ between two stumps of the damaged spinal column,” Reuters wrote. But, of course, it’s a lot more complicated than that suggests and includes a lengthy history of experimentation.

“The breakthrough represents decades of pioneering work” for Geoffrey Raisman, a professor in the Institute of Neurology at University College London in the UK, explained Catharine Paddock for Medical News Today.

“In 1969, he discovered that damaged nerve cells can form new connections, and in 1985, he identified that a type of nose cell—called an olfactory ensheathing cell (OEC)—allows nerve fibers to regenerate into the brain.”

This and other discoveries led Raisman and his team to think that one day it would be possible to regenerate nerve fibers in injured spinal cords.

When the spinal cord is damaged, scar tissue forms at the injured site. This stops nerve fibers from re-growing. Paddock continued:

“He and his team focused on the nerve cells responsible for a sense of smell because they are the only type of nerve cell known to regenerate. They believed OECs helped to clear the way for the nerve cells to regrow.”

“Prof. Raisman had the idea the nerve fibers might regrow if they had a bridge across the scar,” she added. He spent years trying to find the right materials to produce such a “bridge.”

In the first of two operations, the surgeons removed one of his olfactory bulbs in his nose and grew the OECs in culture. According to Paddock...
“Two weeks later, using about 100 micro-injections on either side of the site, they transplanted the cultured OECs into his severed spinal cord, using a strip of nerves from his ankle to bridge the gap.

“The idea was to use the OECs to spur the spinal nerve fibers to regrow across the gap, using the ankle nerve grafts as a bridge.”

As you would expect, Mr. Fidyka is ecstatic.

“When there’s nothing, you can’t feel almost half of your body. You’re helpless, lost,” Fidyak who is now recovering at the Akron Neuro-Rehabilitation Center in Wroclaw, told BBC’s Panorama program. “When it begins to come back, you feel you’ve started your life all over again, as if you are reborn. It’s an incredible feeling, difficult to describe.”

The ability to trigger nervous system repair has massive implications, says Professor Raisman. “There’s no reason to restrict this to spinal cord. We have opened the door to a future which is terrifyingly large.”

John Haycock, a Professor of Bioengineering at the University of Sheffield, said: “It paves the way for cell-based therapies in conditions of the nervous system previously thought impossible to treat, not just spinal cord injuries but other conditions such as stroke.

“I think there’s good reason to be optimistic,” wrote Dr Paul Zachary Myers of the University of Minnesota Morris. “It has to be a realistic hope — progress has been made. A cure does not exist. But that’s still some pretty good news.”

Around the Office
by Cecelia M. Cody, Administrative Director

On November 2nd Brittany Maynard, took her own life after being diagnosed with a brain tumor. She had moved to Oregon which allows Physician Assisted Suicide, a practice currently not allowed in California, where she previously lived.

For over a decade California Right to Life Educational Fund has been a part of a coalition “Californians Against Assisted Suicide. The coalition is made up of leaders from the disability rights, civil rights and medical communities who speak out against assisted suicide. (For more information, see the coalition website: http://noassistedsuicideca.org/)

I recently also had an opportunity to speak at a local church on “End of Life Issues.” Among the topics addressed was the importance of EVERYONE over age 18 having a “Durable Power of Attorney for Health Care, also called a Protective Medical Decisions Document (PMDD). The core of this document is the designation of a person who is familiar with your desire for health care, who will express your desire in the event you are unable.

A couple of approved/recommended forms are available through

(1) The Patients Rights Council - There is no charge for the PMDD. A donation of $15 is requested, but not required, for each PMDD packet. If you would like to obtain a PMDD, call 800-958-5678 or 740-282-3810 between 8:30am and 4:30pm (Eastern Time).


(3) Or if you do not have access to the Internet, contact this office and we will mail you a copy of the San Francisco Archdiocese form.

A “competing” document is the Physician Order for Life Sustaining Treatment (POLST) form. Beware of this form. It is often printed on pink paper. Do NOT fill out or sign this form…. See http://www.ethicalnurses.org/POLST.htm for more information and/or contact our office for a copy of a brochure which explains the dangers of this form.

If would like to have a speaker on a life topic, contact this office. If you are interested in learning how you could be a speaker in your area contact this office and we will provide training and materials. With the recent death of Brittany Maynard, Compassion and Choices (formerly the Hemlock Society) may try and either pass legislation or get a proposition on the ballot. Be careful what petitions you might sign by signature gatherers (standing outside your local supermarket perhaps.) If you are interested in being part of the coalition, contact this office for further information.
Library Corner

Recommendations for pro-life books to give as gifts this Christmas Season.

**Why Pro Life?** by Randy Alcorn. This is an incredibly easy-to-read, yet appropriately detailed and informative book. It’s thin and small, so anyone can read it. It’s even available in an audio-CD format. An absolutely invaluable resource!

