

For Islet Transplant Patients

Thank you for taking part in the islet transplant research program at University of Chicago Hospitals. We hope that your diabetes will be controlled by an islet transplant—without the need for insulin shots. We also hope that the transplant will help protect you against diabetes-related problems, such as kidney and heart disease. However, we cannot say for certain that you will reap these positive benefits.

As you know, islet transplantation is still experimental. Therefore, we cannot guarantee that your transplant will be a success. It is possible that you may not gain any direct benefits. You may still need to take insulin shots after getting a transplant. However, one thing is certain: This and other studies on islet transplants will add to our knowledge about how to treat diabetes. Your involvement in this study may one day help other people with diabetes.

This section provides an overview of the transplant process. If you have any questions, please talk with the clinical islet transplant coordinator, or the registered nurse who is arranging all of your transplant care.

WHAT IS ISLET TRANSPLANTATION?

Islets are clusters of cells in the pancreas that make insulin, a hormone that helps the body use blood sugar (or glucose) for energy. When you have type 1 diabetes, your immune system destroys the islet cells that make insulin. Your body cannot produce any insulin.

Islet transplants try to treat type 1 diabetes by giving you new islet cells. No surgery is needed. The islet cells from a deceased donor's pancreas are removed, purified, and then injected into a major blood vessel in your liver. This procedure will take place in the radiology department. The islet cells should then begin making insulin. You will need to take special medicines, called anti-rejection medicines, to prevent your immune system from attacking your new islet cells.

Islet transplants performed at the The University of Alberta in Edmonton, Canada over the last several years show promising results. In one group of 12 patients who received islet transplants, nine no longer needed daily insulin injections 10 months later.

However, islet transplants are still experimental. We still don't know what the long-term benefits and risks are. This is why the University of Chicago Hospitals is conducting a clinical trial on islet transplantation. We hope our findings will provide information on the procedure's safety and success. Similar studies are being conducted around the world.

THE SCREENING PHASE

We need to make sure that you are healthy enough—both physically and emotionally—to handle the transplant process. All islet transplant patients must meet certain health criteria. So, you will need to undergo various tests and evaluations before we can enroll you in the study. These tests and evaluations will include the following:

- A consultation with the transplant surgeon, a diabetes specialist, an eye specialist, a nerve and a brain specialist. You may also need to see a kidney specialist and/or a heart specialist, if necessary.
- An interview with a transplant social worker.
- Various blood tests to assess your pancreas, kidney, and liver function. We also test for HIV, hepatitis, and other infectious diseases. At this time, we may also determine your blood type and perform other blood tests that will eventually help us find you suitable islets.
- A urine test.
- A chest x-ray to look for any lung or heart diseases.
- Three heart tests:
 - An electrocardiogram (EKG), which records the electrical activity of your heart.
 - An echocardiogram, which uses sound waves to provide a picture of your heart.
 - A stress echocardiogram, which involves walking on a treadmill while you have monitors attached to your chest.
- A liver ultrasound, which is a painless test that uses sound waves to show a picture of your liver.
- A pregnancy test, if you are a female and able to get pregnant.
- A dental evaluation to check for gum or tooth infections.

- You will be asked to visit the Clinical Research Center at The University of Chicago Hospitals one time during the screening phase for Arginine Tolerance Testing and Meal Replacement Testing. These tests are designed to give us detailed information about how well your transplanted islets are functioning. The timing of these tests will be discussed with you when your appointment dates and times are confirmed. If you have any questions, please feel free to ask the clinical islet transplant coordinator or someone at the CRC.
- Arginine tolerance test. Arginine is a protein that stimulates insulin production. This is a sensitive test that helps us determine the function of your islets in response to a strong chemical stimulant. You will have an IV, or thin plastic tube, placed in each arm. Then, you will have arginine injected through one IV and blood drawn through the other IV, at regular intervals. You must not eat after midnight prior to the test.
- Meal replacement test. This test will help us determine your islet function in response to foods that you eat. You must not eat after midnight prior to the test. You will have one IV started for drawing blood samples during the test. You will then be given a sweet drink to consume within five minutes. The test takes two hours. The total amount of blood drawn for this test will be less than two tablespoons.

