Organ and Tissue Donation Awareness (OTDA) Curriculum Toolkit

Yourself

v. 3/2026

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This toolkit was created by Lancaster-Lebanon Intermediate Unit 13 (IU13), as subcontracted by the Pennsylvania Department of Education. Published 2019. For questions about this toolkit or to request additional copies, please contact:

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www.iu13.org/OTDA

Introduction

Introduction to the Organ and Tissue Donation Awareness Revised Toolkit

March 2026

Organ and Tissue Donation Awareness (OTDA) education is an initiative of the Pennsylvania Department of Education (PDE) designed to provide public school students with the knowledge and skills they need to make informed decisions related to organ and tissue donation. Supported by Donate Life Pennsylvania, the initiative began in 1994 when the state legislature passed the Governor Casey Act. Act 102, as it is called, stipulates that the commonwealth makes a comprehensive and collaborative effort toward increasing organ and tissue donation awareness among the citizens of Pennsylvania.

In February of 2019, Bill 108 was passed and Act 90 of 2018 was signed into law by Governor Thomas Wolfe. Within the legislation it is required that a curriculum framework be developed by the Department of Education. This curriculum toolkit fulfills the requirements set forth by Act 90 of 2018.

The OTDA Education Project is an ongoing partnership between the Pennsylvania Department of Education and the Lancaster-Lebanon Intermediate Unit13 since 1996. The mission of the OTDA Project is to promote awareness of organ and tissue donation in the secondary schools throughout the commonwealth. It is our responsibility as educators, to provide students with the information and tools necessary to make informed decisions regarding organ and tissue donation. The revised OTDA Curriculum Toolkit was designed to reflect current legislation, research, teaching strategies, and resources.

This revised toolkit meets the requirements of PDE as described in Act 90 of 2018. These three foci include:

1. To provide a scientific overview of anatomical donation, its history and scientific advancement.

2. Fully address the risks and benefits of and the myths and misunderstandings regarding organ and tissue donation.

3. Explain the options available to minors and adults, including the option of designating oneself as an organ and tissue donor.

Standards Aligned System (SAS)

The toolkit also provides SAS, a portal for Pennsylvania educators, nurses, administrators, and our PA partners to share information, lesson plans, links, articles, and more for bringing organ and tissue donation awareness to Pennsylvania students in grades 9 through 12.

The purpose of the toolkit is:

- To provide secondary educators with information about OTDA.
- To provide secondary educators with tools they can readily use to implement the OTDA Curriculum Framework.
- To provide both a concrete and online format so that teachers can choose the most comfortable and convenient access route to this vital information.
- To provide resources to enable students to make personal choices regarding organ and tissue donation.

Organ & Tissue Donation Awareness (OTDA)

The decision to include a little red heart on a driver's license is personal.

The Organ & Tissue Donation Awareness Project seeks to educate soon-to-be drivers about the facts of organ donation. Basing the decision on facts, as well as having a conversation with family members, is important when making the choice that could save lives.

The project is for PA teachers, nurses, and administrators to receive grant funding to support incorporating organ donation education in their classroom, clubs, or school community. The hope is to educate and inspire PA secondary and post-secondary students to make the decision of a lifetime.

Staff has access to the **curriculum toolkit** shared electronically, which contains lesson plans across all subject areas and is aligned to PA standards.

The goal is to encourage staff in secondary schools to apply for the OTDA mini-grant. This is a three-year grant of **up to $7,000** to cover the costs of activities, field trips, transportation, and even covers substitute costs for teachers.

Annual Spring OTDA Conference

Additionally, the OTDA holds an annual conference at State College, PA. All costs for the event are covered by OTDA.

All first, second, and third-year grantees attend, as well as interested teachers, nurses, and administrators

Listen to experts in the field of donation, recipients, and donor family members

Meet our partners in the organ procurement organizations and community leaders

What is the Organ & Tissue Donation Awareness Project?

In 1994, Governor Robert P. Casey passed Act 102, which stipulates that PA make a comprehensive and collaborative effort toward increasing organ and tissue donation awareness among its citizens.

As part of this mandate, The Organ and Tissue Donation Awareness Project (OTDA) is a partnership between IU13 and PA Department of Education (PDE) to educate secondary students about organ and tissue donation. Pennsylvania has two organ procurement organizations, CORE and Gift of Life Donor Program, who work closely with donor and recipient families, hospital staff, and all others involved in the process for the gift of life to be carried out. They also work alongside IU13 to spread awareness and education in their communities.

These efforts are funded in part by the Robert P. Casey Trust Fund, which works with PDE and the PA Departments of Health, Transportation, and Revenue to take certain initiatives to increase organ and tissue donation awareness.

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iu13.org/OTDA

Pennsylvania Department of Education

Organ & Tissue Donation Awareness
a service of iu13

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Partners

The Center for Organ Recovery & Education (CORE) is one of 50+ federally designated not-for-profit organ procurement organizations (OPOs) in the United States, serving more than five million people in western Pennsylvania, West Virginia and Chemung County, NY. Like all OPOs, CORE coordinates the recovery and matching of organs, tissues and corneas for transplant within our service region and works tirelessly to create a culture of donation within the hospitals and communities we serve. CORE's goal is to end the deaths of those on the transplant waiting list, all the while maintaining integrity for the donation process, dignity for the donors, and compassion for their families.

Gift of Life Donor Program (GOL), founded in 1974 and headquartered in Philadelphia, is the federally designated organ procurement organization (OPO) for the eastern half of Pennsylvania, southern New Jersey, and Delaware, serving over eleven million people. It works with the acute care hospitals and transplant centers in its region, as well as more than one hundred transplant centers throughout the country, to provide the most comprehensive array of services available in the U.S. to the donation and transplantation community.

Pre-Test

1. How do you become an organ donor?
2. What organs can be donated?
3. How are donors and recipients matched?
4. Are there health requirements to become a donor?
5. Have you heard or read anything about organ and tissue donation?
6. If you are an organ donor, is that a guarantee your organs can be used?
7. Can you be an organ donor if you smoke or drink alcohol?
8. How long can organs be kept after recovery before they are transplanted?
9. If you are not designated as an organ donor, can your family designate for you?
10. If your family does not want you to donate your organs, can you still be a donor?
11. Does this topic scare you?
12. Why is it important to understand organ and tissue donation?
13. OPO is an acronym for _____.

Post-Test

1. How do you become an organ donor?
2. What organs can be donated?
3. How are donors and recipients matched?
4. Are there health requirements to become a donor?
5. Have you heard or read anything about organ and tissue donation?
6. If you are an organ donor, is that a guarantee your organs can be used?
7. Can you be an organ donor if you smoke or drink alcohol?
8. How long can organs be kept after recovery before they are transplanted?
9. If you are not designated as an organ donor, can your family designate for you?
10. If your family does not want you to donate your organs, can you still be a donor?
11. Does this topic scare you?
12. Why is it important to understand organ and tissue donation?
13. OPO is an acronym for _____.

ORGAN DONATION
Myths and Facts

Sometimes, myths and misperceptions about organ, eye, and tissue donation can prevent someone from signing up. Imagine the lives we could save if everyone knew the true facts about donation!

You can help bust the myths about organ donation—and help save lives—by learning and sharing these facts.

Myth	Fact
I have a medical condition, so I can't be a donor.	**Anyone, regardless of age or medical history, can sign up to be a donor.** The transplant team will determine at an individual's time of death whether donation is possible. Even with an illness, you may be able to donate your organs or tissues.
I'm too old to be a donor.	**There's no age limit to organ donation.** To date, the oldest donor in the U.S. was age 98. What matters is the health and condition of your organs when you die.
I don't think my religion supports donation.	**Most major religions in the United States support organ donation and consider donation as the final act of love and generosity toward others.**
If they see I'm a donor at the hospital, they won't try to save my life.	**When you are sick or injured and admitted to a hospital, the one and only priority is to save your life.** Period. Donation doesn't become a possibility until all lifesaving methods have failed.
My family will have to pay for the donation.	**There is no cost to donors or their families for organ or tissue donation.**

Myth

My family won't be able to have an open casket funeral if I'm a donor.

Fact

An open casket funeral is usually possible for organ, eye, and tissue donors.

Through the entire donation process, the body is treated with care, respect, and dignity.

Myth

Rich or famous people on the waiting list get organs faster.

Fact

A national computer system matches donated organs to recipients.

The factors used in matching include blood type, time spent waiting, other important medical information, how sick the person is, and geographic location. Race, income, and celebrity are NEVER considered.

Myth

Somebody could take my organs and sell them.

Fact

Federal law prohibits buying and selling organs in the U.S.

Violators can be punished with prison sentences and fines.

Myth

If I'm in a coma, they could take my organs.

Fact

The majority of deceased organ donors are patients who have been declared brain dead.

But brain death is NOT the same as coma. People can recover from comas, but not from brain death. Brain death is final.

Myth

People in the LGBT community can't donate.

Fact

There is no policy or federal regulation that excludes a member of the LGBT community from donating organs.

What matters in donating organs is the health of the organs.

Reprinted with permission from the Health Resources and Services Administration

Register as an organ and tissue donor at **donors1.org**

GIFT of LIFE DONOR PROGRAM
A Legacy of **HEROES.** A Future of **HOPE.**

DONATE LIFE

Yourself

Transplantation & Donation Basics

Yourself

Organ & Tissue Donation Awareness | iu13

Why Do People Need Organ Transplants?

Patients on the U.S. national transplant waiting list are in end-stage organ failure. This means that their organs were formed abnormally at birth or have been damaged by disease or accidental injury. When vital organs are severely damaged, they may need to be replaced for a person to survive. The chart below details some of the more common reasons people need organ transplants.

Donated Organ	Disease or Disorder	Description
HEART	Congestive Heart Failure	The heart no longer pumps enough blood to meet the body's needs.
LUNG	Cystic Fibrosis	A hereditary disease causing thick, sticky mucus to build up in the lungs.
LIVER	Non-alcoholic Fatty Liver Disease	Extra fat builds up in liver cells and destroys the liver's ability to filter. This tends to develop in people who are obese, or have diabetes or high cholesterol.
KIDNEY	High Blood Pressure	Kidneys are damaged, and can no longer filter waste from the body.
INTESTINE	Blocked or Twisted Intestines	Some babies are born with malformations of the gastrointestinal tract, reducing their ability to digest food or absorb fluid.

Why Do People Need Tissue Transplants?

A single tissue donor can save or enhance more than 75 lives. This is because there are many kinds of tissues which can be donated, for many different reasons:

Donated Tissue	Typical Application	Benefit for Recipient
CORNEA	Replaces diseased or damaged cornea	Prevents blindness; restores vision.
BONE	Reconstruction related to trauma, tumors, degenerative diseases	Prevents the need for amputation; accelerates, promotes and allows healing; estores mobility.
SKIN	Temporary biological bandages for burn victims prevent infection, decrease pain, prevent heat and fluid loss, and reduce scarring	Promotes healing; natural barrier to infection.
VALVES	Repairs congenital abnormalities	Maintains unidirectional flow of blood in the heart.
TENDONS	Reconstruction related to trauma, tears, or overuse	Rebuilds joints; restores mobility.

SOURCE: *RecycleYourself: An Organ, Eye and Tissue Donation Curriculum,* Donate Life Northwest

Who Gets an Organ Transplant?

Being placed on the waiting list for an organ transplant is not automatic. Because there are so few available organs, patients are carefully evaluated by their doctors, surgeons, and transplant staff prior to being placed on the national waiting list.

The decision is based on the status of the patient's health, their medical and social history, and the expectation of their stability after the transplant takes place. There is no ranking or patient order until there is a deceased donor, because each donor's blood type, size, and genetic characteristics are different. A donation is a rare and special gift, so doctors must be sure that a potential recipient can take care of their new organ with medication, regular office visits, and healthy lifestyle choices. Patients who are unwilling to give up unhealthy drugs, including nicotine and alcohol, will be automatically disqualified.

If a transplant team feels that a patient is a good candidate for transplant, they will contact the Organ Procurement & Transplantation Network (OPTN) in order to put the patient on the national waiting list.