**Pro-Life Answers to Pro-Choice Arguments** by Randy Alcorn - considered by many to be the “pro-life bible.” Well researched and perfectly articulated, Randy Alcorn addresses head on any and every argument surrounding the abortion issue and breaks it down into a readable format. Whether it is read straight through or selectively by the specific topic, this book equips and motivates the reader like no other. His chapter on the “Hard Cases” where he addresses rape, life of the mother, and other difficult situations is beautifully written and needed now more than ever.

**Why Can’t We Love Them Both** by Dr. and Mrs. J.C. Willke. This is the classic pro-life book, recognized and loved by many in the movement. This book appropriately portrays pro-lifers’ concern for women and their babies. This book goes to the very heart of the movement in many ways and is a must read.

**Gianna** by Jessica Shaver Gianna, who has spoken at the West Coast Walk for Life, survived an abortion attempt because she was “too far along” to die.

**Unplanned** by Abby Johnson - Having lived through much of this beautiful story with Abby, I was moved by how compelling her book is for those inside and outside the pro-life movement. Unplanned covers it all through Abby’s time as a director of a Planned Parenthood, her participation in abortion and the abortion industry, and her conversion in 2009 all show the heart and mercy of God. With lots of twists and turns, this book is hard to put down and should be the first pro-life book we give to anyone.

**Culture of Death: The Assault on Medical Ethics in America** – by Wesley Smith Smith believes that American medicine “is changing from a system based on the sanctity of human life into a starkly utilitarian model in which the medically defenseless are seen as having not just a ‘right’ but a ‘duty’ to die.” Going behind the current scenes of our health care system, he shows how doctors withdraw desired care based on Futile Care Theory rather than providing it as required by the Hippocratic Oath. And how “bioethicists” influence policy by considering questions such as whether organs may be harvested from the terminally ill and disabled. This is a passionate, yet coolly reasoned book about the current crisis in medical ethics by an author who has made “the new thanatology” his consuming interest.

**Consumer's Guide to a Brave New World** – by Wesley Smith. Cloning researchers claim to have created an embryo that is mostly human, but also part animal. Biotech companies brag about manufacturing human embryos as “products” for use in medical treatments. Echoing long discredited master-race thinking, James Watson, who won a Nobel Prize for codiscovering the DNA double helix, claims that genetically enhanced people will someday “dominate the world.” Events are moving so fast—and biotechnology seems so complicated—that many of us worry we can’t have an informed opinion about these issues that are remaking the human future before our very eyes. Now Wesley J. Smith provides us with a guide to the brave new world that is no longer a figment of our imagination, but right around the corner of our lives.

Smith starts with the basic questions. What are stem cells? What is the difference between embryonic stem cells and adult stem cells, and which are most promising for medical therapy? What does embryonic stem cell research involve and why is it so controversial? What is its relationship to human cloning? In addition to explaining the science of stem cells, this highly readable and carefully researched book reports on the gargantuan “Big Biotech” industry and its supporters in the universities and in the science and bioethics establishments. Smith reveals how this lobby works and how the ideology of “scientism,” mixed with the lure of riches, threatens to impose on society a “new eugenics” that would dismantle ethical norms and compromise the uniqueness and importance of all human life.

This book presents a clear-eyed vision of two potential futures. In one, biotechnology will be a powerful tool to treat disease and improve the quality of our lives. But in another, darker scenario, we will be steered onto the antihuman path that Aldous Huxley and other prophetic writers first warned against fifty years ago, before science fiction became science fact.
WHO IS CALIFORNIA RIGHT TO LIFE?

This is the newsletter of California Right to Life Education Fund, a 501-c-3 organization established to educate the public about pro-life issues. Donations to the EDUCATION FUND are tax-deductible and can be sent to P.O. Box 4343, Walnut Creek, CA 94596-0343.

California Right to Life Committee, Inc. is a 501-c-4 organization providing information on legislative issues affecting the right to life, and pro-life political advocacy. CRLC, Inc. is not permitted, under IRS regulations, to offer a tax deduction for donations. $24.99 annually is requested for a subscription to the CRLC legislative email updates list and can be sent to 1920 Monument Blvd #309, Concord, CA 94520.

Both are affiliates of American Life League, headed by Judie Brown, and share the same “no-exceptions, no excuses” beliefs and the same dedication to promoting the Culture of Life, respecting all innocent human life from the single-cell stage to natural death.

Calendar of Events
For the latest updates of events see www.calendarforlife.org

MARCH FOR LIFE – Washington D.C.
Thursday, January 22, 2015. Visit:
http://marchforlife.org/

WALK FOR LIFE – WEST COAST
San Francisco – Saturday, January 24, 2015
See: http://www.walkforlifewc.com/

STUDENTS FOR LIFE NATIONAL CONFERENCES
East Coast – Friday January 23, 2015 - First Baptist Church of Glenarden, Upper Marlboro, MD
West Coast – Sunday January 25, 2015 – St. Mary Cathedral, San Francisco

Wishing you a Happy, Holy and Blessed Christmas…From the Board of California Right to Life Educational Fund

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