

KIDNEY TRANSPLANT PROGRAM



Beaumont

WE WILL HELP
IMPROVE YOUR
QUALITY OF LIFE

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SECTION 1

WELCOME

Beaumont's Kidney Transplant Program was established in 1972. We are looking forward to working with you on your journey to a kidney transplant and a healthier life.

Our team includes physicians, surgeons, nurse coordinators, social workers, dietitians, pharmacists and financial representatives with specialized transplant experience.

We have clinical partnerships with physicians from multiple specialties including radiology, anesthesiology, infectious disease and cardiology. These partnerships allow us to care for patients with even the most difficult and complicated conditions.

Our kidney transplant program offers a desensitization process to provide transplants to individuals who have a positive crossmatch with their donor.

The Beaumont transplant team provides coverage for outpatients 24 hours a day, 7 days a week, 365 days a year. There is always a dedicated transplant surgeon and/or transplant physician available on-call.

Beaumont's Kidney Transplant Program data about transplant outcomes is available for national comparison at srtr.org.

PLEASE KEEP IN MIND

The information contained in this booklet contains general information. Your individual experience may vary.

SECTION 2

YOUR KIDNEYS

There are two kidneys that are located below your ribs in the back of your abdomen. They lie on either side of the spine. Adult kidneys weigh about four to six ounces each.

The kidney performs several essential jobs to maintain health.

Some of these functions include:

- eliminating waste products from the body
- controlling fluid balance
- maintaining acid-base balance
- maintaining electrolyte balance (electrolytes include calcium, phosphorus, sodium, chloride and potassium)
- producing the hormone that controls blood pressure
- producing the protein that stimulates the production of red blood cells

KIDNEY FAILURE

When the kidneys fail, the normal kidney functions and delicate balances are disturbed. As a result, the kidneys cannot remove waste products, maintain fluid balance or make enough red blood cells. Electrolyte levels become disturbed and patients often feel more and more tired and sick.

Kidney failure may be caused by several conditions, including, but not limited to:

- diabetes
- hypertension (high blood pressure)
- polycystic kidney disease
- genetic conditions (such as being born with a single kidney)
- long term use, or excessive use of medications, such as nonsteroidal anti-inflammatory drugs (NSAIDs)
- conditions that damage the glomeruli (filtering units) in the kidney, such as IgA nephropathy, glomerulonephritis, glomerulosclerosis, lupus and amyloidosis

The damage to the kidneys happens over time, resulting in chronic kidney disease. Eventually, the kidneys cannot maintain enough function to sustain life. This is called end stage renal (kidney) disease (also known as ESRD or ESKD).

TREATMENT FOR END STAGE KIDNEY DISEASE

There are several options for end stage renal disease:

- dialysis
 - peritoneal dialysis or hemodialysis
 - kidney transplant (deceased donor or living donor)
- no treatment (which will eventually lead to death)

Peritoneal dialysis is performed through a catheter that is surgically placed in the abdomen. Patients learn how to perform peritoneal dialysis independently. This can be done two ways:

- at regular intervals several times a day
- using an automated dialysis system overnight

Hemodialysis is performed through a surgically created connection between an artery or a vein through either a graft or a fistula. This dialysis graft (or fistula) is usually in the arm.

Hemodialysis is usually performed at a dialysis center three times a week, but patients may be trained to perform dialysis at home several times per week. It takes about three to four hours each time.

Dialysis can help restore some of the balance lost from kidney failure. However, dialysis does not totally replace all of the normal functions of the kidneys.

Kidney transplant is another option for end stage renal disease. It is important to know that a kidney transplant is considered a treatment, not a cure. It will require a lifetime commitment from you, which includes:

- lifelong use of medications
- frequent visits with the transplant team (including blood work and physician visits)
- follow-up testing

A kidney transplant provides better long term survival compared with dialysis.

SECTION 3

TYPES OF KIDNEY TRANSPLANTS

Kidneys that are transplanted can be obtained from a living donor (living-related or living non-related) or a deceased donor.

Living-related kidney transplant

A living-related donor is blood related to the transplant recipient. This may be a mother, father, sister, brother, son, daughter, cousin, aunt or uncle.