WHAT IS THE WAITING LIST?

When a transplant hospital places a patient on the U.S. waiting list, the patients are registered in a centralized, national computer database that links all donors and transplant candidates. In the United States, this network is managed by the Organ Procurement & Transplantation Network 24 hours a day, 365 days a year.

The "list" is a computer network which tracks the following criteria about transplant candidates:

- Blood and tissue type
- Immune status
- Degree of medical urgency
- Time spent waiting

The system uses this information to match the medical characteristics of those waiting against those of a deceased organ donor.

The waiting list does not track a candidate's race, gender, fame, or financial status. This ensures that organs are matched according to strict medical criteria, and that there is no possibility of special treatment.

transplantliving.org

How Does the Waiting List Work?

Submitted by Gift of Life Donor Program

Hospitals are required by law to notify the local organ procurement organization of the impending death of a patient. The OPO staff will then consider possible medical disqualifications for organ and tissue donation. If none are readily apparent, a trained transplant coordinator will visit the hospital to further evaluate the patient. If the patient is medically suitable, the option for donation is offered to the next of kin. Once the family consents, the coordinators work with the national computerized waiting list at OPTN to match the donated organs with the most appropriate recipient(s) and arrange for the recovery surgery. They also stay with the donor's family and provide support as long as the family wishes. Immediately after the organ(s) are surgically removed from the donor, the OPO staff transports the organs to the transplant centers, where the recipients have been readied for surgery.

When donor organs become available, the organ procurement organization (such as Gift of Life Donor Program or CORE) provides OPTN with information about the medical characteristics of the donor and specific organs, including medical compatibility between the donor and potential recipient(s) on such characteristics as blood type, weight, and age, as well as the recipients' urgency of need; and length of time on waiting list.

How Long Do People Wait?

Once someone is added to the list, they must wait for a matching organ to become available. This may take days, weeks, months, or even years.

The algorithm used by OPTN to match recipients with donors considers several medical factors, including blood type, how sick the person waiting is, and the size of the organ available for transplant. For many years, geography also played a major role. Patients who lived closer to the hospital where an organ became available often had a better chance of receiving it. This was especially true for organs that could not survive long outside the body, such as hearts and lungs. Today, that's changing. Thanks to new technology like continuous perfusion pumps, which keep blood and oxygen flowing through an organ during transport so it stays healthy almost as if it never left the body, organs can now travel farther and stay viable longer. To take advantage of this breakthrough and reduce the limits imposed by geography, a new system was introduced in 2023 called continuous allocation. Continuous allocation puts medical need ahead of location. It prioritizes the sickest patients first, even if the organ must travel a greater distance to reach them. Because of this shift, hearts, lungs, and kidneys can now be shared over wider regions, helping to ensure that every available organ reaches the patient who needs it most.

SOURCE: *RecycleYourself: An Organ, Eye and Tissue Donation Curriculum,* Donate Life Northwest

Communities of Color in Crisis

The U.S. waiting list is comprised of people of all ages, genders, and ethnic backgrounds. However, certain ethnic groups are more prone to organ failure.

Although there are many reasons for needing an organ transplant, researchers from Oregon Health & Science University believe that a combination of genetic predisposition and inactive lifestyles foster higher rates of obesity among certain groups. Obesity is a major contributing factor to many diseases. And when untreated or uncontrolled, certain diseases often lead to organ failure (Ahmann, 2014).

According to the U.S. Office of Minority Health, many ethnic groups have higher rates of potentially organ-destroying diseases, such as:

- Diabetes
- Hypertension (high blood pressure)
- Liver disease

- Latinos, African Americans, and Pacific Islanders are three times more likely than Caucasians to suffer from obesity and diabetes.
- Native Americans are four times more likely to suffer from diabetes and heart diseases.
- Asian Americans suffer significantly from liver disease and hepatitis.

At the same time, African American and Hispanic American communities have lower rates of consent to organ and tissue donation. Several studies indicate that cultural beliefs, misinformation and/or negative portrayals of donation in TV or the media regarding donation can heavily influence an individual's decision to donate.

Although organs are not matched according to race or ethnicity, all individuals waiting for an organ transplant will have a better chance of receiving one if there are large numbers of donors from their ethnic background. This is because compatible blood types and tissue markers – critical qualities for donor/recipient matching – are more likely to be found among members of the same ethnicity. A greater diversity of donors may potentially increase access to transplantation for everyone (Office of Minority Health, 2014).

SOURCE: *RecycleYourself: An Organ, Eye and Tissue Donation Curriculum,* Donate Life Northwest

The Organ Donation Process

Healthcare professionals do everything possible to save a patient's life. The goal is not to trade lives, but to save as many as possible.

If a patient is not responding after all lifesaving efforts, tests determine if brain death occurred.

The hospital notifies the organ procurement organization (OPO) of every patient that has died or is nearing death.

When authorization is obtained from the registry or next of kin, medical and social evaluation occur.

The donor is maintained on artifical support; the condition of each organ is carefully monitored.

Organs and tissues are recovered in the same sterile and careful way as in any surgery.

A transplant team arrives at the recipient hospital with the new organ, then the transplant operation takes place.

The families of all donors are offered grief support through a Bereavement Aftercare Program.

Living Donation

Some decisions to donate and save lives can be made during one's lifetime. Living donation is a voluntary process and has nothing to do with registering as a deceased organ and tissue donor.

REGENERATIVE DONATION

Most types of living donation consist of regenerative tissue. This type of tissue grows back naturally after some of it is removed.

Examples include:

BLOOD

Blood donations help millions of patients in need! You can learn more about blood donation and find a local blood drive through the American Red Cross.

BONE MARROW

Bone marrow often saves the lives of leukemia patients. The National Marrow Donor Program's website (my.nmdp.org), offers information and resources about registering to be a bone marrow donor.

LIVER

The liver is the body's only regenerative organ. This means that a portion of the liver can be removed from a living donor and transplanted into a recipient, and both the liver segment in the recipient and in the donor will grow to normal size in a few months. The liver is able to do the extra work necessary so that both the donor and the recipient can be healthy.

NON-REGENERATIVE DONATION

These tissues do not grow back. However, living donors offer their loved one, friend, or an anonymous recipient an alternative to waiting on the national waiting list for an organ from a deceased donor.

Examples include:

KIDNEY

People have two kidneys, except in rare cases. If someone chooses to donate one kidney, the remaining kidney can carry out the normal functions of both kidneys.

LUNG

A lower lobe of a lung can be donated, although this kind of procedure is very rare.

PANCREAS AND INTESTINE

Though extremely rare, it is also possible to be a living pancreas and intestine donor. Neither of these surgical procedures are currently performed in Pennsylvania.

Types of Living Donation

Matching Donors to Recipients

There are three categories of living donations:

#1 Directed Donation:

This is when the donor specifically chooses who will receive the transplant.

#2 Non-Directed Donation:

This is when the donor is neither related to nor known by the person in need. He or she makes the donation purely out of selfless reasons. The recipient is determined primarily by medical compatibility.

#3 Paired Donations (Kidney Only)

This involves at least two pairs of living-kidney donors and transplant candidates who do not have matching blood types. The transplant candiates "trade" donors so that each recipient receives a kidney from the donor with a compatible blood type.

SOURCE: *American Transplant Foundation: https://www.americantransplantfoundation.org/directed-donation-vs-non-directed-donation/*

Frequently Asked Questions

If I decide to register as an organ donor, will it affect the quality of medical care I receive?

No! Every effort is made to save your life before donation is considered. Donors receive the same high quality care that nondonors receive. The first priority for the medical personnel is to save the lives of all patients. Organ and tissue donation is not even discussed until every life-saving option is exhausted and death has been declared or is imminent. The doctors and nurses at the medical center are completely separate from those who work for the organ procurement organization (OPO). Donation occurs as an option when there is nothing more that can be done to save the donor's life.

Who can become a donor and is there an age limit?

Anyone can be a potential organ and tissue donor, from newborns to senior citizens. Eligibility is determined on a case-by-case basis at the time of death and may be affected by medical history, the cause of death and other factors. Persons under 18 years of age must have a parent or guardian's consent.

What organs can be donated?

The heart, lungs, liver, kidneys, pancreas, and intestines can be donated.

What tissues can be donated?

- Cardiovascular tissue, such as heart valves and saphenous veins.
- Eye tissue, such as corneas and whole eyes.
- Bone tissue, such as ribs, bones of the arm, leg, shoulder, hip, ankle, spine and jaw.
- Connective tissue, such as ligaments, tendons, cartilage and fascia.
- Skin grafts from the front and back of the legs and the chest.

What is the difference between donation after brain death and donation after circulatory death?

Donation after brain death occurs when the brain has permanently stopped functioning and recovery is not possible. Donation after circulatory death, often referred to as DCD, occurs when a person is not brain dead, but cannot survive without machines, such as a ventilator, to help them breathe. In cases of DCD, donation can only be considered after doctors and family have made the decision to withdraw medical care.

Can I designate myself a donor before I get a driver's license or can I update my donor status even before my driver's license needs to be renewed?

Yes, you can decide to become a donor and make your decision official on the PA registry at any time. You can register online at www.registerme.org. You need parental permission whether you register online or when you get your license.

What are the benefits of organ donation?

All organ transplants are life saving, except for kidney and pancreas transplants, which are considered to enhance the recipient's quality of life. Kidney transplantation frees the recipient from needing dialysis, and, in many instances, does save or lengthen the life of the patient.

Would my family member feel any pain if his or her organs were donated?

No. The person is deceased and no longer feels pain.

Will donation disfigure my body? Can there be an open-casket funeral?

Donation does not disfigure the body and does not interfere with funeral plans, including open-casket services. In organ and tissue donation, the body is treated with a great deal of respect and dignity. Donation typically does not delay funeral arrangements.

What do religious groups think about organ and tissue donation?

Most religions throughout the world support organ and tissue donation. If you have concerns about your religion's position, you are encouraged to discuss this with your own religious advisor.

Why should minorities be particularly concerned about organ donation?

Race does not play a part in the allocation of organs. Some diseases of the kidney, heart, lung, pancreas and liver are found more frequently among specific racial or ethnic populations. For example, African Americans, Asians, Pacific Islanders, and Hispanics are three times more likely to suffer from end-stage renal disease than Caucasians. Native Americans are four times more likely than Caucasians to suffer from diabetes.

Successful transplantation often is enhanced by the matching of organs between members of the same ethnic and racial group. For example, an African American patient is often less likely to reject a kidney if it is donated by an individual who is also African American. A shortage of organs donated by minorities can contribute to longer waiting periods for transplants for minorities and potentially death.

For more information on minorities and organ donation and transplantation, contact Minority Organ Tissue Transplantation Education Program (MOTTEP) at 202-865-4888, Organ Procurement & Transplantation Network (OPTN), or the Department of Health & Human Services at www.organdonor.gov.

Are there any costs to my family for donation?

No! Donor families are only responsible for the emergency care their loved one received prior to brain death and funeral costs. Procurement agencies pay the costs associated with recovery of organs and tissue from donors. Donor families are not responsible for any additional costs.

Can people sell their organs, tissues, or body?

No! The National Organ Transplant Act makes it ILLEGAL to sell human organs and tissues in the United States. Violators are subject to fines and imprisonment.

How are organs and tissues recovered?

Organs are recovered in a sterile operating room, using qualified surgical personnel and protocols. Tissue is often recovered in operating rooms, but can also be recovered in sterile surgical facilities at medical examiners' offices or at some mortuaries. All donations are a precious gift and are treated with respect and dignity. Standard surgical sutures or staples are used to close the incisions, just as with any operation. If needed following tissue donation, prosthetic devices will be used to maintain the body's original form.

Can I change my mind?

You can register to be an organ donor or make changes to your status at any time. You may do so at your local PennDOT location, online at www.registerme.org, as well as when you receive or renew your license.

What is done to ensure the transplant recipient's safety?

Every effort is made to ensure the safety of organ and tissue donations. Each donor is meticulously screened for any infectious diseases, and a social history is gathered.

What are the benefits of tissue transplantation?