- Any routine health screenings that you need. These tests are based on your age and gender and may include:
 - A gynecological evaluation for women, including a Pap smear, to rule out any infections or disease.
 - A mammogram for women over the age of 40.
 - A PSA (prostate specific antigen) blood test for men over age 50 to test for prostate cancer.

The clinical islet transplant coordinator will help arrange for all your screening tests and evaluations. You can get all of these tests and exams done at the University of Chicago Hospitals. Certain tests which are considered “standard or routine” – such as routine cancer screenings – may be performed at another hospital or doctor’s office. However, it is best to discuss this with the director of the islet program and/or the clinical islet transplant coordinator. Once your tests and evaluations are complete, the director of the islet transplant program and the rest of the transplant team will review the results. Together, the team will decide whether you meet the eligibility criteria for the study and can safely receive an islet transplant. If you are eligible, we will enroll you in the study and you will be placed on the waiting lists to receive donor islets.

If you do not meet our criteria for an islet transplant, the director of the islet transplant program will talk to you about other options.

These options include continuing with insulin injections or pursuing a whole pancreas transplant. You might also be eligible to participate in a different islet transplant study at another research hospital.

THE WAITING PHASE

Once you are enrolled in the study, the wait for suitable islet cells begins. The islet cells for your transplant must be obtained from a *compatible* deceased donor pancreas. Compatible means that the donor can safely give an organ to you. Your immune system will naturally view any transplanted islet cells as foreign, and start attacking them. Unless we take steps to stop it, your immune system will launch an attack against your new islet cells and try to destroy them. This is known as *rejection*. Only identical twins can share organs or cells without worrying about rejection. The remaining majority of transplant patients need to take precautions and find a compatible organ.

Three Compatibility Tests. How do we determine compatibility? With the following three blood tests.

- Blood type. Your blood type must be compatible with the donor's blood type.
- Cross-match. During this test, a sample of your blood is mixed with a sample of the donor's blood to test for a *positive cross-match* or *negative-cross match*. A positive cross-match means that you have developed *antibodies*, or an immune response, to something in the donor's blood or tissues. If you have a positive

Compatible – When one person (the donor) can safely give an organ to another person (the recipient). Also called “a good match.”

Rejection – When the body tries to attack and destroy a transplanted organ or tissue. There are three types: *hyperacute rejection*, *acute rejection*, and *chronic rejection*.

Crossmatch – A blood test to see if a recipient is compatible with a donor. Samples of the recipient's blood and the donor's blood are mixed together. If there's a negative crossmatch, the recipient and the donor are compatible. But a positive crossmatch

means the two people are not compatible. When there's a positive crossmatch, the recipient's immune system may destroy the organ(s) from that particular donor.

cross-match, it is likely that your immune system would attack and destroy the organ(s) from that particular donor. Therefore, the transplant team will usually only accept organs that show a negative cross-match with your blood.

- HLA, or human leukocyte antigens. *HLA antigens* are proteins found on the surface of all the cells in your body. There are hundreds of different HLA antigens. Some people refer to HLA antigens as "genetic markers" because you inherit these proteins from your parents. Blood relatives are more likely to share HLA antigens than non-relatives are. So, too, are people of the same race or ethnicity. During this blood test, a set of the donor's HLA antigens are compared to your HLA antigens to see how well they match. We look for a match of zero to six. A match of six out of six is best, but this occurs less than 10% of the time with deceased donor organs. Thanks to better anti-rejection drugs, an organ with a zero HLA match can now be transplanted without fears of rejection.

The Waiting List. The wait for a deceased donor pancreas varies. Typically, the wait may be six months to two years, on average. However, a pancreas suitable for islet transplantation may be obtained sooner in certain circumstances. As soon as we enroll you in the study, your name will be put on a waiting list to receive islets isolated from a deceased donor pancreas. To put you on the waiting list, we send your name to two organizations:

- United Network for Organ Sharing (UNOS), the non-profit organization that oversees the nation's organ transplant activities.
- Gift of Hope Organ & Tissue Donor Network, the local organ procurement organization that is responsible for this area of the country.

