



# Understanding solid organ transplants

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Specialty Pharmacy

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# What you need to know about solid organ transplants

A successful organ transplant can be the start of a new way of life. Some people find instant relief from long-term pain or health problems. For others, the healing process takes time. Many patients feel relieved to put a long-term illness and the transplant waiting process behind them.

But life after an organ transplant can bring questions and challenges, especially at first. Understanding how to care for your body after an organ transplant can help you take control of your health. Certain treatments, medications and lifestyle changes are important for your recovery and long-term health. Knowing the right things to do can help you stay well and return to a more normal lifestyle.

Work with your healthcare provider and your healthcare team. Together, you can create a care plan that works best for you. Your healthcare provider can also adjust your plan as your needs change.

This booklet will discuss:

- Organ transplantation
- What to expect after an organ transplant
- Follow-up care and medication
- Maintaining overall health and preventing rejection

## Indications

Transplantation is a treatment option for a range of illnesses, injuries or other conditions that affect organs like the heart, kidney or lungs.<sup>1</sup> Reasons for an organ transplant might include<sup>2</sup>:

- Genetic conditions
- Heart disease
- Kidney disease
- Liver disease
- Long-term conditions like diabetes or high blood pressure
- Lung disease

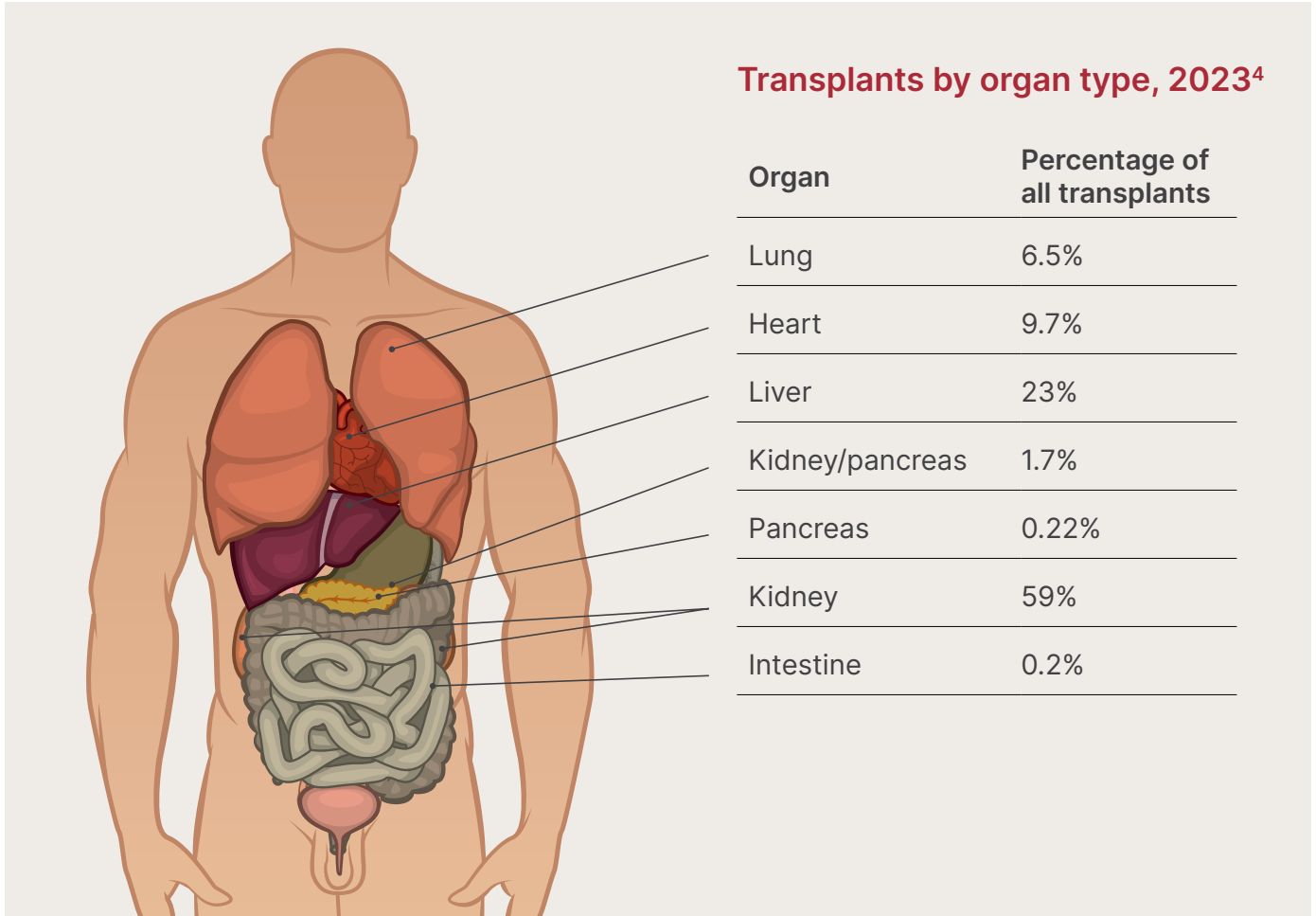
These diseases and conditions can damage organs. Transplant surgery is a treatment that replaces a failing organ with a working one.