Patients who have the option of a living-related kidney transplant have certain advantages:

- Health deteriorates the longer someone remains on dialysis. A person may wait for several years for a deceased donor transplant on the transplant waiting list. A living donor transplant surgery can be scheduled soon after the patient is accepted for transplant.
- Surgery dates can be arranged for a time that is convenient for both the recipient and the donor.
- The kidney will typically function for a longer time.
- Fewer anti-rejection medicines may be required.

Living non-related kidney transplant

A living non-related donor is a person who is not blood related. This could be a spouse or friend. The advantages of a living non-related kidney transplant are the same as a living related kidney transplant.

Deceased donor kidney transplant

Deceased donors are individuals who have arranged in advance to be an organ donor, or their family has granted permission to donate their organs either after cardiac or brain death. Patients on the transplant waiting list are waiting for a deceased donor.

SECTION 4

EVALUATION FOR KIDNEY TRANSPLANT

If your physician or staff from your dialysis center thinks that you may benefit from kidney transplant, a referral will be sent to our transplant center. You may also call for an appointment. Your medical history will be reviewed by the transplant nurse coordinators and Advanced Practice Providers (APPs), who will reach out to you to discuss your health and personal information and to provide you with details regarding your evaluation appointment.

Prior to your appointment, you and your significant others will be provided instructions about how to access the online Beaumont kidney transplant education video. This provides an overview of the different phases of the transplant process and information that will be reinforced during your appointment. It reviews what will be expected from you and your support team.

We encourage you to write down questions related to transplant to bring to your appointment.

Bring your medical insurance cards to your appointment. If you receive benefits through Medicare or Medicaid, bring those cards as well. This information will be reviewed with you to help prevent future billing problems.

Be familiar with your insurance coverage before any doctor appointments, diagnostic testing and hospitalizations.

If you require a referral for transplant clinic appointments, please make sure you secure it before the appointment. If the referral is not in place, your insurance may not cover the cost of your office visit. Your primary care physician's office can assist you in obtaining this referral and for referrals for future appointments and testing.

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Your evaluation appointment can last up to six hours. You should bring a support person (family member or friend) with you.
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Your evaluation for transplant includes a multidisciplinary team, as described on the following pages. This team will be available to you throughout the transplant process to answer questions and to help you decide if transplant is right for you.

Evaluation for transplant multidisciplinary team:

- **Transplant nephrologist:** A doctor who specializes in kidney disease and kidney transplantation. The nephrologist will review your history and will complete a physical exam.
- **Transplant APP:** This is a nurse with an advanced degree who assists the physician with the medical evaluation and ordering tests.
- **Transplant surgeon:** A doctor who has undergone special training to perform kidney transplant surgery. The transplant surgeon will ask you about your medical history, perform a physical exam and discuss the kidney transplant operation.
- **Transplant nurse coordinator:** The transplant nurse coordinator's role is to provide continuity of care while you are being evaluated for your kidney transplant. The transplant coordinator will work closely with you to be sure that tests are being scheduled and completed, results are being sent to the transplant office for review, communication lines are staying open and questions are being answered.
 - It is very important that you keep in touch with your transplant coordinator. Any test results that you have from other hospitals should be sent directly to your coordinator.
 - Your transplant coordinator is a liaison between you and the other transplant team members to be sure that accurate information is being shared and recorded in your medical record.
- **Transplant social worker:** The transplant social worker's role is to complete an evaluation to determine psychosocial stability for transplant.
 - The transplant social worker will determine if there are psychosocial requirements to be met and provide resources if needed.
 - Throughout the transplant process, the social worker will be available to you and your support team to ensure that psychosocial needs are met and assist you with your adjustment to a kidney transplant.

- **Transplant financial representative:** The transplant financial representative will discuss your financial situation and counsel you about resources that may help you pay for your transplant, follow-up care and your transplant medicines.
- **Transplant dietitian:** If needed, the transplant dietitian will complete a nutritional assessment and education about how to maintain a healthy diet.
 - If you are on dialysis, it is important for you to follow your dialysis dietitian’s plan.
- **Transplant pharmacist:** The transplant pharmacist will review your medications and will provide education as needed.
- **Transplant program coordinator:** On the day of your evaluation appointment, the transplant program coordinator schedules your meetings with the individual members of the transplant team.
 - If you are considered to be a potential candidate for a kidney transplant, the transplant program coordinator will work with the nurse coordinators to help keep you informed of important information related to your evaluation. The program coordinator is also available to help you schedule the tests that will be part of your kidney transplant work-up.