Stay in Contact. The clinical islet transplant coordinator will check in with you on a regular basis while you're waiting for your transplant. We hope that you will stay in regular contact with us, too. Be sure to call us with any questions or concerns. It's also *very, very* important that you notify us of any changes in your life, including:

- Any changes of address or phone numbers.
- Any major illnesses or changes in your medical condition, such as strokes, heart attacks or infections.
- Any hospitalizations or surgery.
- Any blood transfusions.
- Any pregnancies.
- Any vacations you have planned.
- Any other reason you may be out of town or temporarily not reachable.
- Any time you change your primary care doctor.
- Any change in your insurance. While the University of Chicago may cover part or all of the costs of the study, it's still important to have current health insurance.

Antibody – A molecule made by your body. Your immune system makes antibodies to fight off anything that it thinks is foreign or strange. A transplant can increase your antibody level. So, too, might a blood transfusion, or giving birth. We

use a test called a panel reactive antibody (PRA) to see how high your antibodies are. A person with a high antibody level is called *sensitized*.

HLA Antigens –
A blood test that helps match a recipient with a donor. HLA antigens are proteins found on the surface of all the cells in your body. You inherit HLA antigens from your parents.

Because a donor pancreas could become available at any time, we need to be able to reach you at all times of the day and night. The clinical islet transplant coordinator will usually ask you for several phone numbers where you can be reached. For instance, you might give us your home number, your work number, your cell phone or pager, or a family member's number. Many organs come in the middle of the night. So, be sure to keep a phone by the bed.

When a donor pancreas becomes available, we only have one hour in which to reach you. If we cannot locate you during that time, we have to turn the organ down so that it can be offered to someone else.

Provide Regular Blood Samples. You will need to provide blood samples on a regular basis while you are waiting for a pancreas. Gift of Hope needs to have fresh blood on file for you at all times in case an organ becomes available.

The clinical islet transplant coordinator or Gift of Hope will help you set up these regular blood draws. You can have the blood samples taken at a nearby doctor's office, laboratory, or hospital.

THE TRANSPLANT PHASE

Once a potential donor pancreas is found for you, the clinical islet transplant coordinator will call and ask you to come to the hospital right away. You will need to get to the hospital quickly—within a few hours, if possible. The clinical islet transplant

coordinator will give you specific instructions. Be sure to write these down. It's easy to forget things when you're excited or anxious.

Before You Leave Your Home. Here are some general guidelines to help you get ready for your transplant. Some of these preparations can be done before you get the call that a pancreas is available:

1. Know how you will get to and from the hospital.
We strongly encourage you to bring a relative or friend to the hospital for support and to drive you home afterwards. You might want to have a Plan A and a Plan B. For instance, you might ask your neighbor to be your back-up driver in case your sister can't drive you when the time arrives.
2. Do not eat or drink anything after you get the call that a pancreas is available.
3. Pack a small suitcase or bag for a short stay. You will have to stay in the hospital for about 12 to 24 hours. Here's what to bring:
 - a. All of your medicines. Make sure your name is written on all the containers.
 - b. Your insurance information, including the name of your insurance company(ies) and the policy number(s).
 - c. A small amount of money with you to buy a magazine, snack, or phone card for long-distance calls. (Local calls are free.)
We suggest that you do not bring large

amounts of cash, credit cards, or valuable items such as jewelry. You will not need them while you are in the hospital.

d. Some comfortable clothes, a bathrobe, slippers, socks.

e. Toiletries, eye glasses, dentures, hearing aid, etc.