Tissue transplants enhance the quality of life of the recipient, except for skin, which saves more lives than all tissues and organs combined. Listed below are some of the ways tissue is used to help recipients:

- Skin grafts for burn victims
- Fusing of spinal defects to reduce pain
- Replacement of benign cystic bone defects to improve mobility
- Replacement of cancerous bone tumors to prevent amputation
- Straightening and strengthening of spines distorted by scoliosis
- Replacement of hip bones to restore mobility
- Reconstruction of jaw and other bones to restore normal facial appearance
- Restoration of sight and prevention of blindness
- Heart bypass surgery through use of saphenous veins
- Restoration of blood flow through use of saphenous veins
- Replacement of defective heart valves
- Repair damaged ligaments, cartilage and tendons for improved mobility
- Skin for breast reconstruction surgery

Can the donor's family request information after donation?

Yes. The family can request to receive information regarding how the various donated organs or tissues helped recipients.

Can recipients contact the donor's family? And how can the donor family contact the recipients of their loved one's organs?

Recipients of donated organs often want to find out specifics about the person that donated the organ they received. Also, many families that donate their relative's organs wish to know where and to whom the organs went. In general, the identity of the donor and the recipients of the organs is kept confidential to protect the privacy of each party. If both parties agree to connect, the regional OPO will coordinate the process.

What does the recovery process involve?

Only after all life-saving efforts have been made, is the care of the donor transferred from one medical team to another. Once the decision to donate has been made, an OPO contacts the transplant surgeons who will perform the surgery to recover the organs. An OPO staff member, called a recovery coordinator, accompanies the surgeons to the donor hospital. The recovery coordinator also is responsible for ensuring that the organs are prepared appropriately for transport to the hospital where the transplant will be performed. Once the organs are recovered, the recovery coordinators then will recover the tissue and corneas, if consent has been obtained.

How many people can be helped through donation?

One donor can impact up to eight lives directly, tissue can enhance up to 75 lives, and corneas can enhance up to two lives.

What is brain death?

Brain death results most often from severe head injuries caused by strokes, motor vehicle accidents, shootings, acute allergic reactions or some illnesses. When the injury or illness permanently cuts the blood and oxygen supply to the brain, the brain stops working. If the brain stops working, the body will stop working and die. Brain death is permanent and irreversible.

To learn more, visit https://www.youtube.com/watch?v=Ffqz-vKZO5Q

How is it decided who receives organs?

Donated organs are given to patients based on the match between the donor and intended recipient's height, weight, and blood type; medical urgency; and time on the waiting list. In spite of another common myth, a person's wealth, age, race and gender do not affect who receives organs.

How else can I help?

You can help by making a contribution to the Governor Robert P. Casey Memorial Organ and Tissue Donation Awareness Trust Fund, which helps support donor awareness and education programs in Pennsylvania. Simply add the designation amount to the driver's license fee or car registration renewal fee to help educate others about the importance of organ and tissue donation.

FAQs compiled with IOPO, JRI/Flow,The Gift of Life

Religion and Donation

All major religions support organ donation as a humanitarian gift giving life. If you have questions about donation, we encourage you to talk with the leader of your religious community. Below is a basic summary of some of the key beliefs.

AME & AME Zionism

(African Methodist Episcopal) Organ and tissue donation is viewed as an act of neighborly love and charity by these denominations. They encourage all members to support donation as a way of helping others.

Anabaptism (Amish, Brethren, Mennonite)

The Anabaptist religions have no formal position on donation; however, they all support donation as a life-saving act to improve others' lives.

Baptism

Organ and tissue donation is supported as an act of charity. The Baptist Church leaves the decision up to the individual.

Buddhism

Buddhists believe organ and tissue donation is a matter of individual conscience and place a high value on acts of compassion. Reverend Gyomay Masao, former president and founder of the Buddhist Temple of Chicago says, "We honor those people who donate their bodies and organs to the advancement of medical science and to saving lives." The importance of letting loved ones know your wishes is stressed.

Catholicism

Catholics view organ and tissue donation as an act of charity and love. Transplants are morally and ethically acceptable to the Vatican. Pope John Paul II has stated, "The Catholic Church would promote the fact that there is a need for organ donors, and Christians should accept this as a challenge to their generosity and fraternal love so long as ethical principles are followed."

Christian Science

The Church of Christian Science does not have a specific position regarding organ donation. The question of organ and tissue donation is an individual decision.

Episcopalian

The Episcopal Church passed a resolution in 1982 that recognizes the life-giving benefits of organ, blood and tissue donation.

Hinduism

According to the Hindu Temple Society of North America, religious law does not prohibit Hindus from donating their organs. This act is an individual's decision.

Islam

The religion of Islam strongly believes in the principle of saving human lives.

Jehovah's Witness

According to the Watch Tower Society, Jehovah's Witnesses believe donation is a matter of individual decision. Jehovah's Witnesses are often assumed to be against donation because of their opposition to blood transfusions. However, this merely means that all blood must be removed from the organs and tissue before being transplanted.

Judaism

All four branches of Judaism (Orthodox, Conservative, Reform and Reconstructionist) support and encourage donation.

The Lutheran Church of America

Lutherans passed a resolution in 1984 stating that donation contributes to the well being of humanity and can be "an expression of sacrificial love for a neighbor in need." They call on "members to consider donating… and to make any necessary family and legal arrangements, including the use of a signed donor card."

Mormonism (Church of Jesus Christ of Latter-Day Saints)

The Church of Jesus Christ of Latter-Day Saints believes the decision to donate is an individual one made in conjunction with family, medical personnel, and prayer.

Presbyterianism

Presbyterians encourage and support donation. They respect a person's right to make decisions regarding his or her own body.

Protestantism

Protestants encourage and endorse organ donation. The Protestant faith respects an individual's conscience and a person's right to make decisions regarding his or her own body.

Seventh-Day Adventistism

Donation and transplantation are strongly encouraged. They have many transplant hospitals, including Loma Linda in California, which specializes in pediatric heart transplants.

Society of Friends (Quakers)

Organ and tissue donation is widely believed to be an individual decision. The Society of Friends does not have an official position on donation.

Unitarianism

Organ and tissue donation is widely supported by Unitarian Universalists. They view it as an act of love and selfless giving.

United Church of Christ

Reverend Jay Lintner, Director, Washington Office of the United Church of Christ Office for Church in Society, states, "United Church of Christ people, churches and agencies are extremely and overwhelmingly supportive of organ sharing."

United Methodist

The United Methodist Church issued a policy statement regarding organ and tissue donation. In it they state, "The United Methodist Church recognizes the life-giving benefits of organ and tissue donation, and thereby encourages all Christians to become organ and tissue donors by signing and carrying donor cards or a driver's license, attesting to their commitment of such organs upon their death to those in need, as a part of their ministry to others in the name of Christ, who gave His life that we might have life in its fullness."

Donation and religion facts compiled with IOPO, Gift of Life Donor Program and CORE sources.

Curriculum & Standards

Yourself

Organ & Tissue Donation Awareness | iu13

Pennsylvania Academic Standards

CIVICS AND GOVERNMENT	
Standard - 5.2.12.A	Evaluate an individual's **civil rights**, responsibilities and obligations in various contemporary **governments**.
Standard - 5.3.9.B	Analyze the roles of local, **state**, and national **governments** in policy-making.
Standard - 5.4.9.D	Analyze the various **mass media** outlets and their influence on global issues.
Standard - 6.1.9.A	Analyze how choices are made because of **scarcity**.
Standard - 8.1.9.B	Compare the interpretation of historical events and **sources**, considering the use of fact versus **opinion**, multiple perspectives, and cause and effect relationships.
Standard - 8.1.12.B	Evaluate the interpretation of historical events and **sources**, considering the use of fact versus **opinion**, multiple perspectives, and cause and effect relationships. Evaluate continuity and change in Pennsylvania are interrelated to the US and the world.
Standard - 8.4.12.D	Evaluate how **conflict** and cooperation among groups and organizations have impacted the development of the world today, including its effects on Pennsylvania.
HEALTH, SAFETY, AND PHYSICAL EDUCATION	
Standard 10.1.12.A	Evaluate factors that impact growth and development during adulthood and late adulthood.
Standard 10.1.12.B	Evaluate factors that impact the body systems and apply protective/preventative strategies.
Standard 10.1.12.C	Analyze factors that impact nutritional choices of adults.
Standard 10.1.12.D	Evaluate issues relating to the use/non-use of drugs
Standard 10.1.12.E	Identify and analyze factors that influence the prevention and control of health problems.
Standard 10.2.12.A	Evaluate health care products and services that impact adult health practices.
Standard 10.2.12.B	Assess factors that impact adult health consumer choices.
Standard 10.2.12.D	Examine and apply a decision-making process to the development of short and long-term health goals.
Standard 10.2.12.E	Analyze the interrelationship between environmental factors and community health.
Standard 10.3.12.D	Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.
Standard 10.4.12.A	Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.
Standard 10.4.12.B	Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.
Standard 10.4.12.C	Evaluate how changes in adult health status may affect the responses of the body systems during moderate to vigorous physical activity.
Standard 10.4.12.D	Evaluate factors that affect physical activity and exercise preferences of adults.
Standard 10.5.12.A	Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

Pennsylvania Academic Standards

DRIVER'S EDUCATION	
Standard 14.1.CE.C	Describe the Pennsylvania licensing procedures. •Learner's permit •Graduated driver's licensing
Standard 14.1.PE.C	Acquire and have in possession a learner's permit and/or driver's license.
SCIENCE, TECHNOLOGY & ENGINEERING, AND ENVIRONMENTAL LITERACY & SUSTAINABILITY STANDARDS (STEELS)	
Standard 3.1.9-12.D	Students who demonstrate understanding can use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
Standard 3.1.9-12.Q	Students who demonstrate understanding can make and defend a claim based on evidence that inheritable genetic variations may result from (1) new genetic combinations through meiosis, (2) viable errors ocurring during replication, and/or (3) mutations caused by environmental factors.
Standard 3.1.9-12.R	Students who demonstrate understanding can apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.
Standard 3.1.9-12.N	Students who demonstrate understanding can design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
Standard 3.1.9-12.O	Students who demonstrate understanding can evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
Standard 3.1.9-12.S	Students who demonstrate understanding can communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.
Standard 3.1.9-12.T	Students who demonstrate understanding can construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
Standard 3.1.9-12.U	Students who demonstrate understanding can apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.
Standard 3.1.9-12.W	Students who demonstrate understanding can construct an explanation based on evidence for how natural selection leads to adaptation of populations.
Standard 3.2.9-12.U	Students who demonstrate understanding can evaluate questions about the advantages of using digital transmission and storage of information.
ENGLISH LANGUAGE ARTS	
Standard CC.1.2.11-12.B	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences and conclusions based on and related to an author's implicit and explicit assumptions and beliefs.
Standard CC.1.2.11-12.C	Analyze the interaction and development of a complex set of ideas, sequence of events, or specific individuals over the course of the text.
Standard CC.1.4.11-12.A	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately.

Pennsylvania Academic Standards

Standard CC.1.4.11-12.B	Write with a sharp distinct focus identifying topic, task, and audience.
Standard CC.1.4.11-12.C	Develop and analyze the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic; include graphics and multimedia when useful to aiding comprehension.
Standard CC.1.4.11-12.I	Distinguish the claim(s) from alternate or opposing claims; develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.
Standard CC.1.5.11-12.C	Integrate multiple sources of information presented in diverse formats and media (e.g. visually quatitative, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
Standard CC.1.5.11-12.D	Present information, findings, and supporting evidence, conveying a clear and distinct perspective; organization, development, substance, and style are appropriate to purpose, audience, and task.

Sample Lesson Plans & Activities

Yourself

Organ & Tissue Donation Awareness | iu13

History of Organ & Tissue Donation

Focus: History of Organ and Tissue Donation

Lesson: Organ Donation and Transplantation

Overview: Students will read about Dr. Thomas Starzl as the "Father of Transplantation," the medical developments of his time, and the chronological events of his work.