### Transplants by the numbers in the US

According to data from the Organ Procurement and Transplantation Network, **more than 46,600** organ transplants were completed across the U.S. in **2023**. Around **40%** of those receiving a transplant are between the ages of 50 and 64. **More than 1 million** transplants have been completed across the country since 1954, with 971,000 of those completed since 1988.<sup>3</sup>

### Transplants by gender and age, 2023<sup>3</sup>

Gender	Total
Men	28,554
Women	18,076
Age	Total
0-17	1,916
18-34	4,423
35-49	10,279
50-64	18,908
65+	11,104



## Evaluation

Individual transplant programs and centers have different requirements for transplant candidates. Being eligible for a transplant can depend on a person’s age, overall health and other factors. Your transplant team likely used many tests, including<sup>5</sup>:

- Blood typing
- Cancer screening
- Chest X-rays
- Dental exams
- Heart health screening
- Infectious disease tests
- Lung function workups
- Tissue typing

After being evaluated for a transplant, you were placed on a waiting list. Then, you worked closely with your healthcare provider and transplant team to prepare yourself physically, emotionally and financially for the big day. Like the thorough process of preparing for your transplant, learning to live with an organ transplant takes time.



# Living with a solid organ transplant

An organ transplant is not a cure, but a treatment. After surgery, you must continue to work with your healthcare provider and transplant team to maintain your transplanted organ and your overall health.<sup>6</sup> It is critical for you to stay on track with healthcare provider visits, prescribed tests and medications to stay healthy and prevent rejection.<sup>7</sup>

## Rejection

Rejection is when the body's immune system treats a new organ as an invader and tries to attack it.<sup>6</sup> This damages the transplanted organ. It can also affect your overall health and make you feel sick.

There are three types of rejection<sup>7</sup>:

- **Hyperacute rejection.** This can happen right after a transplant if the donor and recipient are not matched properly.
- **Acute rejection.** This happens anywhere from the first week after a transplant to three months after surgery.
- **Chronic rejection.** This can happen over many years as the body's immune response slowly damages a transplanted organ.



## Signs and symptoms of rejection

It is important to treat rejection as quickly as possible. This can help prevent organ damage. Know the signs and symptoms of organ failure or rejection. These can include but are not limited to<sup>6,7</sup>:

- Bleeding easily
- Change in heart rate
- Fever
- Flu-like symptoms
- High blood glucose
- Less ability to exercise
- Less urine
- Pain or tenderness at the transplant site
- Shortness of breath
- Swelling
- Weight gain
- Yellow skin

If you have any of these symptoms, call your healthcare provider right away. It is common to have at least one episode of acute rejection within the first year after a transplant.<sup>6</sup> Your healthcare provider and transplant team will help adjust your treatment as needed.



# Treatment

Part of staying healthy after a transplant is keeping up with important tests, procedures and office visits. It also means managing medication that will help your body stay healthy.

## Follow-up care

After surgery, you and your care team will monitor your health with frequent follow-up visits. These visits will decrease over time. At your physical exams and office visits, your care team will order certain tests and procedures, including<sup>8</sup>:

- Biopsies
- Blood tests
- Heart function tests
- Lung function tests
- Ultrasounds
- X-rays

These tests can help your healthcare provider spot early signs of infection or rejection. They can also assess your overall health.