- **When You Get to the Hospital.** Where you go once you arrive at the hospital will depend on the time of day: If it's between 6 am and 10 pm: Enter the hospital through the Bernard Mitchell Hospital door, at 5841 South Maryland Avenue (one block north of 59th Street and one block east of Cottage Grove Avenue). Then, you will receive instructions to go directly to the Clinical Research Center (CRC). In most cases, you will be escorted to this location by the clinical islet transplant coordinator, a physician, or other hospital personnel. You will then be asked to provide some admission information, such as your insurance provider(s), etc.
- If it's after 10 pm and not yet 6 am: Go to the Emergency Room entrance at 901 East 58th Street. The Bernard Mitchell entrance is closed late at night. Inform the registration clerk that you are here for a transplant. The clinical islet transplant coordinator will have already submitted your admissions information so you won't need to go through that step. You will then go directly to the Clinical Research Center (CRC).

Once you're admitted to the hospital, you'll be assigned to a patient room in the CRC. The CRC is a specialty unit within the hospital designed to meet the needs of individuals participating in a clinical trial. While you are waiting for the procedure, family members or loved ones can stay with you during this period, if you'd like. For specific visiting policies, ask the unit nurses.

Soon after you arrive in your room, you'll be asked to put on a hospital gown. Several members of the islet transplant team will probably stop by to talk with you and your loved ones.

You may need to repeat some or all screening tests you had before enrolling in the study. The director of the islet transplant program will determine which tests you need to repeat once you arrive at the hospital.

Testing the Pancreas and Islet Cells. A lot will be going on behind the scenes while you are traveling to the hospital and getting admitted. Both Gift of Hope and the University of Chicago transplant team will evaluate the donor pancreas to make sure the organ is healthy, compatible with you, and free of transmissible diseases. In addition, Gift of Hope or The United Network for Organ Sharing (UNOS) must transport the donor pancreas to the University of Chicago Hospitals, either by car or airplane.

The donor pancreas is then brought to the University of Chicago Islet Isolation Laboratory where our staff carefully isolate and purify the islet cells from the pancreas. If enough

Percutaneous transhepatic portal venous catheterization –

A catheter is placed into the portal vein of the liver by a radiologist.

Radiologist –
A physician who specializes in diagnosing and treating people using radiation or radioactive substances, such as the use of x-rays.

islet cells are obtained, they will be tested. Only suitable islets will be used for transplantation. Enough islets for transplant are only obtained from one donor pancreas about half the time.

It is possible that you may arrive at the hospital and go through the pre-tests only to find out that your transplant has been cancelled. This may happen if the islet cells do not meet the high-quality standards required for transplantation. We make every effort to prevent this from happening, but sometimes islet cells are damaged or have other problems. You're bound to feel disappointed if this happens. But it is better to continue to wait for suitable islet cells. You will maintain your same position on the waiting list and receive islet cells from a compatible pancreas as soon as one becomes available.

The Transplant Procedure. After the islet cells have been prepared, you will be taken to the radiology suite for your islet transplant. Islets are transplanted into your liver via a procedure known as *percutaneous transhepatic portal venous catheterization*. This is not an operation. The procedure may cause minor discomfort. But it should not be painful.

To make the procedure more comfortable, you will be given a sedative through an IV in your arm to calm you. A *radiologist* will perform the procedure. A radiologist is a doctor who is trained to place

tubes in blood vessels using X-ray guidance. After cleaning and numbing a small spot on your upper abdomen, the radiologist will place a catheter, or thin tube, into a large vein near the liver. This vein is called the portal vein.

The radiologist uses ultrasound and X-ray images to see inside your abdomen and ensure the catheter is in the right place. The islets will then be transplanted into your liver through the catheter. You will receive about 2 teaspoons (10 milliliters) of islets contained in about 1 pint (500 milliliters) of fluid.

The procedure takes about two hours. Once it is complete, the tube will be removed, and a small bandage will be applied.

Possible Complications from the Procedure. The radiologists at the University of Chicago are highly skilled, so complications are not common. We will be watching you very closely during and after the procedure to help make sure that no problems occur. But there is a small chance that you may suffer one of the following problems during or after surgery:

- Internal bleeding as a result of placing the catheter in the portal vein. This is unlikely because our radiologists are very skilled. If it does happen, you may need a blood transfusion or surgery.
- Portal vein thrombosis, or a blood clot that forms in the portal vein. The risk of clot formation is related to the amount of islet tissue infused into the vein. For

this reason, we only infuse a very small amount (less than 2 teaspoonfuls) of islet cells during transplantation. As a preventive measure, we also give you medicine to prevent clot formations during and after surgery.