Time Needed: One class period

Objectives:

1. During this activity, students will read the non-fiction text about Dr. Thomas Starzl, also known as the "Father of Transplantation." (*Source: http://www.starzl.pitt.edu/about/starzl.html*)
2. Upon completion of the text, students will use a timeline to record significant events in the life of Dr. Starzl and his advancements made in transplantation.
3. Students will conduct a search using the internet to explore medical and technological advancements from 1950-1960. Students will use a timeline to record these findings.
4. After completing this activity, students will complete a written response depicting the challenges and advancements of Dr. Starzl regarding organ transplantation.

Standards Match: Please refer to the Standard Alignment Section

Materials Needed:

- Access to internet to read about Dr. Starzl: http://www.starzl.pitt.edu/about/starzl.html
- One timeline per student

Activity:

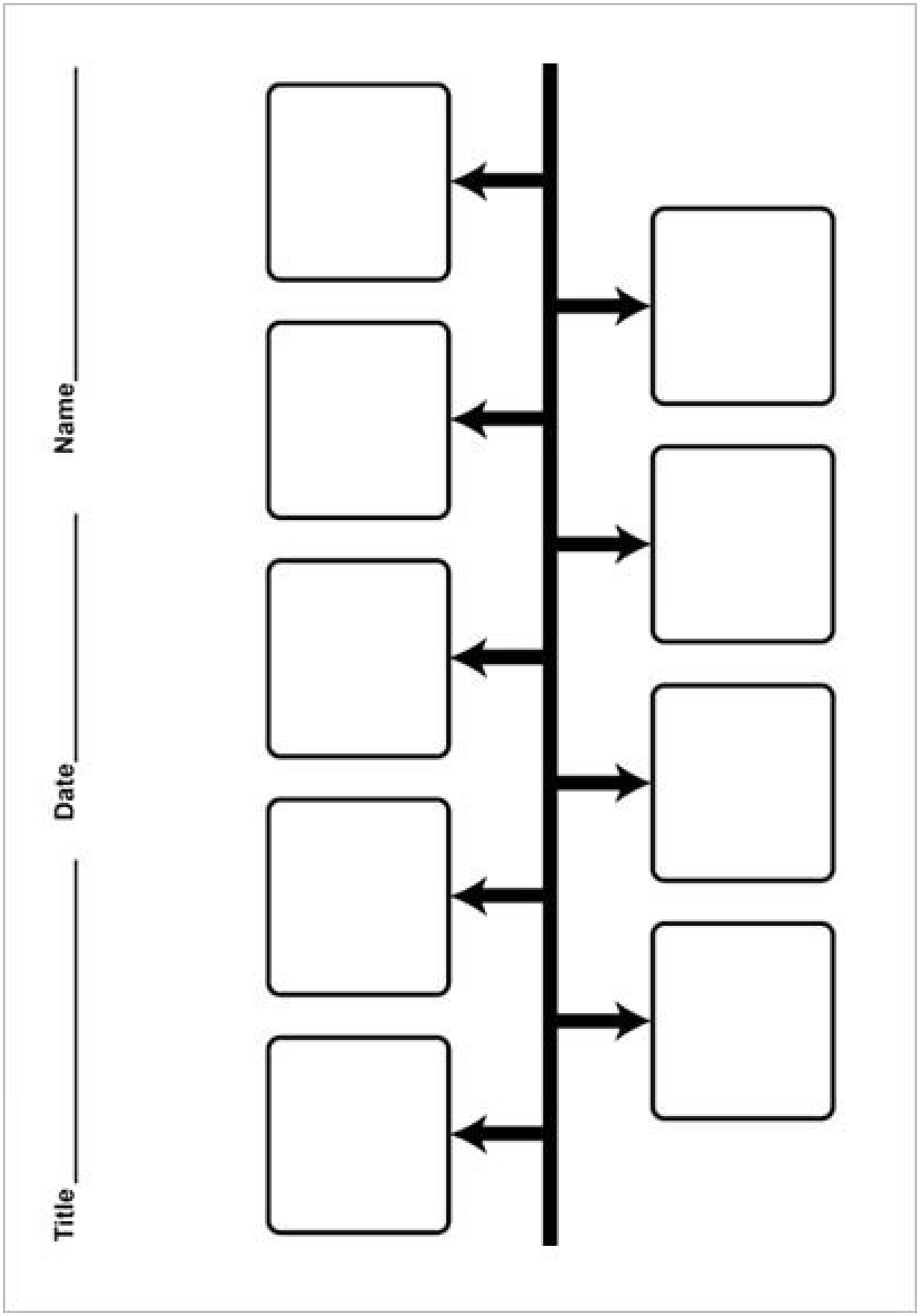
1. Have students read about Dr. Thomas Starzl. Students will record significant events in his life and his medical accomplishments in transplantation.
2. Divide the class in half. One group performs internet search on the medical and technological advances made from 1950-1960 and records findings on provided timeline. The other half of the students will research the life and work of Dr. Thomas Starzl and record their findings on the provided timeline.
3. Students discuss findings in a large group setting.
4. Upon completion of activity and whole group discussion, each student will reflect on the research and readings to write a response depicting the challenges that Dr. Starzl experienced as he pioneered his way to becoming the "Father of Transplantation."

Optional Resources:

"A Science of Miracles"
https://www.youtube.com/watch?v=EWCBxinhwbc

History of Organ & Tissue Donation

ACTIVITY



Yourself

Myths and Truths

Domain: Risks and Benefits

Lesson: Myths and Truths

Overview: Students will explore and discuss the myths and truths of organ donation through whole class and small group activities.

Time Needed: Two class periods

Objectives:

Upon completion of this activity, students will know the "Myths and Truths" of organ donation.

Standards Match: Please refer to the Standard Alignment Section

Materials Needed:

- "Myths and Truths" template (one per group)
- "Myths and Truths" statement slips (one per group)
- Top 10 myths of organ donation.
- "Organ Donation: What You Should Know" (one per group)
- "Myths and Truths"

Activity:

1. Students will be grouped in small groups to complete the "Myths and Truths" cut and paste activity.
2. In a large group, discuss the myths related to organ and tissue donation.
3. Have groups use the internet to research answers to complete the "Organ Donation: What You Should Know About Organ Donation" worksheet.
4. Wrap Up Activity: Form students into two equal teams. Have each team member sit shoulder to shoulder. The last student on each team holds one set of the "myths and truths" cards. The teacher reads a statement about organ and tissue donation. If the statement is a "truth", then the "truth" card is passed all the way to the front of the line. The same applies if it is a myth. First person in line stands and announces the card chosen. First one to announce correct answer, earns a point. If the answer is incorrect, the opposing team gets a chance to steal the point if they can defend why it is incorrect. Once point is awarded, all players move one seat over to their right, with the first person going to the end of the line. Next statement is read and the game continues in the same manner.

Discussion Questions:

1. What have you learned?
2. How did you feel about organ and tissue donation in the beginning?
3. How do you feel about organ and tissue donation now?

Myths and Truths

ACTIVITY

MYTHS AND TRUTHS

MYTHS	TRUTHS

ACTIVITY

MYTHS AND TRUTHS

Students: Please cut the following strips and place under appropriate column on the “MYTHS and TRUTHS” template.

Some people are too old to be organ donors.
All major organized religions support organ donation.
Only 3 out of 1,000 people die under circumstances appropriate for organ donation.
The donor’s family pays for organ recovery.
If an adult hasn’t made a decision about organ donation, only their spouse or adult child can legally consent to organ donation.
If a person has a medical condition, they cannot be an organ donor.
If medical staff see that I am an organ donor, they will not try to save my life.
A national computer system matches donated organs to recipients.
My family won’t be able to have an open-casket funeral if I’m a donor.

ACTIVITY

MYTHS AND TRUTHS - Teacher Answer Key

Some people are too old to be organ donors. (M)
All major organized religions support organ donation. (T)
Only 3 out of 1,000 people die under circumstances appropriate for organ donation. (T)
The donor's family pays for organ recovery. (M)
If an adult hasn't made a decision about organ donation, only their spouse or adult child can legally consent to organ donation. (M)
If a person has a medical condition, they cannot be an organ donor. (M)
If medical staff see that I am an organ donor, they will not try to save my life. (M)
A national computer system matches donated organs to recipients. (T)
My family won't be able to have an open-casket funeral if I'm a donor. (M)

Your Decision to Donate

Focus: Personal Response

Lesson: Your Decision to Donate

Overview: Students will review the recent national and state statistics (donatelife.net, donatelifepa.org) of organ and tissue donation, listen to real life stories of recipients and donor families, and know the steps to take to designate oneself.

Time Needed: Two class periods

Objectives:

1. Upon completion of activity, students will learn about Pennsylvania's statistics regarding organ and tissue donation.
2. Upon completion, students will understand the steps needed to become an organ donor in Pennsylvania.
3. Students will complete a letter to their family describing facts of donation and personal wishes regarding their own organ donation.

Standards Match: Please refer to the Standard Alignment Section

Materials Needed:

- DMV Pennsylvania Department of Motor Vehicle pamphlet
- computer
- copy of decision making format, one per student
- copy of letter to parent/guardian, one per student

Activity:

1. Students will turn to a neighbor and discuss what they know about organ and tissue donation.
2. Students will read the most recent Pennsylvania Department of Motor Vehicle's pamphlet on considering to become an organ donor at the time of your license and discuss.
3. Students will view the videos:

   a. "Donation and Transplantation: How Does It Work?" from the United States Department of Health and Services: https://www.youtube.com/watch?v=qW4zN_xcnkE

   b. Multiple videos of Pennsylvania's recipients and donor families: https://donatelifepa.org/stories/

Yourself

Your Decision to Donate

ACTIVITY

When you receive your license or permit, you will be asked if you want to be an organ donor. What does it mean to be a registered donor?

WHY REGISTER?

There more than 100,000 patients on the national organ transplant waiting list, each one reliant on the compassion and generosity of another for a life-saving gift of organ donation from a deceased donor. While many will be transplanted, there are some who sadly will not. Approximately 13 people die every day while waiting for an organ transplant.

SHOULD THE UNTHINKABLE HAPPEN…

Registering as a donor indicates that you wish to donate any viable organs or tissues which could save someone else's life, or to restore a stranger's vision or mobility, through transplantation after you pass away. When individuals document this decision by registering – whether at the DMV or directly on their state's confidential, online registry – their family can take comfort in knowing their loved one's wishes. One organ donor can save up to eight lives and one tissue donor can help more than 75 people!

"The Human Side of Donation" Resources:

https://donatelifepa.org/pa-residents-featured-in-statewide-organ-and-tissue-donation-campaign/

https://donatelifepa.org/stories/

Registering as a donor does not necessarily mean you will become a donor after you pass away. In fact, less than one percent of hospital deaths occur under the specific medical conditions necessary to support organ donation.

This video explains why:

"Donation and Transplantation: How Does It Work?" from the United States Department of Health and Services: https://youtu.be/VHLD6jqEBXM?si=jRtXk5Z2jubhACVd

TALK TO YOUR FAMILY

It is extremely important for everyone to talk with their families and loved ones about their decision regarding organ and tissue donation. If you are under the age of 18, your parent or guardian must give permission for you to be a designated organ donor. This is why it is important to talk to your family about your decision. Do you know what your loved ones think about organ and tissue donation?

More information about your state's registry and organ donation can be found at the links below:

National: donatelife.net

State: donatelifepa.org

To register to be a donor: registerme.org

ACTIVITY

ORGAN DONATION: What You Should Know About Organ Donation

Please use the internet to complete the following questions.
Use www.donatelife.net; www.donors1.org; www.core.org

1. What does OPO stand for?

2. List five organs that can be used in transplants.

a. _____

b. _____

c. _____

d. _____

e. _____

3. List three tissues that can be used in a transplant.

a. _____

b. _____

c. _____

4. How many people die each day waiting for a life-saving organ?

ACTIVITY

ORGAN DONATION: What You Should Know About Organ Donation (continued)

5. When someone's heart stops instantly, or the individual dies outside the hospital setting, can an individual still donate? If so, what can be donated?

6. How long does a recipient have to take an anti-rejection medicine?

7. In the state of PA, three organs can be donated from a living donor. What are they?

a. _____

b. _____

c. _____

8. With one donor, how many people can be saved? _____ Be helped? _____

9. What is the organ in greatest demand?

10. If three recipients all have one month to live and are equally sick, how is the decision made as to who receives the organ?