SECTION 5

SELECTION FOR TRANSPLANT

Transplant centers are required to have selection criteria for transplant candidates. Some of these criteria are mandated by the United Network for Organ Sharing, and others are transplant center specific. The reason for the criteria is to ensure safety for the potential transplant recipient and to provide guidelines for an unbiased selection. A copy of Beaumont's Criteria for Kidney Transplant Wait List Candidacy is provided to you in your education folder.

The decision regarding kidney transplant candidacy is made collectively by a multidisciplinary transplant team using information gathered during your evaluation appointment. If you are deemed a potential candidate for kidney transplant, the transplant team will formulate an individualized plan for testing to make sure that transplant is a safe option for you. This may consist of both medical and psychosocial requirements. A transplant nurse coordinator will guide you through the process.

MEDICAL TESTING

The goal of the transplant team is to complete thorough medical testing prior to surgery to identify any potential risks or barriers that may make the operation or long-term survival unsuccessful. Your transplant nurse coordinator will provide you with a detailed list of the required testing and information about how to schedule the tests.

It is the responsibility of the patient, with assistance from their support team as needed, to complete the pre-transplant testing as quickly as possible. The transplant program coordinator and transplant nurse coordinator are available to assist you if needed.

Medical testing may include:

Blood work: To determine ABO blood type and to obtain information needed for post-transplant management.

Tissue typing: Antigens are molecules on cell surfaces that are important for transplant success. Tissue typing is a blood test that uses DNA based technology to identify genetic similarities (antigens) between the donor and the recipient.

- You receive half of your chromosomes (genetic material) from each parent. Because of the way we inherit genes from our parents, it is possible for one sibling to match all six antigens (also referred to as HLA identical or a perfect match) with another sibling. Among siblings, there might either be a three-antigen match (haplotype) or a zero-antigen match (complete mismatch). Parents and natural (not adopted) children will always match three antigens (haplotype).
- The ideal match is an identical twin. Since not many of us have identical twins, the next best match is a living-related, six-antigen match. However, many patients have a successful transplant with a zero-antigen match.

Human Leukocyte Antigen (HLA) typing: It is possible to have pre-formed antibodies circulating in your system that might make you more likely to reject a kidney transplant.

- These antibodies come from pregnancies, blood transfusions or a previous organ transplant.
- Once you have been placed on the kidney transplant waiting list, blood must be drawn each month to check for HLA antibodies. Part of the blood sample is sent to Gift of Life Michigan (GOLM). GOLM is the organization that obtains and distributes deceased donor kidneys. When a donor kidney becomes available, your blood is tested to make sure that you do not have antibodies against the donor kidney.

Cardiac evaluation: Testing may include a two dimensional (2D) echocardiogram, stress test and/or a consultation with a cardiologist.

- This will identify underlying heart disease or a heart condition that would make it unsafe for you to undergo surgery. In certain cases, a cardiac catheterization may be required.

Chest X-ray: To make sure that there is no lung disease.

Abdominal ultrasound: To identify abnormalities with your abdominal organs or blood vessels.

Colonoscopy: Required for patients who meet the current American Cancer Society guidelines for screening for colon cancer or who have conditions that make them more prone to colon cancer.

Dental clearance: A dentist must examine you to verify that you are free of active oral infection or gum disease.

Tuberculosis (TB) testing: This will be done by TB Quantiferon blood test. If you have risk factors for TB or have had previous exposure, additional testing may be required.

Vaccinations: We recommend immunization for pneumonia. We also strongly encourage an annual influenza vaccine and vaccination for COVID-19.

- Speak with your primary care physician to ensure all your immunizations are up to date.

Women

- Pap smear: Women must have an up to date pap smear and pelvic exam. This is repeated annually while on the wait list.
- Mammogram: Breast cancer screening is required based on the American Cancer Society's guidelines.

Males

- Prostate specific antigen (PSA) screening: This is a blood test that screens for prostate cancer.