- An injury to the organs in the abdominal area. While rare, it is possible that your gallbladder, colon, or other organ may be punctured during the procedure. If this occurs, you will need surgery to fix the injury.
- Failure to access portal vein. If the radiologist cannot place the catheter in your portal vein, you may need surgery so that we can access this vein. If this occurs, a member of our transplant surgery team will explain the procedure to you in detail. Islet cells often take some time to start working. Some patients may need to take insulin shots for a few days or weeks until the islet cells begin to make insulin and your blood sugar becomes normal.

It is possible that a single infusion of islets may not completely control and make your blood sugar normal. If this occurs, you may need to continue to take insulin shots. You can be placed back on the waiting list to receive another donor pancreas so that you can receive another islet transplant. However, you cannot have more than three islet transplants while in this study.

Your Hospital Stay. You will remain in the CRC for 12 to 24 hours following the islet transplant procedure. During your stay, you will be asked to

check your finger stick glucose on a frequent basis. We will also need to draw your blood to check your islet function. You will receive assistance as needed to monitor your blood glucose levels and will receive specialty care from the experts in the CRC.

You will begin taking anti-rejection medicine while in the hospital to prevent rejection. Before you leave the hospital, the transplant pharmacist will give you detailed information about all of the medicines you will need to take. You will be told about the specific purpose of each medicine, how to take each medicine, potential side effects, and precautions. (See the next section, "The Follow-Up Stage," for more information on medicines.)

After you leave the hospital, you can return to your normal activities. However, talk to the islet transplant team before performing any strenuous activities, such as vigorous exercise or heavy lifting.

THE FOLLOW-UP STAGE

The period after your islet transplant will probably feel overwhelming and intense. You will probably have dozens of questions about how to take care of yourself. You may wonder how in the world you're going to keep track of all the medicines you need to take. Or you may be concerned about organ rejection or infections. You are also expected to come to the University of Chicago Hospitals for many follow-up visits and tests.

Don't worry. There *is* a lot to learn and adjust to after a transplant. But we're right here to help you. The clinical islet transplant coordinator is always available by phone or page to address any questions or concerns you might have.

Take Your Medicines as Prescribed. After your transplant, you will need to take a number of different medicines—some for the life of your transplant and others for a short time:

- **Anti-rejection medicines.** At first, you will need to take three anti-rejection drugs to prevent your immune system from attacking your new islet cells: Zenapax (Daclizumab), Prograf (Tacrolimus), and Rapamune (Sirolimus). You will only need to take Zenapax for a few weeks or months. But you will need to take the other two medicines, Prograf and Rapamune, for the life of your transplant.
- **Drugs to prevent infections, such as antibiotics, anti-viral, and anti-fungal medicines.** You will need to take these medicines, as prescribed, for a few months or so after your transplant to help prevent infections. One side effect of all anti-rejection medicines is an increased risk of infections. Anti-rejection medicines work by suppressing or weakening your immune system so that it doesn't attack your new islet cells. But a weakened immune system also means your body has trouble warding off infections. Your body can still fight infection, but your immune system no longer has 100% of its "soldiers." Once you are off Zenapax and taking lower

doses of your other anti-rejection medicines, you will have a lower risk of infection. At that point, you will no longer need to take medicines to prevent infections.

- A medicine, called Lovenox, to help prevent blood clots in the main vein of your liver, where the islets were injected. You will only need to take Lovenox for one week after your transplant. You need to take Lovenox through a shot, similar to an insulin injection. The transplant pharmacist will show you how to take your Lovenox before you leave the hospital.
- Various drugs to prevent or relieve side effects from anti-rejection medicines. For the first few months after your transplant, high doses of anti-rejection medicines may cause you to experience high blood pressure, water retention, and other side effects. Each patient responds differently to the medicines so you may or may not have these reactions. Medicines are available to relieve side effects. Once your doses of anti-rejection medicines are stabilized, you may no longer need to take all or any of these additional medicines.