11. Will the family be charged for organ donation?

ACTIVITY

ORGAN DONATION: What You Should Know About Organ Donation - ANSWER KEY

Please use the internet to complete the following questions.
Use www.donatelife.net; www.OPTN.org; www.donors1.org; www.core.org

1. What does OPO stand for?

   Organ Procurement Organization

2. List five organs that can be used in transplants.
   a. Heart
   b. Liver
   c. Lungs
   d. Kidneys
   e. Intestine
   f. Pancreas

3. List three tissues that can be used in a transplant.
   a. Bones
   b. Corneas
   c. Tendons
   d. Heart Valves
   e. Skin
   f. Veins

4. How many people die each day waiting for a life-saving organ?

   Student will refer to donatelife.net for most current statistics.

ACTIVITY

ORGAN DONATION: What You Should Know About Organ Donation (continued)

5. When someone's heart stops instantly, or the individual dies outside the hospital setting, can an individual still donate? If so, what can be donated?

Yes, an individual can still donate corneas and tissues.

6. How long does a recipient have to take an anti-rejection medicine?

Every day for the rest of their lives

7. In the state of PA, three organs can be donated from a living donor. What are they?

a. One Kidney

b. Partial Liver

c. Partial Lung

8. With one donor, how many people can be saved? ___8_____ Be helped? ___over 75___

9. What is the organ in greatest demand?

The Kidney

10. If three recipients all have one month to live and are equally sick, how is the decision made as to who receives the organ?

Organ Procurement & Transplantation Network (OPTN) is the official organization that uses a nationwide computer system used to match organs to those on the waiting list. The OPTN computer generates a list of potential transplant candidates who have medical and biologic profiles compatible with the donor. The computer ranks candidates by this biologic information, as well as clinical characteristics and time spent on the waiting list. These characteristics are: medical urgency, time spent on the waiting list, organ size, blood type and genetic makeup.

11. Will the family be charged for organ donation?

No. Your family pays for your medical care and funeral costs, but there is no charge for donation.

Your Decision to Donate

ACTIVITY

Making a Decision about Donation

Answering the questions below will help you consider organ and tissue donation. Use the back of this paper if needed to write out your thoughts.

1. What are your options in terms of registering as a donor?

2. Does the idea of donating organs and/or tissues conflict with or complement your personal values? Why or why not?

3. If you needed an organ transplant in order to live, do you think organ donation would conflict with or complement your values?

4. Who would be affected by your decision to donate or not to donate?

5. Are there any risks to registering?

   a. What, if any, are they?

   b. Where did you hear about this risk?

   c. Can you verify that your concerns are based on fact?

6. How do you register as a donor in your state?

Your Decision to Donate

ACTIVITY

Decision-Making Format

1. The Problem: Should I become an organ donor and sign the organ donor card?

2. Facts bearing on problem.

3. List courses of action.

a)

b)

c)

4. Discuss courses of action.

a)

b)

c)

5. My decision is_____.

This is based on:_____.

Your Decision to Donate

ACTIVITY

Provide to the student AFTER teaching

Dear Parent or Guardian:

During _____ class I learned about organ and tissue donation and transplantation. An important part of what I learned is the need for me to talk about my feelings regarding donation and transplantation with my family.

Before, I thought _____.

Now I know _____.

Before, I was _____ about organ donation. Now I _____.

Now that I know _____, I still have questions about _____.

☐ I DO want to be an organ and/or tissue donor.

It is important for me to know how you feel about this subject. I want to take the time to talk with you about it so that we can both understand more about each other's decision.

_____ _____

Signature Date

Organ Transplants-Spare Parts for Broken Hearts

Focus: Scientific Advancement

Lesson: Organ Transplants-Spare Parts for Broken Hearts

Overview: Students will answer questions related to the scientific advancements made in the area of donation and transplantation while learning about its challenges.

Time Needed: One class period

Objectives:

1. Upon completion, students will be able to articulate the importance of science in their personal lives and the lives of family members.
2. Upon completion, students will be able to discuss obstacles and challenges of organ and tissue transplants.

Standards Match: Please refer to the Standard Alignment Section

Materials Needed:

- Computers
- Organ Transplants -"Spare Parts/ Broken Hearts" Reinforcement Activity
- Passage

Activity:

1. Students will read the passage below silently.
2. In small groups, students will discuss the passage and utilize the internet to complete the worksheet.
3. The entire class will discuss the passage and make additions to the worksheet.

Have you ever considered the thousands of things that take place in your body? Think of your body as an automobile. Mechanics are always busy replacing this belt or that valve. The brakes, tires, battery and spark plugs are all parts that often need to be changed. When an accident occurs, fenders, doors or a hood may need to be replaced. Auto mechanics go to the local junkyard where usable parts can be recycled from cars that are no longer drivable. Who would have thought that a similar idea could someday be used to save lives? Organ transplants have become quite common in today's medical world. You may have heard of the kidney transplant. This surgery is fairly common. Hearts and lungs have also been transplanted, separately and together.

Today, hearts, kidneys, livers and other organs are transplanted. Doctors believe that someday, with more research, certain animals could be raised specifically to supply organs for human transplants. Yet, other exciting ideas are being considered. For example, can one part of the body be used to replace another? Scientists have already constructed a heart for a dog using the muscle taken from the dog's back. Where will technology end? Someday scientists may be able to grow new organs in the laboratory using organ tissue. We may each have our own spare organs on the shelf ready to fix our broken parts!

Organ Transplants-Spare Parts for Broken Hearts

ACTIVITY

Name _____ Date _____

Answer the following questions.

1. Why would someone need a kidney transplant?

2. What problems can result from organ transplantation?

3. What precautions do doctors take to minimize complications in organ transplants?

4. Why does the body sometimes reject a donated organ?

5. What is the purpose of the drug cyclosporine? How does it work?

6. What are two ways in which scientists might someday be able to make more organs available for transplantation?

7. Which organs are typically transplanted into humans?

Directions: Place a check mark indicating whether the listed procedure is routine, experimental, or untested.

Procedures	Routine Procedure	Experimental Procedure	Untested Procedure
Blood transfusions			
Growing new organs from organ tissue			
Constructing new organs from animal tissue			
Transplanting human kidneys into humans			
Transplanting organs from animal to a human			
Use of cyclosporine			
Transplanting human livers into humans			
Raising animals specifically for human transplants			
Matching donor and recipient organs			
Transplanting human hearts into humans			
Replicating organs through 3D printing			

Organ Transplants-Spare Parts for Broken Hearts

ACTIVITY

Have you ever considered the thousands of things that take place in your body? Think of your body as an automobile. Mechanics are always busy replacing this belt or that valve. The brakes, tires, battery and spark plugs are all parts that often need to be changed. When an accident occurs, fenders, doors or a hood may need to be replaced. Auto mechanics go to the local junkyard where usable parts can be recycled from cars that are no longer drivable. Who would have thought that a similar idea could someday be used to save lives? Organ transplants have become quite common in today's medical world. You may have heard of the kidney transplant. This surgery is fairly common. Hearts and lungs have also been transplanted, separately and together.

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Standards Aligned System (SAS)

Yourself

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SAS (Standard Aligned System) Portal

The Standards Aligned System (SAS), developed by the Pennsylvania Department of Education, is a comprehensive, researched-based resource to improve student achievement. SAS identifies six elements that impact student achievement: Standards, Assessments, Curriculum Framework, Instruction, Materials & Resources, and Safe and Supporive Schools. Schools and educators across Pennsylvania are supported in their efforts to implement SAS by the development of a state-of-the-art portal.

All Pennsylvania Educators have access to the SAS Portal and can sign in to access the **Organ and Tissue Donation Awareness Project**.

1. Sign in to your portal using your username and password.
2. Click on the "SAS Tools" in the top right corner and a pull down menu will appear.
3. Choose "Communities".
4. Search for "Organ and Tissue Donation Awareness".
5. Click on "Members" and join.
6. Click on "Shared Content" to explore information.

Visit pdesas.org for more.

Resources & Links

Yourself

Organ & Tissue Donation Awareness | iu13

General Glossary of Terms

CORE
Center for Organ Recovery and Education; PA O.P.O.

G.O.L.
Gift of Life; PA O.P.O

O.P.O.
Organ Procurement Organization

OTDA
Organ and Tissue Donation Awareness

P.D.E.
Pennsylvania Department of Education

Anatomy
The dissection of a plant or animal to study the structure, position, and interrelation of its various parts.

Brain Death
When there is no blood flow to the brain and no electrical activity occurs in the brain during this state.

Donor
An individual from whom blood, tissue or an organ is taken for transfusion, implantation or transplant.

Ethics
The rules or standards governing the conduct of a person or the members of a profession.

Implantation
To insert surgically, e.g. to implant a heart.

Informed Decision
The act of reaching a conclusion or making up one's mind after acquainting oneself with knowledge of a subject.

Initiative
The ability to begin or to follow through energetically with a plan or task.

Organ
A differentiated part of an organism, such as an eye, that performs a specific function.

Physiology
The study of the functions of living organisms and their parts.

Procurement
The process to obtain or acquire for another.

Recipient
One who receives blood, tissue, or an organ from a donor.

Tissue
An aggregation of morphologically similar cells and associated intercellular matter getting together to perform one or more specific functions in the body.

Transfusion
The transfer of whole blood or blood products from one individual to another.

Transplantation
To transfer (tissue or organ) from one body or body part to another.

General Subject Glossary

http:/www.transplantawareness.org/resguide/chap42.htm
As you learn more about transplantation, your vocabulary will begin to expand rather rapidly. We have noted here a number of the terms frequently used in transplantation. Remember this is just a sample.

Acute
Having severe symptoms and a short course.

Acute tubular necrosis (ATN)
Reversible kidney damage resulting in delayed kidney function after transplant. Among other factors, it may be caused by sub optimal organ storage before transplantation or medication used to prevent rejection.

Allocation
The system of ensuring that organs and tissues are distributed fairly to patients who are in need.

Allogenic
Refers to genetically different members of the same species. See transplantation.

Allograft
An organ that is removed from a donor to be used in another person.

Anemia
A condition characterized by too few red blood cells in the bloodstream, resulting in insufficient oxygen to tissues and organs.

Antibody
A serum protein consisting of soluble molecules that is produced by the body's immune system, they are produced in response to and bind to substances, usually foreign, known as antigens, antibodies to transplantation antigens are one of the mediators of graft rejection.

Antibiotic
A drug used to fight bacterial infections.

Antigen
A substance, such as a transplanted organ, that can trigger an immune response. This immune response may be the production of antibodies.

Apheresis
An apheresis donation returns unwanted portion of blood to the donor. Usually relating to a platelet donation.

Arteriogram
An x-ray of the arteries taken with the aid of a dye, sometimes referred to as angiography.

Ascites
Accumulation of fluid in the stomach.

Aseptic necrosis
One or both hip joints may suddenly undergo massive deterioration in patients using a high dosage of steroids for a prolonged time. Dietary calcium and/or supplements are recommended for prevention.

Atherosclerosis
The disease in which fatty deposits build up on the inner walls of the arteries, causing narrowing or blockage that can lead to heart attack.

Autoantibody
An antibody that reacts with antigens on a person's own cells and tissues.

Autoimmunity
The condition in which the immune system mistakenly attacks the body's own cells and tissues; this immune reaction is the basis of a variety of autoimmune diseases including diabetes, rheumatoid arthritis, and system lupes erythematosus, among others.

B cell
A specialized white blood cell responsible for the body's immunity. B cells play a central role in antibody production.

Bacteria
Microscopic organisms that invade human cells, multiply rapidly and produce toxins that interfere with normal cell functions.

Beta blockers
A class of drugs that lower blood pressure.

Bile
Fluid produced by the liver that is transported to the intestine to help digestion and remove waste products.

Bile ducts
Passageways in and from the liver that transport bile.

Bilirubin
Substance in bile that is produced when the liver processes waste products. A high bilirubin level causes yellowing of the skin.