## Medication

Special medications are necessary to help the body stay healthy after a transplant. These are called immunosuppressant drugs. They are also called anti-rejection drugs. If they are not taken as prescribed, the body will launch an attack against the transplanted organ. This can cause rejection and poor health. It could also lead to organ failure or loss. For some, this would mean needing another transplant, which could take time and compromise quality of life while waiting for a new organ.<sup>7</sup>

Anti-rejection drugs are prescribed differently at different stages of treatment<sup>9</sup>:

- Induction — high doses right after surgery to prevent rejection
- Maintenance — long-term medication taken before, during or after a transplant
- Anti-rejection — used to treat episodes of acute rejection

The table on the next page lists common examples of anti-rejection maintenance drugs.<sup>9-11</sup> These can be prescribed, alone or together, in varying combinations. Prescriptions can also change over time. This will depend on which drugs work best for a person. These drugs are usually prescribed along with lifestyle changes. They are taken for as long as a person has a transplanted organ.

Your healthcare provider might also prescribe other drugs. Some can help fight infection. Others can help lessen side effects from immunosuppressants.<sup>11</sup>

They might include<sup>12</sup>:

- Antibiotics
- Antifungal medication
- Antiulcer medication
- Antivirals
- Blood pressure medication
- Cholesterol medication
- Diuretics, or water pills

## Anti-rejection maintenance drugs<sup>9-11</sup>

Type	Names	Intake method
Antiproliferative agents	<ul style="list-style-type: none"><li>• Azathioprine</li><li>• Mycophenolate mofetil</li><li>• Mycophenolic acid</li></ul>	Oral
Calcineurin inhibitors	<ul style="list-style-type: none"><li>• Cyclosporine</li><li>• Tacrolimus</li></ul>	Oral
Corticosteroids	<ul style="list-style-type: none"><li>• Methylprednisolone</li><li>• Prednisone</li></ul>	Oral
mTOR inhibitors	<ul style="list-style-type: none"><li>• Everolimus</li><li>• Sirolimus</li></ul>	Oral
Selective T-cell costimulation blocker	<ul style="list-style-type: none"><li>• Belatacept</li></ul>	Intravenous infusion

### Managing side effects

Anti-rejection drugs have side effects.<sup>10,13</sup> One of the most common side effects is an upset stomach.<sup>10</sup> If this happens to you, ask your healthcare provider or pharmacist if spacing out your prescriptions or taking them with food might help.

You might have other side effects. These can be different for each person. They can depend on which drugs or combination of drugs you are taking. Side effects can include, but are not limited to<sup>13</sup>:

- Acne
- Anxiety
- Bloating
- Headaches
- Nausea or vomiting
- Weight gain
- Puffy face
- Tremors
- Trouble sleeping
- Unwanted hair growth

Side effects might leave you feeling discouraged. But know that many side effects generally get better over time. In the meantime, ask your care team about ways to reduce symptoms. Your healthcare provider might adjust your dose or prescribe a different drug combination. Together, you can manage side effects and keep up with treatment. It is vital that you take your medication as prescribed to stay well and prevent rejection.

## Managing medication

After a transplant, managing your medications will become part of daily life. This might mean keeping track of different drugs, times and doses. There are a few ways you can keep things straight<sup>6,10,14</sup>:

- Establish a routine. Take certain drugs at the same time each day.
- Label and organize drugs and supplies. This can make them easier to find. It can also help prevent a mix-up of medications.
- Make portable containers of medications and supplies. These can help you stay on track when you are away from home. Consider carrying one or two doses of each medication with you (in a pill container key chain or in a purse) in case of unexpected delays in returning home.
- Mark days and doses on a calendar. Check them off after you take your medication.
- Set computer or phone alerts for each dose.
- Talk with your healthcare provider about medication schedule changes if you will be traveling across time zones.

Take your medication exactly as prescribed. Each drug might have specific directions about how and when it can be taken. For example, you should know whether or not you may take certain drugs with food or drink. If you are not sure when or how to take a certain drug, ask your pharmacist or healthcare provider.