The sheer number and variety of medicines you need to take can seem overwhelming at first. And each medicine comes with its own set of instructions. For instance, some need to be taken twice a day, but others need to be taken four times a day. How can you keep track of all these medicines—and make sure you take them all as directed?

Don't worry. There are plenty of people here to help you. We will answer any questions you have about your medicines, and double check that you are clear on when and how to take each drug.

It is extremely important that you take your medicines as directed. You will hear us say over and over again: *Never* stop taking your medicine or change your doses unless you have been directed to do so by your transplant doctors or nurses. Rejection will soon follow and possible loss of your transplant.

For more information on each specific medicine, please see Your Transplant Medicines Chapter.

Your Follow-Up Visits. After the transplant, you will need to come to the Islet Transplant Clinic on a regular basis for the remainder of the study. The Islet Transplant Clinic is located on the sixth floor of the Duchossois Center for Advanced Medicine (DCAM) in Suite 6A. The Blood Draw Lab is located down the hall in Room 6F.

The number of follow-up visits will slowly decline over time. For instance, you will come:

- twice a week for the first two weeks after your transplant,
- once a week for the next three months,
- then once a month for the rest of the study.

The length of your clinic visits will vary. Some appointments may take two to four hours, depending on your needs.

During clinic visits, you can expect the following:

- You will receive regular physical exams. The frequency will decrease over time. You'll be examined once a week for the first month, once every two weeks for the next three months, and then once every month for the rest of the study.
- You will be asked to monitor your blood sugar at home and submit these results to our transplant team at each study visit.
- An eye specialist will examine your eyes every three months for the first year and then once every year for the rest of the study.
- Once a year, a neurologist will check for any abnormalities in your nervous system, which are common in patients with diabetes.
- You will have regular blood samples taken to monitor your health and the function of your transplanted islets. The frequency of blood draws will decline over time. You will have your blood samples drawn:
 - two times a week for the first two weeks after transplant,
 - once a week over the next three months,
 - once every two weeks for the next six months, and
 - once a month for the remainder of the study.

- You will need to give occasional urine samples: once a month for the first three months after transplant, then every six months until the end of the study.
- You will need to provide a 24-hour urine sample at six months after transplant, at one year after transplant, and once a year until the end of the study.
- If you are a woman and able to get pregnant, you will receive regular urine pregnancy tests.

In addition to your follow-up visits, you will need to come to the CRC for two days of testing on 12 separate occasions. These tests include Arginine Tolerance Testing and Meal Replacement Testing. These tests are described in the “screening phase” on page 4. These tests are designed to give us detailed information about how well your transplanted islets are functioning. You will need to come for two days of testing:

- at two weeks after transplant,
- at one month after transplant,
- at three months after transplant,
- at six months after transplant,
- then once every six months until the end of the study.

The clinical islet transplant coordinator and the CRC nurses will work with you to schedule your CRC test days at convenient times for you. You can schedule the tests on two consecutive days if you wish. The CRC can provide you with overnight accommodations between these test days.

- After the study ends, the transplant doctors at the University of Chicago Hospitals will continue to see you for regular visits if your transplant is still working.

Avoid Infections. As discussed earlier, you will have a higher risk of infection while you are taking anti-rejection medicines. One of the best ways to prevent catching an infection is to wash your hands a lot. A lot of infections are spread when you touch your mouth, nose, or eyes with dirty fingers that are carrying germs. It's especially important to wash your hands:

- before eating
- before and after using the bathroom
- before and after cleaning a wound
- before changing your contact lenses
- before and after preparing food, especially raw meat, poultry, or fish.

How you wash your hands is as important as how often. You should wash your hands with warm water and soap for about 15 to 20 seconds. Scrub all over your hands and fingers—and don't forget to scrub under your nails. Then use a clean towel to dry your hands.