Biliary cirrhosis
Slow, progressive scarring of the bile ducts in the liver.

Biopsy
Removal of tissues for examination under a microscope.

Bladder
The part of the urinary tract that receives urine from the kidneys and stores it until urination.

Blood vessels
The arteries, veins and capillaries through which blood circulates. Blood vessels can be donated and transplanted.

Bone
Dense tissue that forms the skeleton. Bone can be donated and transplanted.

Bone marrow
Spongy tissue in the cavities of large bones, where blood cells are produced. Sometimes referred to as a tissue donation.

Brain death
The condition in which the brain has permanently ceased functioning as determined by the medical team. Cadaveric organs are recovered from persons declared brain dead in the US.

BUN
Stands for Blood Urea Nitrogen, a waste product normally excreted by the kidney, Your BUN value represents how well the kidneys function.

Cadaveric organ
An organ from a person who has been declared brain dead.

Candidate
A person awaiting an organ or tissue transplant.

Cardiac
Relating to the heart.

Catheter
Small, flexible plastic tube inserted into the body to administer or remove fluids.

CellCept
A new drug used to assist the immune system in transplanted patients, is approved for renal allograft rejection in combination with cyclosporine and corticosteroids (prednisone).

Chronic
Persisting for a long time.

Cirrhosis
Irreversible scarring of the liver. Can be caused by a variety of conditions.

Clinical trail
A prospective, scientific evaluation of a treatment regimen, agent (e.g. drug), device, or procedure used for the prevention, diagnosis, or treatment of a disease.

Coagulation
Relating to the process of clotting, usually the body's system of controlling bleeding.

Cocktail
Refers to a combination of drugs prescribed to prevent rejection consisting of cyclosporine, imuran, and prednisone. This combination's success allowed transplantation to proceed beyond the experimental stage.

Connective tissue
Forms the supportive and connective structures of the body.

Cornea
The transparent outer coat of the eyeball that covers the iris and pupil. Corneas can be donated and transplanted.

Corticosteroids
Hormones secreted by the adrenal gland. Corticosteroids can be manufactured. In high doses, corticosteroids cause immOPTNuppression. See prednisone.

Creatinine
A product of muscle metabolism. Creatinine level is referred to as a number that is watched closely and serves as an indicator of kidney function.

Crossmatch
A test for recipient antibodies versus donor antigens. A positive crossmatch means the recipient and donor are incompatible. A negative crossmatch means there is no reaction between donor and patient and that the transplant may proceed.

Cyclosporine
A drug commonly used after transplantation to suppress the immune system of the recipient and prevent rejection by the immune system of the transplanted organ or tissue. See cocktail.

Deceased donors
Donors who donate their organs or tissue after they have been declared dead.

Dialysis
Mechanical ways of cleaning the blood in kidney failure.

Diastolic
The bottom number of a blood pressure reading measuring the heart at rest.

Diuresis
Significantly increasing the production of urine.

Donation
The act of giving one's organ or tissue to someone else.

Donor
One who gives of themselves.

Edema
Abnormal accumulation of fluid in the body.

Encephalopathy
Confused, fuzzy, or slowed thinking when the liver is not properly functioning.

End-Stage Organ Disease
A disease that leads, ultimately, to functional failure of an organ. Some examples are emphysema (lungs), cardiomyopathy (heart) and polycystic kidney disease (kidneys).

End-stage renal disease (ESRD)
A very serious and life-threatening kidney disease that minorities suffer much more frequently than do Whites. ESRD is treatable with dialysis; however, dialysis is costly and can result in a poor quality of life for the patient. The preferred treatment of ESRD is kidney transplantation. Transplantation offers the patient "freedom" from dialysis to lead a more normal lifestyle and can successfully treat ESRD for many years.

Exacerbation
An increase in activity of a disease, a relapse.

Febrile
Running a fever.

FK-506
Pre-approval designation for immOPTNuppressant drug Prograf.

Fulminant
Happening very quickly and severely.

Gene
A unit of genetic material (DNA). A gene may be defined in different ways as follows:
•Gene pattern of inheritance A segment of DNA that is transmitted, intact, from parent to offspring.
•Gene structure A segment of DNA encoding a protein molecule.
•Gene function A segment of DNA that contains the information for a specific function.
•Gene therapy Treatment of genetic diseases by providing the correct or normal form of the abnormal gene causing a disease.

Genetic disease
A disease due to an abnormal condition of one or more genes. While most diseases have some genetic component, the genetic disease is usually applied to those cases where one or two genes determine the disease, such as sickle cell anemia, Tay Sachs disease, and cystic fibrosis.

Gastrointestinal
Relating to the stomach and intestines.

Gastroenterologist
A physician trained in treating gastrointestinal disease.

Gingival hypertrophy
Enlargement of the gums as a side effect of certain medications, especially cyclosporine. Managed with good oral hygiene.

Glucose
A type of sugar in the blood.

Graft
A transplanted tissue or organ.

Graft failure
Absence of adequate function in a transplanted organ or tissue.

Graft survival rates
The percentage of patients who have functioning grafts; graft survival rates are usually given for chronological landmarks (e.g., 1 year, 5 years).

Graft-versus-host disease
A life-threatening reaction in which transplanted immunocompetent cells attack the tissues of the recipient. This is most commonly seen in bone marrow transplantation but is also known to occur in transplantation of organs, such as the liver and the lung, that contain significant numbers of immunocompetent cells.

Heart
A muscular organ that pumps blood through the body. The heart can be donated and transplanted.

Heart valves
A tissue that prevents the back flow of blood into the heart. The heart valves can be donated and transplanted.

Helper T cell
The specialized white blood cell that tells other parts of the immune system to combat infection or foreign material. A transplanted organ is foreign material.

Hemorrhage
Excessive bleeding.

Hepatic
Relating to the liver.

Hepatitis
Inflammation of the liver.

Hirsutism
Excessive increase in the hair growth.

Histocompatibility testing
Determining how closely the HLA (or transplantation) antigens of the donor and recipient are matched and the likelihood that the recipient will reject the donor tissue.

HLA Human Leukocyte Antigen
There are over 10,000 HLA types, with three major genetically controlled groups,: HLA-A, HLA-B and HLA-DR. In organ transplantation HLA-A types are important.

Hypertension
High blood pressure.

Immune Response
The body's defense against things that are not normally part of the body, such as bacteria, viruses or transplanted organs or tissue.

Immunocompetent
Capable of developing an immune response.

Immunodeficiency
The lack of an adequate or normal immune response.

Immunologic disease
A disease due to a dysfunction of the immune system. These are the autoimmune, allergic, and immunodeficiency diseases.

Immune system
The body's natural defense mechanism against invasion by foreign bodies. In transplantation, the transplanted organ is considered a foreign body and the recipient's immune system will naturally want to defend against it through rejection of the organ.

ImmOPTNuppression
The artificial suppression of the immune response, usually through drugs, so that the body will not reject a transplanted organ or tissue. The drugs commonly used to suppress the immune system after transplantation include prednisone, azathioprine (Imuran), CellCept, cyclosporine, Prograf (FK506), OKT3, and ALG.

Imuran
A drug commonly used after transplantation to suppress the immune system of the recipient and prevent rejection by the immune system of the transplanted organ or tissue. An "AZT family" drug. See cocktail.

ImmOPTNuppressive Drugs
Chemical agents that cause the human body not to produce antibodies that normally fight off foreign material in the body. The production of these antibodies needs to be suppressed in order to permit the acceptance of a donor organ by the recipient's body.

Intestines
The portion of the digestive track extending from the stomach to the anus, consisting of upper and lower segments. The intestines can be donated and transplanted.

Intravenous (IV)
Into a vein.

Jaundice
Yellowing of the skin and eyes. A sign that the liver or bile duct system is not working properly.

Kidneys
A pair of organs that maintain proper water and electrolyte balance, regulate acid-based concentration, and filter the blood of metabolic waste, which is excreted as urine. Kidneys can be donated and transplanted.

Leukocyte
A white cell of the blood.

LifeNet
Tissue procurement organization for Washington DC and Virginia.

Living-related donor (LRD)
A "blood" relative who donates an organ, usually kidney, also partial livers, lungs, and pancreas lobes from LRDs are used for infants and small children when that is the appropriate transplant.

Match
The compatibility between recipient and donor. The more closely the donor and recipient "match" the greater the potential for a successful transplant.

Meds
Used by recipients for their prescribed medications. Taking them at the appropriate time(s) is most important.

NCAC
Nation's Capital Area Chapter, Initials often used to denote the local TRIO chapter.

Noncompliance
Failure to follow the instructions of your health care providers such as not taking prescribed medications or not showing up for prescribed clinic visits.

Neoral
Emulsified cyclosporine immOPTNuppressant drug manufactured by Sandoz.

NSF
Formerly initials for the National Sanitation Foundation. Now the organization is known as NSF International or NSF in their logo. Provides drinking water standards, and standards for associated equipment, including water purification filters.

Organ Preservation
Organ preservation is used so that organs or tissues can be kept outside the body before being transplanted. The length of time varies per type of organ, the preservation fluid, and temperature.

Organism
An individual, living thing.

Orthotopic
A graft that is transplanted into its normal anatomical position (e.g. livers, hearts, lungs, and intestines).

OPO
Organ Procurement Organization.

OPTN
Organ Procurement and Transplant Network, a partnership that links all involved in the U.S. donation system.

OTC
Over The Counter, non-prescription drugs or other medications.

Pancreatic
Relating to the pancreas.

Panel Reactive Antibody (PRA)
The percentage of cells from a panel of donors with which a potential recipient's blood serum reacts. The more antibodies in the recipient's blood, the higher the PRA. The higher the PRA, the less chance of getting a good crossmatch. Patients with a high PRA have priority on the waiting list.

Patient
A person under a physician's care as a living donor, transplant candidate or recipient.

Platelets
The smallest elements in the blood, needed to control bleeding.

Prednisone
A steroid drug commonly used after transplantation to suppress the immune system of the recipient and prevent rejection of the transplanted organ or tissue. See cocktail.

Peritonitis
Inflammation of the abdominal cavity due to intestinal perforation.

Prognosis
The predicted or likely outcome.

Prograf
A drug (Tacrolimus, FK-506) used after transplantation to suppress the immune system of the recipient and prevent rejection of the transplanted organ or tissue. Initially used for liver transplants, but recently an option for all organ transplants.

Protein
A type of organic compound that is one of the major components of cells and tissues.

Protocol
The plan of treatment.

Pulmonary
Relating to the lungs.

Recipient
A person who has received an eye, organ or tissue transplant.

Rejection
An event in which the immune system tries to fight off a transplanted organ or tissue by making antibodies. ImmOPTNuppresive drugs help prevent rejection.

Remission
Return to good health.

Renal
Relating to the kidneys.

RS-61443
Preapproval number assigned to CellCept. See CellCept.

Sandimmune Cyclosporine
immOPTNuppressant drug manufactured by Sandoz.

Sensitization
When there are antibodies in the blood of the potential recipient, usually because of pregnancy, blood transfusions or previous rejection of the organ transplant. Sensitization is measured by PRA. Highly sensitized patients are more likely to reject an organ transplant than unsensitized patients. See PRA.

Steroids
A group of medications including Prednisone.

Systolic
The top number of a blood pressure reading measuring when the heart is contracting.

T cell
A white blood cell responsible for the body's immunity. T cells can destroy cells infected by viruses, graft cells, and other altered cells (e.g. cancer cells).

Tacrolimus
A drug (Prograf, FK-506) used after transplantation to suppress the immune system of the recipient and prevent rejection of the transplanted organ or tissue.

Thoracic
Relating to the chest.

Tissue
A term applied to actual tissue (skin), blood products, and bone marrow.

Tissue typing
The examination of human lymphocyte antigens (HLA) in a patient; a blood test identifying genetic markers. Tissue typing is done for all kidney donors and recipients to determine a proper match.

Tolerance
A state of immunologic non-responsiveness to one or more antigens.

Tolerance, donor-specific
Tolerance of the donor's antigens by a transplant recipient.

Transplant patient
A person waiting to receive an organ or tissue transplant or a person who has already received a transplant.