Follow basic steps for drug safety:

- Call your healthcare provider right away if you miss a dose or mix up medications.<sup>10,11,14</sup>
- Check with your healthcare provider or pharmacist if you receive a prescription refill that looks different from what you usually take. Different versions of the same drug can be made in different ways. This can affect how they are absorbed in the bloodstream.<sup>15,16</sup>

- Do not take any other drugs or supplements without your healthcare provider's approval. This includes over-the-counter or herbal medicines. Some of these should not be taken with anti-rejection medications. Others are not recommended for transplant patients.<sup>11,14</sup>
- Follow each drug's manufacturer storage instructions.<sup>11</sup>
- Wear or carry emergency information that identifies you as a transplant patient and lists your current prescriptions.<sup>6</sup>

If it gets too hard to stay on track, ask your care team for other tips. You can work together to make things easier to manage. Do not stop taking your medication on your own.

## Staying on track with treatment

Staying on track with treatment is the key to staying healthy and avoiding rejection. But it might sometimes seem overwhelming. You might feel frustrated about side effects. Or you might be anxious about prescription costs. This is normal. Work with your healthcare provider and care team to stay on track.

Take your medicine exactly as prescribed by your healthcare provider — at the right times and the correct doses. Continue this even if you feel well. If you find it hard to manage your prescriptions or their side effects, tell your healthcare provider your concerns. Together, you can find ways to stick with a treatment plan that will keep you healthy and avoid rejection. Do not stop treatment on your own.





# Lifestyle changes

Along with prescribed medication, certain lifestyle changes are important for your health after a transplant. This includes precautions against infections and new health concerns. It also includes eating well, staying active, getting enough rest and finding support.

## Avoiding infection

Anti-rejection drugs work by lowering your body's immune response. This is needed to prevent rejection after a transplant. But this might also raise your risk for infection from other illnesses. Common infections after a transplant can include<sup>17,18</sup>:

- Cytomegalovirus
- Epstein-Barr virus
- Fungal infections
- Hepatitis B or C
- Herpes simplex virus
- Pneumonia
- Urinary tract infection

You must protect yourself from germs that can cause infection. This is especially true in the first few weeks after surgery. You can take certain precautions to stay away from key sources of germs<sup>17</sup>:

- Avoid crowded indoor places. Things like coughs and colds are more easily passed along in close quarters.
- Avoid people with infections or illnesses.
- Avoid taking care of animals or working outdoors in a garden. Cleaning up after animals or working with dirt might expose you to germs. This might include a common parasite called toxoplasma.
- Consider wearing a mask when out in public, in transit or in crowds where distancing is not possible.
- Promptly treat cuts and scrapes by cleansing and covering them to avoid infection.



- Wash your hands frequently. This controls the spread of germs. Carry hand sanitizer with you in case washing your hands is not an option.
- Take care of your teeth and gums. Ask your healthcare provider if you should take an antibiotic before dental visits. This might protect you from any bacteria that could enter your bloodstream during a dental procedure — even a routine cleaning.

It is also important to know the early signs of infection.<sup>18</sup> Call your healthcare provider or transplant team if you have any of the following:

- Burning feeling during urination
- Cold or cough that won't go away
- Drainage from your surgical scar
- Fever higher than 100°F (37.78°C)

# Vaccinations

After a transplant, it is critical to stay current with vaccinations.<sup>19,20</sup> Anti-rejection medication lowers the body's immune response. Vaccines can help your body fight off illness and infection. Some are only needed once. Others must be repeated.



There are important guidelines regarding vaccines for transplant recipients<sup>19</sup>:

- In most cases, vaccines should not be given in the first two months after a transplant.
- In most cases, transplant recipients should not receive live virus vaccines. A lowered immune response cannot fight off the weakened viruses used in live vaccines. Examples of live vaccines include:
  - Chickenpox (varicella)
  - Measles, mumps, rubella
  - Nasal mist flu vaccine
- It is also important to avoid contact with anyone who recently received a live virus vaccine or currently has any of the conditions treated by those vaccines.

Ask your healthcare provider or pharmacist which vaccines you need and when to get them.

# Managing new health concerns

Organ transplantation and maintenance medication can improve a person's health. However, they can also raise the risk for other long-term health conditions. You can work with your healthcare provider and care team to stay ahead of some of these new health concerns.