You might want to buy some hand sanitizer to carry with you when you're away from home. You can use these gels and lotions to clean your hands when there's no water around.

What else can you do to prevent infection? Just be cautious and use common sense. Here are some examples:

- Do not touch your face with dirty hands.
- Avoid people who are sick, especially with the flu, measles, chicken pox, hepatitis, etc. If someone you live with is sick, use common sense. For instance, don't share drinking glasses and utensils. And ask the sick person to always cough and sneeze into a tissue.
- Get adequate rest and proper nutrition so your body is better able to fight off infection.
- Wear gloves when working in the soil. If you like to garden, we encourage you to talk to the islet transplant team about safety precautions.
- Don't eat raw or undercooked meat, poultry, fish, or seafood.
- If you have a pet, ask a family member or friend to clean up the pet's waste. If you have to clean up animal waste, wear gloves and wash your hands thoroughly afterwards. If you have a pet, we encourage you to talk to the islet transplant team about safety precautions.

If you are interested in getting a flu vaccine or any other type of vaccine, talk to the islet transplant team first.

Get Regular Health Exams and Screenings. Anti-rejection medicines are associated with a somewhat higher risk of cancer, especially skin cancers and lymphomas. So, it is important to schedule regular exams and screenings as needed:

- an annual Pap Smear and breast examination, if you're a woman
- an annual skin cancer exam by a dermatologist or your primary care doctor
- an annual prostate exam, if you're a man
- an annual colorectal exam, if you are over age 50

All transplant recipients should also pay attention to any unusual physical changes in their bodies or bodily functions. For instance, men should routinely check their testicles for any nodules or lumps. And all transplant recipients should check their skin for any unusual markings or moles.

You should also continue to see any specialists you go to for any condition that's unrelated to your transplant, such as heart failure, asthma, or arthritis. It's important that you keep any chronic health conditions under control.

Take Precautions About Dental Care. For the first several months post-transplant, you should not get any dental work done, unless absolutely necessary. Prior to any dental work—even a cleaning—you will need to take antibiotics to

prevent an infection. You or your dentist should contact the clinical islet transplant coordinator for antibiotic instructions.

Talk to Us About Pregnancy. Our islet transplant team strongly encourages you to use an effective method of birth control during the study period (5 years). You are able, as a participant, to withdraw from the study for any reason at any time, including pregnancy. However, for your health and well being during this study, the islet transplant team will perform routine pregnancy testing. If you believe for any reason that you might be pregnant, please notify the clinical islet transplant coordinator as soon as possible.

Commit to a Healthy Lifestyle. If you're good to your body, you will be less likely to experience rejection, get an infection, or develop heart disease or another serious condition.

- Eat a healthy, varied diet. All transplant patients should consume a variety of foods so they get the nutrients they need to stay strong and fight off infection and disease. You also need to watch your fat intake to prevent or control heart disease and other health conditions. Our transplant nutritionist is here to help you design a healthy eating plan that fits your lifestyle.
- Exercise regularly. Aim to get at least 30 minutes of moderate exercise on most days of the week. It can help prevent or control high blood pressure, heart disease, osteoporosis and

many other health problems. Exercise can also help you lose or maintain a healthy weight. Plus, it's a great way to relieve stress and anxiety. Choose exercises that you like to do. Examples include brisk walking, swimming, biking, dancing, hiking, aerobics, or playing basketball. Housework and yard work also count toward exercise if you get your arms and legs moving fast enough.

- Lose weight, if you need to. There is no secret to weight loss. You just need to eat less than you burn off through exercise and activity. But weight loss is not easy. Our transplant nutritionist can help you design an eating plan that can help.
- Protect yourself in the sun. To prevent skin cancer, practice safe sun habits. For instance, avoid going out in the sun in midday when you're most likely to get burnt. When you are outside, stick to the shade when possible. And wear a sunscreen with a sun protection factor (SPF) of at least 15.
- Get plenty of sleep and relaxation. If you get rundown or overtired, your body will have a harder time fighting off infection.