Transplantation
Transfer of cells, tissues, or organs from one area of the body to another or from one organism to another.

Transplantation, allogenic (allograft)
Transplantation between genetically different members of the same species. Nearly all organ and bone marrow transplants are allografts.

Transplantation, autologous
Transplantation of an organism's own cells or tissues, autogous transplantation may be used to repair or replace damaged tissue; autologous bone marrow transplantation permits the usage of more severe and toxic cancer therapies by replacing bone marrow damaged by the treatment with marrow that was removed and stored prior to treatment.

Transplantation, syngenic
Transplantation between genetically identical members of the same species (e.g., identical twins).

TRIO
Transplant Recipient's International Organization - membership includes candidates, recipients, their families, donor families, medical professionals and other interested parties.

Varices
Enlarged veins that develop in the esophagus and stomach.

Vascular
Relating to blood vessels.

Viatical
Viatical settlement allows one to sell their Life Insurance policy to obtain funds for medical care.

Xenographs
Organs transplanted from animals.

APPROPRIATE TERMS	INAPPROPRIATE TERMS
"Recover" organs	"Harvest" organs
"Recovery" of organs	"Harvesting" of organs
"Donation" of organs	"To harvest" organs
"Deceased" donation	"Cadaver" donation
"Deceased" donor	"Cadaveric" donor
"Mechanical" support or "Ventilated" support	"Life" support
Organs, tissue, and corneas	"Body parts"
"Brain Death"	"Coma"
"Enhanced" risk	"High" risk

Website Resources

C.O.R.E (Center of Organ Recovery Education)
https://www.core.org/

Donate Life America
https://www.donatelife.net

Donate Life PA
https://www.donatelifepa.org/

Gift of Life
https://www.donors1.org/

National Kidney Foundation
https://www.kidney.org/

OPTN (Organ Procurement & Transplantation Network)
https://www.hrsa.gov/optn

Pennsylvania Dept. of Education
http://www.pa.gov

Pennsylvania Department of Health-Organ Donation Awareness
http://www.dsf.health.state.pa.us/health/site/default.asp

TRIO (Transplant Recipients International Organization)
https://www.trioweb.org/

U.S. Department of Health and Human Services/FirstGov
https://www.organdonor.gov

Toolkits

Organ and Tissue Donation Awareness (OTDA) Curriculum Toolkit 2025
To learn more about OTDA, and to download the digital version of the toolkit, visit www.iu13.org/OTDA and click "OTDA Curriculum Toolkit"

Donate Life America - Youth Educational Guide
https://www.donatelifetexas.org/wp-content/uploads/2015/02/Youth_Educational_Guide_DLA_111717.pdf

RecycleYourself Classroom Tools
http://gorecycleyourself.com/classroom-tools/

Real-Life Stories

Yourself

Organ & Tissue Donation Awareness | iu13

Shannon Werner, kidney donor & Lou Orendorf, her recipient

For years now, I have been attending the OTDA conference. And for all of those years I have been moved by all the stories that have been told. After several years of attending, I said to myself "I'm going to donate a kidney".

It's no secret that I am passionate about organ and tissue donation and all of my friends and family know that. In the spring of 2023 a friend of mine sent me a Facebook post of a local women in need of a kidney. I reached out to the provided email and it happened to be this woman's Dad. He told me that they were going through UPMC in Harrisburg so I called. That fall I went to UPMC on two different occasions to be tested.

At the same time, in the summer of 2023 at a golf outing, I was told that my former Assistant Principal, Lou, when I was a student and my first couple of years teaching, was in kidney failure and was on the list for a kidney transplant.

The second time I went to UPMC and they took my first drop of blood, they told me I was a match to the original woman I contacted and that I wasn't a match to Lou. But if I chose to donate to Lou, I would donate to someone I was a match with, and he would get a voucher and go to the top of the list. At this time, I knew I was ready and I was waiting for a call to schedule surgery. While this is going on, they continued to test her sister, who wasn't a match and my surgery kept getting delayed. In November, I decided to table my decision because of other things going on in my life, so I called UPMC and told them to take me off the surgery list.

That following summer, I called UPMC and said I was ready again, and they told me that the woman I originally set out to help had received a kidney transplant and that now I WAS a match with Lou!!! So that summer I saw him at the annual golf outing and told him I was his match! After he picked his jaw off that ground, he told me that he switched to Johns Hopkins and gave me the number to call. I called and told them my story and that led me on another testing journey.

On Tuesday, October 29, 2024, I pulled into the Johns Hopkins parking garage at 5:15AM with Lou anxiously awaiting my arrival. My surgery was at 7:30 and Lou's was at 1:00. As soon as they transplanted my kidney to Lou, it started working immediately. Both surgeries could not have gone better. Not to brag, but the surgeon said it was a "perfect" kidney.

Lou and I still keep in touch and he calls or texts me after every check up to let me know how he is doing. We have gone out to dinner and lunch several times since the surgery. Lou is a great man and our relationship will only get stronger.

Markita Lewis, donor mom

In June 2014, Markita Lewis' bravery and giving spirit allowed many lives to be saved. When she received a phone call that her son, Marquis Wood, had been airlifted to the hospital, she knew that the prognosis would not be good. She arrived at the hospital to be by her 13-year-old son's side and learned that he had an asthma attack and went into cardiac arrest. After Marquis was pronounced brain dead, Markita was given the option for him to be an organ and tissue donor.

Markita was diagnosed with lupus and learned that organ failure and transplantation may be necessary in her future. When she shared this information with Marquis, he responded by saying, "Don't worry, mom. You can have my organs." Even at such a young age, Marquis was an extraordinary young man with a selfless and generous nature. After he passed away, Markita honored his kind words by agreeing to donate his organs to benefit others. Markita said, "Having that conversation with Marquis before he died gave me the strength, on the worst day of my life, to make the decision to give the gift of life." Today, Markita is passionate about sharing her son's story and has become an advocate for Gift of Life. She is a member of Gift of Life's Multicultural Affairs Coalition and Chairperson for the donor family volunteer group, Hearts of Gold. She has spoken to local churches and Philadelphia high school students about the importance of registering as an organ and tissue donor.

Roger Weaver, kidney donor

WHY NOT?

Why?

This question begins to surfact at the age of two years old and never fades. We are constantly asking why. It seems we want to understand it all - we want our world to make sense - but often the answer eludes us or, at the very least, is unsatisfactory. Now, I realize this is a bit philosophical for a bio; however, I am afraid that in my attempts to answer the "why" behind my donation, it may not make sense. I am not sure I totally understand it myself.

Nearly a year prior to my donation, I felt what I can best describe as a "nudge". There were a few things that took place that led me to consider the possibility of being a living donor. Sure, I have been donating blood for many years, but this was… let's just say, a little more involved. It's difficult to define, but I felt a strong sense of calm in stepping out in faith and making the decision to donate. I was not donating to a specific person or on behalf of someone to help them move up the chain. I was what they call an altruistic donor. That word is not often used and seeing it written out reminds me of some type of medical condition. But it simply means my kidney had no designated recipient.

Soon, everything starting lining up. I was able to move forward with the help of a supportive family, a job that was flexible, and a boss that was very generous. Of course, like all journeys, there were some hiccups along the way. I had a lot of additional tests prior to the surgery. The result of a chest x-ray showed something in my lungs. Surgery was postponed for a month until I was cleared.

I continued to trust my feeling of peace, and eventually my kidney was successfully transferred into someone who desperately needed it. A husband and father of three was given a second chance at life.

I am proud to call myself a Christian, and I want my faith to be expressed in my actions as well as in my words. If I believe that God loves and cares for others, then I need to demonstrate that myself. I truly feel that I have received more than I gave! I'm left wondering: where and when will the next "nudge" come from? Maybe you are feeling that, too? I'll leave you with one final question...

Why not?

LeeAnn Richter, liver donor

PERSONAL NARRATIVE: MY JOURNEY AS A LIVING LIVER DONOR

"The two most important days in your life are the day you are born and the day you find out why." — Mark Twain

This quote has always resonated with me, and when I reflect on my life, I can clearly see two dates that define my "why."

The first is July 11, 1980—the day I was born. It was the beginning of every possibility, the blank canvas of my life. The second is August 20, 2023—the day I sat with my iPad and filled out a form on the UPMC website to become a living liver donor. That moment began a journey that changed me forever.

Becoming a donor was never something I had planned, yet every step that followed confirmed it was the right choice. This wasn't just about me—it was about giving someone else the chance to continue their story. That someone was my uncle.

My journey with organ donation, though, actually began years earlier at a conference. There, I met a passionate representative from OTDA who encouraged me to share organ donation education with my students. Teachers love classroom grants, so I signed on. What started as a simple opportunity quickly grew into a passion. I attended my first OTDA conference that spring and met incredible families and educators. I loved bringing organ donation awareness to Southmoreland students and staff.

At the same time, my uncle was quietly getting sicker. My mom shielded me from the details until things became critical: his liver was failing, the result of choices he had made in his life. At first, I was angry—angry that he had done this to himself, to his wife and daughter, to our family. It took me a long time before I went to see him. When I finally did, he apologized to me. He didn't owe me that, but his courage and honesty struck me deeply.

A few days later, sitting in church, I prayed for him—and for a way to help. Suddenly, I felt a cool breeze and caught the familiar scent of my grandma, who had passed two years earlier. I knew in that moment it was a sign. I knew what I had to do.

The process began with that online form. From there came phone calls, evaluations, and countless tests. On September 19, 2023, I received the call: I was approved to be my uncle's living liver donor. Everything moved quickly. By November 10, 2023, I was in the operating room, donating a piece of my liver to save his life.

Through this journey, I've learned lessons that shape me every day:

- **Resilience**—discovering the strength of both the human body and spirit.
- **Empathy**—understanding others in a way that changed how I see the world.
- **Community**—recognizing that no one walks a journey like this alone.

These lessons also influence who I am as a middle school librarian. When I share this story with my students, they see that some of the most meaningful lessons aren't found in textbooks—they're found in courage, compassion, and choices. When they ask about my surgery, I tell them honestly: it was one of the most important decisions of my life. My hope is that they see we all have the ability to make a difference.

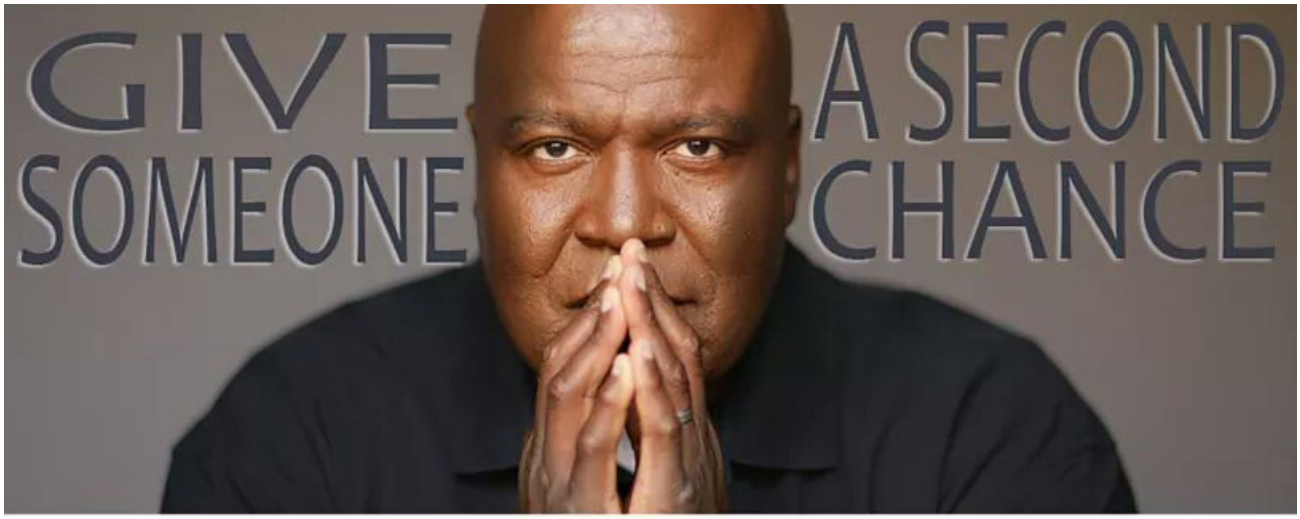
LeeAnn Richter (Continued)

As I reflect, I return again and again to that Mark Twain quote. For me, July 11 and August 20 are the dates that define my purpose. For others, the dates will be different—but we all have those moments that give shape and meaning to our lives.