Based on the results of your initial testing, additional studies may be required to complete your evaluation. These may include more detailed cardiopulmonary evaluations, pulmonary function tests or consultations with specialty providers.

SECTION 6

FINANCIAL CONSIDERATIONS

A transplant financial representative will meet with you to discuss your individual insurance coverage and possible out-of-pocket expenses.

Transplant medications are expensive, so it is important to have a financial plan for your medications and other transplant related expenses.

While you are on the waiting list for your transplant, you should develop a long-term financial plan. That long term plan should include your income from employment, insurance coverage and fundraising, if needed.

During the transplant process (evaluation, time on the waiting list and after transplant) do not change insurance plans without first speaking with the transplant financial representative.

When a center is certified by Medicare and the patient has Medicare Part A at the time of transplant, the transplant recipient's immunosuppressant medications may be covered under Medicare Part B at a reimbursement rate of 80%. The patient must also have Medicare Part B coverage to receive this benefit.

If a transplant center is a non-approved facility or if the center loses their Medicare certification, the center would be unable to bill Medicare and services related to the transplant would not be paid. Our adult kidney transplant program is Medicare certified.

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While you are on the waiting list for your transplant, you should
develop a long term financial plan.

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SECTION 7

PSYCHOSOCIAL SUPPORT

Having an adequate support team is required for approval for transplant. This can be family, friends or members of your community.

Support persons need to be actively engaged throughout the process and be willing and able to assist you as needed. In addition to emotional support, you may need assistance with transportation, help in carrying out medical or psychosocial treatment plans and assistance with care in the home.

TRANSPLANT WAITING LIST

The transplant team will review your medical and psychosocial testing to decide if you are eligible to be placed on the kidney transplant waiting list. Some contraindications to transplant may include (but are not limited to):

- severe underlying heart or lung disease
- active malignancy or aggressive kidney cancer determined to be out of criteria for transplant
- elevated body mass index (BMI)
- inadequate support team (family or friends who can help you after your transplant)
- medical non-compliance
- poor functional or nutritional status
- lack of insurance
- behavior patterns or psychiatric illness that are barriers to compliance with care of the transplant

If you are determined to be a candidate for kidney transplant, your name will be added to the deceased donor transplant waiting list. A waiting list for transplant is necessary because there are more people waiting for a kidney transplant than available organ donors. A person's waiting time on the list is determined by several factors. Some patients may wait five or more years for a transplant.

The waiting list is managed by the Organ Procurement and Transplantation Network (OPTN) which is managed by the Federal Government. The OPTN currently has contracted with the United Network for Organ Sharing (UNOS) to manage the duties of the OPTN.

When a deceased donor kidney becomes available, the donor information in the UNOS national computer matches the information with the patients on the waiting list.

While on the waiting list, it is important to closely follow the transplant team's recommendations to optimize your condition for transplant. You will be assessed by the transplant staff at least once a year. Frequency of visits will be determined by clinical condition.

While you wait for a kidney transplant, updated testing may be required. Your transplant nurse coordinator will let you know when you require additional testing.

It is crucial that you keep open communication with the transplant team during this process. It is essential that you notify the clinic of changes in address or telephone numbers. You or your support team must notify the clinic if:

- you have a change in your medical condition
- you are hospitalized at an outside hospital
- you need to make any changes in your medical insurance
- you have a change in your support team
- you plan to travel

Failure to communicate with the transplant team may affect your candidacy for transplant.

Maintain your health by staying as active as possible, getting adequate nutrition (or if needed, engaging in weight loss efforts), avoiding toxic substances and staying engaged in recommended emotional support plans.

HOLD STATUS

If there is a new medical problem or concern for non-adherence to pre-transplant requirements while on the wait list, your status may be changed to "on hold". During this time, you are ineligible for offers for a kidney transplant. However, you will continue to accumulate waiting time.

The transplant team will inform you about what needs to be completed to be reactivated. If the requirements cannot be met, you may be removed from the kidney transplant wait list.

SECTION 8

DONOR CONSIDERATIONS

Donors with risk criteria for hepatitis B, hepatitis C or Human Immunodeficiency Virus (HIV) according to the 2020 U.S. Public Health Service Guidelines.