## Diabetes

Some anti-rejection drugs can cause high blood glucose. This can raise your risk for diabetes.<sup>21</sup> It can also make existing diabetes worse. Uncontrolled diabetes can harm your heart, blood vessels, eyes, feet and nerves.<sup>22</sup> Some warning signs of diabetes can include:

- Being very thirsty
- Blurry eyesight
- Dry, itchy skin
- Intense hunger or tiredness
- Slow-healing cuts or sores
- Tingling or numb feet
- Urinating often
- Weight loss without trying

But many people with high blood glucose or diabetes have no symptoms. Ask your healthcare provider if, when and how often you should be testing your blood glucose to see if you are affected.

Blood glucose is measured in milligrams per deciliter (mg/dL). In people without diabetes, fasting blood glucose is below 100 mg/dL.<sup>22</sup> Your target level might be different. Ask your healthcare provider about your target blood glucose level.

You can work with your healthcare provider to prevent or control a high blood glucose level or diabetes. This might include being more active, eating a healthier diet or losing weight. It also includes regular testing of your blood glucose levels at home and at your healthcare provider's office.

## Foot problems

Some people have foot pain and other foot problems after a transplant. This might be due to certain anti-rejection drugs. It might also be tied to high blood glucose or diabetes. Small cuts and sores might not heal quickly.<sup>23</sup> This can raise the risk for infection.

Inspect your feet each day for any problems, including<sup>23</sup>:

- Blisters or sores
- Bruises or cuts
- Dry and cracked skin
- Firm or hard spots
- Redness, warmth or tenderness

If you find any problems, or if you have any tingling, burning or pain, call your healthcare provider.<sup>23</sup> You might also ask for a referral to a podiatrist, or foot doctor. Even small foot problems can lead to infection and injury if they are not treated properly.<sup>23</sup> It is important to get the right care for your feet.

## High blood pressure and high cholesterol

High blood pressure and high cholesterol are common after a transplant.<sup>24-26</sup> This might be due to some anti-rejection drugs. It might also be the result of other health conditions. If left untreated, high blood pressure and high cholesterol can raise the risk for rejection. They can also cause heart problems, stroke or kidney failure.

High blood pressure and high cholesterol usually have no symptoms. You should work with your care team to measure both regularly.

Blood pressure is measured in millimeters of mercury (mmHg). It is written as one number over another: 120/80 mmHg, for example. The measurement includes two types of blood pressure<sup>27</sup>:

- Systolic (top number) — when the heart beats while pumping blood
- Diastolic (bottom number) — when the heart is at rest between beats

Normal blood pressure for adults is below 120/80 mmHg.<sup>27</sup> Your target blood pressure might be different. It can depend on the status of your transplanted organ. It can also be different if you have other long-term health conditions. Ask your healthcare provider what your target blood pressure should be.

Cholesterol is measured in milligrams per deciliter (mg/dL). Tests can show four different types of cholesterol:

- Total cholesterol
- LDL (bad) cholesterol — causes buildup and blockages in the arteries
- HDL (good) cholesterol — prevents buildup in the arteries
- Triglycerides — another form of fat in the blood



In most adults, target levels should be as follows<sup>28</sup>:

- Total cholesterol — less than 200 mg/dL
- LDL — less than 100 mg/dL
- HDL — at least 40 mg/dL
- Triglycerides — less than 150 mg/dL

Ask your healthcare provider what your target cholesterol levels should be. Depending on your overall health, your goal numbers might be different.

You can work with your healthcare provider to manage your blood pressure and cholesterol levels. This might mean being more active and watching what you eat. It might also mean working to better manage stress. Your healthcare provider might also prescribe drugs to help control these conditions.

## Oral health

Anti-rejection drugs can raise the risk for dental problems, oral infections and even oral cancer. Common oral health problems can include<sup>29</sup>:

- Bacterial infections
- Dry mouth
- Fungal infections
- Gum disease
- Swollen gums
- Slow-healing wounds
- Ulcers or sores
- Viral infections

Ask your healthcare provider when you should make your first dental appointment after surgery. Dental work is not recommended for at least three months after a transplant.<sup>29</sup> Even after this waiting period, you might need to take antibiotics before any visits to the dentist.