Becoming a living donor gave me clarity about my “why.” It showed me that sometimes the most powerful impact we can make comes from a simple choice—the choice to say yes.

This is my story. I share it in the hope that others may reflect on their own pivotal moments—and perhaps even consider the life-changing gift of organ donation.

Ron Gooden, heart recipient



Words cannot begin to express how grateful I am to receive this wonderful gift of life. My name is Ron Gooden and I am a heart transplant recipient. My family has a long history of heart disease. My father passed away at the early age of 63 due to heart failure and my sister currently has Dilated Cardiomyopathy and Lupus. When I was growing up, I was always involved in sports, primarily football. I was fortunate enough to play at all three levels without any problems. So, over the years, I was very active, playing tennis, golfing, hiking, and coaching high school.

In 2005, I started to notice I was having a hard time doing the things I had come to enjoy. I had shortness of breath and always seemed to be tired. I thought it was due to me just getting older and pushing myself too hard. I went to my primary doctor who in turn recommended me to a cardiologist. After many tests, I was diagnosed with Dilated Cardiomyopathy and I started a regimen of cardiac medication. In 2007, I was implanted with an ICD, Implanted Cardio Defibrillator, due to some arrhythmias. My symptoms kept getting worse over the years, with swelling starting in my ankles and abdomen, along with palpitations.

In January 2011, my cardiologist referred me to the Heart Failure Clinic at Allegheny General Hospital, saying there was nothing more he could do for me. My girlfriend and I met with the doctors at AGH to discuss what the next steps would be. At that time, they tweaked my medications and suggested that I may need a heart transplant in a couple of years. My health started to deteriorate rapidly after January 2011. I was having difficulty climbing stairs and just walking in general. Every so often I would have to stop just to catch my breath. In August 2011, I had a routine heart catheterization that indicated the pressures in my heart were very low and that some of the oral medications were not effective enough. We met with the doctors and it was determined that I should be evaluated for an immediate heart transplant. I began to receive my cardiac medication intravenously 24 hours with a pump. In late August, I started the process for the transplant evaluation. On September 7, 2011, I was placed on the transplant list and could be called at any time. Being a high school football coach, this time of the year is really busy for me. I have been coaching for the past 25 years and enjoying every minute of it. My heart problems made in increasingly difficult to coach.

I had another heart catheterization on September 23, 2011, and as a result, I was admitted to the hospital. It was a Friday, and I begged to be able to coach the game and come back on Saturday, but to no avail. The doctors said I would not be on the sidelines for a while. I was placed at the top of the transplant list due to my low heart pressures. Due to my condition, the doctors recommended that I receive a LVAD, Left Ventricular Assist Device, while I waited for a transplant. They did not feel that my heart would hold out long enough for a new one without some assistance. On October 3, 2011, I received a LVAD and I remained in the hospital until October 19, 2011. Life with my LVAD was not easy for me, but I knew it was helping to keep me alive

Ron Gooden (continued)

and live the best life I could have, given my circumstances. My girlfriend and I had been together for 8 years and I decided to propose to her on November 11, 2011. She said yes and we decided to have a small family wedding on November 26, 2011, the Saturday after Thanksgiving. But fate had charted a different course for us.

On November 22, 2011, at 5:45am, I received the call from my heart transplant coordinator. THEY HAD FOUND A HEART! With this new heart, I am able to live my life to the fullest extent possible. I am able to walk, jog, and coach again. I look at life with a whole new appreciation. I was able to make my girlfriend my wife, see both of my kids graduate college, walk my daughter down the aisle at her wedding, and witness my son's wedding. I was appointed by the governor to sit on the Organ Donation Advisory Committee. The committee is responsible for advising the Secretary of Health on matters relating to the administration to the Governor Robert P. Casey Memorial Organ and Tissue Donation Awareness Trust Fund.

Every day I thank God and my donor family for the wonderful life I have been given, because without them and their decision I would not be here today. I plan to be the best steward possible to my gift of life. I hope that by reading my story, others will choose to support organ and tissue donation, so that those on the waiting lists can receive their gift of life.

Matthew Byrne, stem cell and double lung recipient

I've been called many things in the past 42 years but never in my wildest dreams did I ever think I would be called a 2 time transplant survivor. I had a normal childhood, typical colds and the occasional sprained ankle from my skateboarding days. It wasn't until my late teens, early twenties that I started to get repeated sinus infections. While on vacation for my 22nd birthday, I became very ill. Thinking it was the flu, I rested and took the week off from work. Five days after initially getting sick I had a fever of 104.5 and my fiancé, at the time, took me to the hospital emergency room. My blood levels were critically low and I was ordered to receive blood transfusions and strong antibiotics for the next five days as doctors scrambled to figure out what was wrong with my immune system. Two bone marrow aspirations later, the oncologist believed I had MDS, a type of bone marrow cancer that usually happens to older women. We tested my siblings to see if their immune system could be a match for me. Two of my siblings were a perfect match and we set the transplant date for a few weeks later.

I kept getting a lung infection that would delay the date of my transplant. After months of treating lung infections and getting better, the pulmonary doctors ordered a lung biopsy. The result was a common viral infection that most healthy people's immune system could keep in check. But since mine was compromised I didn't have that ability.

About a year after first getting "sick" I went to Sloan Kettering in NYC for a second opinion. They reviewed the bone marrow slides from University of Pennsylvania and could not confirm the diagnosis without getting their own bone marrow slides. I was so traumatized from the the first two rounds of bone marrow aspirations that I declined. I was young, 24, and at this early stage tired of constantly having to consent to painful procedures.

Years passed with infections, antibiotics and hospitalizations. With the urging of my sister I went to Johns Hopkins in Baltimore. They determined that I didn't have bone marrow cancer but an immune system defect. My doctor worked with a doctor who recently moved to the NIH (National Institute of Health) . The NIH is a government run research hospital that helps people with rare diseases. They had me there for a few days of testing and said I had a immune system defect. They have seen other people who had a similar health background and wanted me to participate in a case study. That single decision changed the course of my health care for the better.

October 2008 I stopped working and was placed on oxygen 24/7 due to my pulse oxygen levels being too low. A wheelchair was soon to follow. I was in and out of the hospital monthly.

In May 2009, after 10 years of fighting my failing immune system, I conceded to do a Stem Cell Transplant. NIH wrote a specific protocol for the transplant for my disease. I was patient "0", the first to receive a BMT for this disease. The disease is now called Gatta2 referring to the defective gene that superseded my immune system. I spent 28 days in the hospital after my transplant. I slowly got better and a year later decided to take a 10-week cross country trip with my dog to see the USA.

Matthew Byrne (continued)

In 2012, my breathing became worse and was placed back on oxygen. Now hospitalizations lasted months instead of weeks. I was told we had exhausted all options and I should consider a double lung transplant. I interviewed at INOVA a transplant hospital in Virginia. I was accepted for the transplant and placed on the list. I spent five months hospitalized, waiting for the gift of life.

September 23, 2013, we received the call that I had a matching donor. A joyful day for me and a sad and heart breaking decision for someone else. Recovery took four months. It was hard living on a ventilator for weeks. Then a tracheotomy for a few more weeks . Learning to sit up, move my hands and legs, and swallow were all things I had to teach my body to do again. I was out for seven days and my body started to break down. Each day I tried more than the last.

Sometimes failing but not giving up. My family was by my side the whole time; they were strong when I couldn't be.

It took a long time to regain my ability to function physically but more mentally. I still suffer from PTSD and trauma from years of pain and months spent in physical isolation from staff and especially other patients. My donor was a 17-year-old young man from Clinton, South Carolina named Eugene Kinard. He was the victim of a single gun shot wound to the head. His mother, in her darkest hour decided his senseless death was not going to be the end of his story. As long as I speak his name he lives on. In me.

In April 2015, I had a heart attack. Not a big deal considering my past. Then a few months later, I met Jenna, my fiancé. I was told I would probably not be able to have children due to chemo and radiation I received during stem cell transplant. Now we have a son named Noah and he's going to be three in June. Don't believe everything your told.

My sister would always say during my seemingly endless hours attached to a breathing machine, "Don't give up before the miracle happens."

Zachary Sweitzer, organ donor

By Missy Sweitzer, mother

On October 19, 1988, our lives were changed forever. We were blessed with the first of our three children, Zachary Daniel Sweitzer. He was an energetic and passionate boy who grew up to be a compassionate young man with a great desire to help others. He was a talented athlete, a dedicated volunteer fire-fighter, and an amazing son and friend.

Our lives were changed forever once again on November 27, 2008, Thanksgiving morning. We received a phone call that our son was involved in an accident. We didn't know what to expect when we got to the hospital, but nothing could have prepared us for what we were about to see. He was admitted to the trauma ICU at York Hospital with closed head trauma. He had been ejected when an underage, DUI driver hit his truck. He was on his way home to celebrate Thanksgiving with our family.

The surgeon explained they were going to attempt to alleviate the pressure that was building in his brain. Zac survived the surgery but he would never regain consciousness. Never again would we see his beautiful brown eyes. Never again would we hear him say "I love you." We never gave up hope or stopped praying for a miracle but there came a time when we knew that our boy was gone. There's something that a parent experiences when their child dies…something that really can't be explained or described…but a part of you is gone…forever…and you feel it in your deepest being.

Zac made the decision to be an organ donor when he got his driver's license, a decision for which later we would always be grateful. We informed the nursing staff that if we were faced with a decision, Zac was a donor and would want to help as many people as he could. We met our transplant coordinator, who explained the transplant process to us. Never once did we feel pressured or that the decision was not ours to make. But after hearing the story of a mom who got to hear her son's heart beating in another man's chest, we knew that Zac's decision was right. We never really thought about organ donation, other than deciding to be one, and now we found ourselves as a donor family. Even though we have never met or heard from any of his re-cipients, we feel as though his six recipients have become a part of our family. We think about them and pray for them all the time.

In life, Zac's mission was helping others…and in his death, that legacy continues. And we're still praying that someday we get to hear Zac's heart of gold beating in another man's chest.

Ryan Lee Mohn, organ donor

By Alison Mohn, mother

This is the story about my 16-year-old son Ryan Lee Mohn. In 2004, Ryan was a junior in high school. He led his team to a district football championship earlier that fall as the team's quarterback, and he was also one of the starting pitchers on the school baseball team. He was in the middle of basketball season as a reserve guard. On January 31, 2004, Ryan was on his way to the local mall with two of his best friends when the car he was riding in went out of control and hit a tree. The impact of the accident was all on Ryan's side. In addition to other less-serious injuries, Ryan suffered massive head trauma and was flown to a local trauma hospital by helicopter transport. His situation was very grave because of the massive head trauma he suffered from the accident. After a week in the hospital on artificial breathing support and various brain stem activity testing, Ryan passed away.

One month before his accident when he got his driver's license, Ryan signed up to be an organ donor. Because of that decision, six people received life-saving transplants and over 100 lives were enhanced through his tissue donations. My life and my family's life were forever changed that day by what happened to Ryan. As a way to help us deal with our grief and continue Ryan's legacy, the Ryan Lee Mohn Memorial Foundation was created. This foundation provides scholarships to graduating seniors from his high school, promotes organ and tissue donation awareness, and makes donations to other organizations in Ryan's memory. My family has also had the honor of meeting four of Ryan's transplant recipients and we have developed beautiful friendships with them. Losing a loved one, especially at such a young age, is really hard and my faith plays a major role in dealing with Ryan's loss.

Knowing that Ryan saved and enhanced so many lives also helps with our grief. Organ donation works. We never know if we could one day be on the other end of needing a life-saving transplant, and I believe if that would happen, we all hope that even in an extreme time of grief, others would say yes to organ and tissue donation.