Donors who have a history of certain high-risk behaviors are classified as donors with risk criteria for hepatitis B, hepatitis C or HIV.

It is important to know that these organs are not bad quality. Lab tests performed prior to donation are extremely sensitive, so the chance of detecting a potential infection is greater than the chance of acquiring disease from the donor.

It is not known what the actual risk of transmission is but it is thought to be less than 1%. The risk of dying from kidney disease while waiting on the transplant waiting list is higher than the risk of developing hepatitis B, hepatitis C or HIV from a donor with identified risk criteria.

Patients who accept an organ with potential risks identified are routinely screened after transplant to monitor for possible transmission of the virus from the donor to the recipient.

There are treatments for hepatitis B, hepatitis C and HIV in the rare chance that the virus is contracted from this type of donor.

When a kidney becomes available, your transplant team will discuss with you if the donor had increased risk factors for hepatitis C, hepatitis B or HIV or if the donor was infected with hepatitis B or C. The kidney will not be accepted for transplant without your knowledge and willingness to accept it.

RIGHT TO REFUSE TRANSPLANT

You have the right to refuse transplantation at any point in the process.

NOTIFICATION OF POTENTIAL TRANSPLANT

The call that a kidney is available could happen at any time of day or night. This call will come from a service that Beaumont Transplant contracts to assist with organ offers. It is important to know that you will not recognize the number of the person who is calling with the organ notification. You should answer all calls, even those from out of state numbers.

Due to time constraints associated with transplant, it is crucial that you check your messages frequently and return any missed calls promptly. Failure to do this may result in the need to bypass your offer to the next available patient.

You will be given instructions on what time to report to the hospital, where to register and when you must avoid eating or drinking. You must be accompanied by a member of your support team when you arrive.

You will be admitted to the transplant unit where you will be prepared for surgery. You will meet with the surgical team who will answer any final questions you have about the surgery.

Once admitted for a kidney transplant, there are circumstances which may require canceling the surgery. The transplant cannot be performed if you have an active, serious infection or other serious medical issues.

Changes in the medical condition of the potential kidney donor or issues with the quality of the kidney may also cause your surgery to be canceled.

While having your surgery canceled may be frustrating, please remember that the transplant team wants your transplant to be successful and would not complete the transplant surgery if it could endanger your health.

SECTION 9

TRANSPLANT SURGERY

In the operating room (OR), you will be administered general anesthesia and placed on a ventilator (breathing machine). Most patients have the ventilator tube removed prior to fully waking up from surgery. The kidney transplant operation takes approximately four to six hours. The length of the operation varies depending on individual complexities. The OR staff will keep your loved ones updated throughout the procedure.

Your diseased kidneys are usually left in place. You will have a diagonal incision on either the right or left side of your lower abdomen. After the operation is complete, you will be taken to the Intensive Care Unit (ICU) that specializes in caring for transplant recipients. You will have several monitors, intravenous (IV) lines and drains in place. You will have a catheter in your bladder to drain urine and to monitor your kidney function.

Most transplanted kidneys begin to function right away. Others may take a few days to “wake up”. This is called delayed graft (transplant) function. You may need dialysis temporarily after transplant.

Pain is experienced differently from person to person. Our goal is to keep you as comfortable as possible, but you will have some incisional pain after surgery. You will be ordered pain medications to help manage the discomfort. You may try other techniques, such as meditation or distraction, to manage your pain in addition to medication.

You will be asked to get out of bed to a chair and to walk on the day after surgery. Moving helps to prevent pneumonia, prevent blood clots and maintain strength. Once stable, you will be moved from the ICU to a medical-surgical unit that specializes in the care of transplant patients. You can anticipate being in the hospital for five to seven days after surgery.

POTENTIAL RISKS OF KIDNEY TRANSPLANT

As with any surgical procedure, there are potential risks involved. The transplant team will monitor you closely to identify and treat complications quickly.