You might need to see the dentist more often than you did before your transplant. But you can take small steps each day to take care of your teeth and gums:

- Brush and floss daily.
- Look inside your mouth every day. Check how it feels with your tongue.
- Call your dentist if you notice any changes or have any concerns.

## Osteoporosis

Some anti-rejection drugs can make your bones weak. This is called osteoporosis.<sup>30</sup> This can raise the risk for broken bones. Your healthcare provider can test your bone density to assess your risk. If your results show signs of weakened bones, your healthcare provider might prescribe medication to prevent or treat osteoporosis.

Talk with your healthcare provider about the best ways you can manage your risk for osteoporosis. You might discuss other things that can help strengthen weak bones, such as<sup>30</sup>:

- A healthful, balanced diet that includes enough calories, calcium and vitamin D
- Avoiding smoking and limiting alcohol
- Calcium and vitamin D supplements
- Resistance exercises, like light weight training
- Weight-bearing exercise, like walking



## Cancer

Anti-rejection drugs can raise the risk for certain cancers.<sup>11</sup> Screening for cancer will be a part of your regular care after a transplant.<sup>5</sup> Transplant recipients are 15% to 20% more likely to develop certain cancers. This includes cervical, breast and colorectal cancer. Skin cancers and cancers of the lymph glands are most common.<sup>31</sup>

Skin cancer is 65 times more common in organ transplant recipients than in those without transplants.<sup>32</sup> The risk is even greater for patients who<sup>32</sup>:

- Have light skin, eyes or hair
- Have family histories of skin cancer
- Have taken immunosuppressant drugs for longer periods of time or at higher doses
- Spend a lot of time in the sun

You can take small steps to protect your skin when going outside<sup>32</sup>:

- Apply large amounts of sunscreen 15 to 20 minutes before going outside. Reapply at least every two hours.
- Choose a broad-spectrum sunscreen with a sun protection factor (SPF) of at least 30. Those with light skin or a history of skin cancer might use an SPF of 50 or 75.
- Stay in the shade between 10 am and 4 pm when the sun is the hottest.
- Wear hats and protective clothing.

You should also check your skin carefully<sup>32</sup>:

- Examine your skin thoroughly at least once a month.
- Tell your doctor about any changing moles or areas of skin that are painful, red or scaly, bleeding or scabbed.
- Work with your doctor to find a dermatologist who can check your skin at least once a year.

## Staying active

Following restful recovery after surgery, you might start to have more energy. Regular physical activity can give you the energy to manage side effects. It can also help you control medication-related health concerns, like diabetes, high cholesterol or high blood pressure.<sup>24,33,34</sup> Exercise can help improve your overall health and mood. It can also help you manage stress.

Most people should aim for about 30 minutes of moderate activity four or five days a week.<sup>34</sup> There are many ways to move:

- Weight-bearing exercise, like walking or jogging, can help strengthen your bones.
- Other exercise, like biking or swimming, can be good for your heart and easy on your joints.
- Resistance training, with free weights or bands, can improve your muscle strength. This helps your bones, too.

Talk with your healthcare provider about what kind of exercise plan is right for you.





## Eating well

Some post-transplant drugs can increase appetite. Others change the way your body processes food. This might cause you to eat too much or gain weight. It can also raise the risk for certain health problems. This might include diabetes, heart disease or high blood pressure.<sup>24,33,34</sup>

Along with regular physical activity, smart food choices can help you stay healthy. Your diet will depend on your specific transplant and medications. It will also depend on any other health conditions you might have.

Talk with your healthcare provider about what foods are right for you. Ask if you should supplement your diet with any vitamins or minerals. You might also ask for a referral to a dietitian who understands the unique needs of transplant recipients.