Complications of surgery may include:

- **Cardiopulmonary complications:** including, but not limited to, heart attack, stroke, blood clot, pulmonary embolism (blood clot in the lung).
- **Bleeding:** This usually occurs in the first 12-24 hours after surgery. May require returning to the operating room and/or a blood transfusion.
- **Ureter issues:** The ureter is the tube that carries urine from your new kidney to your bladder. It will be connected to your bladder during your kidney transplant operation.
 - The ureter may leak or become narrowed (known as a stricture). Usually these leaks or strictures can be corrected medically, but sometimes require another surgery.
 - A small plastic stent is placed in the ureter from your new kidney into your bladder to help prevent these issues from occurring. This stent is removed two to six weeks after surgery by a urologist.
- **Fluid collection:** In some patients, fluid can collect around the kidney. If this puts pressure on your new kidney, a procedure may need to be performed to relieve this pressure.
- **Transplant rejection:** As described in the next section about antirejection medications, you will be educated about signs of rejection after surgery. Most transplant rejection episodes are reversible if treated early.
- **Transplant failure:** There is a rare complication called primary nonfunction in which the kidney transplant fails to work. This requires return to dialysis. In this case, you may qualify to return to your previous spot on the transplant waiting list.
- **Infection:** This includes, but is not limited to, pneumonia or a wound infection. You will receive antibiotics to help reduce your chance of infection.
- **Renal artery or vein thrombosis:** This is a rare but serious complication in which the main artery or vein of the kidney is blocked by a blood clot. It can sometimes be reversed.
- **Multi-system organ failure & death:** This is rare, but is a risk with any surgery.

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Obese patients are at a higher risk for wound complications, heart and lung issues, infections, hernias and blood clots. We encourage patients to exercise and eat healthily while waiting for kidney transplantation to reduce these risks.

SECTION 10

IMMUNOSUPPRESSION MEDICATIONS

Your body's natural response to a foreign object is rejection. Immunosuppressants, or antirejection medications, are critical to avoid rejection after transplant.

Right after surgery you will be on high doses of immunosuppression but these doses will gradually decrease as you get further out from surgery.

Right after transplant, you will be on additional medications to help reduce your chance of infection. You will be given a medication schedule to take home with you to keep track of when and how to take your medications.

Prograf (tacrolimus), CellCept (mycophenolate mofetil) and prednisone are used to prevent rejection. Each works in a different way to control the body's immune response. Patients must make sure that they are taking these medications as directed. You will have your blood drawn frequently to make sure that your Prograf (tacrolimus) is at an appropriate level to prevent rejection while minimizing potential side effects. Until the blood levels of the medications are stable, your doses may change frequently.

Patients may experience side effects from the antirejection medications.

Side effects may include, but are not limited to:

- upset stomach/nausea
- diarrhea
- weight gain
- diabetes
- hair loss
- hypertension
- high blood pressure

Discuss any difficulties you may have with these medications with the transplant team. You should not alter the dose of your medication unless directed by the transplant team. Doing so may put you at risk for rejection.

After transplant, you will be educated about the signs and symptoms of rejection. It is important to monitor yourself for these symptoms and notify the transplant team promptly if they occur. Rejection can happen at any time after transplant but is treatable and usually reversible when diagnosed early.

Immunosuppression places patients at higher risk for more serious or rare infections. Patients on long-term immunosuppression are also at higher risk for certain cancers and are encouraged to maintain screening for cancer as directed by your physician.

SECTION 11

PREPARATION FOR DISCHARGE

While you are in the hospital, the nursing staff, transplant physicians and surgeons will provide education to you about caring for yourself at home.

In preparation for discharge, you and your support team will meet with several different team members who will provide you with additional education about how to care for yourself and your new kidney. These team members include a transplant nurse, transplant dietitian and transplant pharmacist. You will also receive written educational materials to assist you with keeping yourself and your transplanted kidney healthy.

The transplant social worker will assess your situation for any discharge needs.

A Continuing Care nurse will determine if you need any special equipment or help at home.

Some patients will require additional physical therapy to regain strength and stability in order to be safe at home. This may be completed at home or in an inpatient or outpatient rehabilitation unit, based on individual needs.

FOLLOW-UP

After discharge to home, you will have frequent follow-up visits in the transplant clinic. You will be unable to drive for several weeks after your transplant, so plan for someone reliable to bring you to your clinic visits.

If you live far from the Beaumont Transplant Center, you may want to consider staying in the area for several weeks after your transplant.

You will be expected to follow-up with the transplant team for the life of your transplant. Close monitoring is crucial to the long-term success of your health.