No matter your specific diet, there are some basic guidelines for eating well<sup>34,35</sup>:

- Eat a balanced diet of fresh foods. Avoid processed foods and snacks.
- Focus on whole fruits and vegetables. These are good sources of fiber.
- Limit salt and fat. These can cause or worsen problems with high blood pressure or high cholesterol. Try herbs and spices for flavor. Use fat-free sprays and sauces instead of oil.
- Mind your carbs and sweets. They can give you energy, but some post-transplant drugs make it hard for the body to use extra carbohydrates.<sup>35</sup> This can raise blood glucose. It might also raise the risk for diabetes.<sup>34,35</sup>
- Protein helps your body rebuild muscle tissue. It also helps you heal after surgery.<sup>35</sup> Choose lean meat, skinless poultry or fish.
- Remember calcium for bone health. Low-fat dairy or leafy greens are good sources.
- Stay away from caffeine, alcohol and tobacco.
- Watch portions. Look at recommended serving sizes. Be mindful of how much you eat.



# Food safety

Because of your transplant and medication, you'll need to pay special attention to food safety.<sup>36</sup> Foodborne illness can be dangerous to people with weakened immune systems.



You can take steps to eat safely<sup>36</sup>:

- Avoid eating undercooked meat, seafood or eggs. Don't eat unpasteurized dairy or raw fish, like sushi.
- Cook and heat meat, poultry and eggs to a safe internal temperature. The U.S. Food and Drug Administration (FDA) recommends at least<sup>36</sup>:
  - 145°F (62.8°C) for meat and fish
  - 160°F (71.1°C) for ground meats and eggs
  - 165°F (73.9°C) for poultry, hot dogs and luncheon meats
- Check food labels for expiration dates. "When in doubt, throw it out."
- Store fresh foods properly in the refrigerator or freezer. The FDA recommends<sup>36</sup>:
  - Refrigerator temperature of 40°F (4.4°C) or colder
  - Freezer temperature of 0°F (-17.8°C) or colder
- Wash your hands and any surfaces used to prepare food. Wash fresh fruits and vegetables before eating.

Even with the best efforts at food safety, it is still possible to get sick. If you have diarrhea, fever, nausea or vomiting and you suspect foodborne illness, call your healthcare provider right away.

# Rest

Recovering after transplant surgery is hard work. So is getting used to a new medication and treatment routine. Rest is important. It helps your body recover. It also helps recharge your body and mind.

However, some transplant-related symptoms and medication side effects can make it hard to sleep.<sup>37</sup> One study of transplant recipients found about 41% had poor sleep. This included having trouble falling asleep, waking up at night or sleeping fewer than six hours each night.<sup>37</sup>

Lack of sleep can make it hard to have enough energy for the day. It can also be hard on your health. You can follow some simple tips to get better sleep and more rest<sup>38</sup>:

- Avoid eating or drinking too much in the evening.
- Don't nap after 3 pm. This can disrupt nighttime sleep.
- Finish any exercise at least two or three hours before bedtime.

- Go to bed and wake up at the same times each day.
- If your medication seems to affect your sleep, ask your healthcare provider if you can take doses earlier in the day.
- Make a good sleep space. Remove electronics. Keep the temperature cool. Turn the clock face away from you at night.
- Relax when you can. Don't overschedule yourself, and ask for help when you need it.
- Skip caffeine, nicotine and alcohol.
- Try to get about an hour of morning sunlight each day. Turn down lights before bedtime. Cues from light can help set sleep rhythms.
- Wind down before bed. Try reading a book, listening to music or taking a bath.

If you have trouble finding ways to rest or have ongoing problems with sleep, talk with your healthcare provider. This can help rule out other health problems that might be causing sleep problems.



# Emotional health

Life after a transplant can be full of changes. For many, the first year after a transplant is a hard transition — both physically and emotionally.<sup>5,39</sup> It is important to find healthy ways to cope.

## Dealing with emotional challenges

After a transplant, your body and your daily routines will be new. Your emotional and physical relationships with others might change. Your view of yourself might be different, too.<sup>39</sup> These things might make you feel anxious, guilty, sad or stressed. These

feelings are normal.<sup>40</sup> But they can sometimes be hard to work through. And some medication side effects might make things feel worse.

A therapist with a specialty in post-transplant concerns might be of great help during this transition.<sup>41</sup> Many transplant care teams include a psychiatrist, psychologist or social worker. You might also consider seeing a professional counselor or therapist away from the hospital. These individuals can help you sort through your feelings. They might also help you understand what emotions could be tied to your physical recovery or your medication.