COPING

Transplant can be emotionally difficult. Having the proper support is extremely important. Beaumont offers a transplant support group that meets regularly to provide patients, families and caregivers a forum to share ideas, thoughts, stories and gather additional information. The support group is open to patients who are under evaluation, actively listed and post-transplant. We highly encourage patients to participate. More information can be obtained from the transplant social worker.

PEER MENTOR PROGRAM

Beaumont's peer mentor program, which is supported by the National Kidney Foundation of Michigan, is comprised of trained and certified kidney transplant recipient volunteers, who provide a listening ear and an experienced voice to their fellow patients. As part of your evaluation process, the transplant social worker will ask you if you wish to be matched up with a peer mentor.

SECTION 14

DEFINITIONS OF TERMS

Acute rejection: Acute rejection can happen at any time after a transplant.

During an acute kidney transplant rejection episode, the serum (blood) creatinine rises. This can usually be treated by taking a higher dose or different type of immunosuppressive medicine until the creatinine returns to a baseline.

Antibody: Product of the immune system that helps the body fight infections and foreign substances.

Antigen: The “marker” that stimulates the body to produce antibodies.

Antirejection medicines: These drugs are taken every day through the life of the transplanted kidney. They are also known as immunosuppressive medicines. They help prevent the immune system from rejecting the new kidney.

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

Blood typing: A blood test that indicates blood group. There are four blood types: O, A, B and AB. The recipient’s blood type needs to be compatible with the donor’s blood type to receive the kidney transplant.

BUN: BUN stands for Blood Urea Nitrogen, a waste product from the kidney. Your BUN value is an indication of waste products being created by the body.

Chronic rejection: Chronic rejection is a process that may develop over months or even years. During this process, the creatinine slowly rises. There is no known treatment for chronic rejection however, adjusting medicines may slow the damage to the kidney.

Creatinine: A product of muscle metabolism. Creatinine level serves as a very good indicator of kidney function.

Crossmatching: A test to find out if the blood of the kidney donor and the recipient are compatible.

Deceased donor: A person who has donated organs after dying from a brain injury or cardiac death.

Dialysis: A process that cleans and balances the chemicals in the blood when a person’s kidneys have failed. Dialysis may refer to hemodialysis or peritoneal dialysis.

Diastolic blood pressure: The bottom blood pressure number. Diastolic is when the heart relaxes and refills with blood.

End Stage Renal Disease (ESRD): Occurs when the overall function of the kidneys declines to less than 10% of normal. When this happens, treatment, such as dialysis or a transplant, is needed to replace lost kidney function and support life.

Graft: The transplanted kidney is also sometimes referred to as a graft.

Human Leukocyte Antigen (HLA): A marker found on white blood cells that helps determine compatibility of the donor and transplant recipient.

Hypertension: Another word for high blood pressure.

Immunosuppressive medicines: These medications are taken daily to help prevent the transplant recipient's immune system from rejecting the new kidney. Also known as antirejection medicine.

Intravenous (IV): A small catheter (tube) placed into a vein; refers to the fluids and medicines that are injected into a vein through a needle or catheter.

Kidneys: Two bean-shaped organs located beside the spine, just above the waist. They remove waste and balance fluids in the body by producing urine.

Nephrectomy: The surgical removal of one or both kidneys.

Nephron: A section of the kidney made up of millions of tiny blood filtering tubes.

Rejection: The process by which the body responds to a "foreign object," such as a transplanted kidney. Rejection can be acute or chronic.

Renal: Having to do with the kidneys or referring to them.

Systolic blood pressure: The top blood pressure number. It measures the force of the heart muscle as blood is pumped out of the heart chambers.

Tissue typing: A blood test that evaluates if there is a tissue match between organ donor and recipient antigens.

Transplant: Transferring an organ from a donor to a recipient.

Ureter: The tube that carries urine from each kidney to the bladder.

Urethra: The tube from the bladder that allows urine to flow out of the body.

Urinary tract: The system made up of the kidneys, ureters, bladder and urethra. It produces, moves, stores and eliminates urine.

Each person is an individual and responses may vary.

If you have any questions, please talk
to a member of your health care team.

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Beaumont

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