## Depression

Depression is common in the first year after a transplant.<sup>39</sup> This might be due to the many physical and emotional changes that are part of life after an organ transplant. It might also be tied to side effects from post-transplant medication. Feelings of depression are normal. But if you have been feeling some or all of the following for more than two weeks, it is important to seek help<sup>42</sup>:

- Aches and pains that don't go away with treatment
- Being tired or lacking energy
- Eating too much or too little
- Feeling hopeless or negative
- Feeling restless or irritable
- Feeling sad, empty or anxious most of the time
- Feeling worthless, helpless or guilty

- Having a hard time concentrating or making decisions
- Having panic attacks
- Losing interest or pleasure in activities that you used to enjoy
- Losing interest in relationships
- Sleeping too much or too little
- Thinking about death or suicide
- Using or thinking about using over-the-counter remedies, drugs or alcohol to cope

If you have thoughts of suicide, contact the National Suicide and Crisis Lifeline by calling or texting 988 or visiting [988lifeline.org/chat](https://988lifeline.org/chat). You can also get help by calling 911, your local emergency services number or your healthcare provider or mental health professional.



## Support groups

You might have been a part of a support group before your transplant. Support groups after a transplant can be useful, too.<sup>43</sup> Meeting with others who understand your experience will remind you that you're not alone. These groups might also be helpful for your family, friends and other caregivers.<sup>44</sup>

In post-transplant support groups, you can talk with other new transplant recipients. Or you might meet others who have been living with a transplanted organ for many years. You might learn about different ways to cope with stress, side effects or insurance and financial issues.<sup>44</sup>

There are many types of post-transplant groups, including<sup>44</sup>:

- Clinical or advocacy organizations
- Hospital programs
- Local patient groups

If you find it hard to attend group meetings in person, some groups even connect by telephone or online.<sup>44</sup> Your care team can suggest a support group that is right for you.

## Ongoing care

Work with your healthcare provider and care team to keep track of your progress and your symptoms. You can discuss how well your medication and lifestyle changes are working. Your healthcare provider can also monitor side effects and adjust your treatment as needed. Each visit can help you stay on track with treatment and improve your health.

We provide this information because the more you know about living with an organ transplant, the better you'll be able to manage it.

Additionally, the Walgreens Specialty360 Therapy Team is here to support you with **dependable, personalized service** to help manage your medication side effects and stay on track with your prescribed therapy.

We look forward to being a member of your healthcare team and helping you get the best results from your treatment.

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# Resources

You might find it helpful to contact these organizations for additional support and resources.\*

## **American Society of Transplantation (AST)**

[www.myast.org/patient-information/patient-information](http://www.myast.org/patient-information/patient-information)  
856-439-9986  
[@AST\\_info](http://www.facebook.com/AmericanSocietyofTransplantation)

The AST is an organization of transplantation professionals providing guidance, research and resources on transplantation to improve patient care. Its website features a number of resources for transplant patients and their families, including fact sheets, brochures, and links to advocacy and support organizations.

## **National Kidney Foundation (NKF)**

[www.kidney.org](http://www.kidney.org)  
855-NKF-CARES (653-2273)  
[@nkf](http://www.facebook.com/nationalkidneyfoundation)

The NKF is a national organization dedicated to increasing awareness, prevention and treatment of kidney disease. Its website features patient and family resources on kidney disease and transplantation, as well as links to the NKF peer support program and advocacy events.

## **Organ Procurement and Transplantation Network (OPTN)**

<https://optn.transplant.hrsa.gov>  
888-894-6361

Under the U.S. Department of Health and Human Services, the OPTN connects all clinicians across the U.S. donation and transplantation system. The network aims to increase availability and access to

transplants, improve survival rates, promote patient safety and increase efficiency in transplant care. The OPTN website hosts a number of patient resources about transplantation and care after surgery.

## **Transplant Recipients International Organization (TRIO)**

[www.trioweb.org](http://www.trioweb.org)  
800-TRIO-386 (874-6386)  
[@TRIO\\_National](http://www.facebook.com/TransplantRecipientsInternationalOrganization)

TRIO hosts an international support network for organ donors, transplant candidates, recipients and their families. TRIO member chapters focus on increasing awareness, support, education and advocacy for transplant issues. The TRIO website offers patient stories and resources as well as a links to local chapters.

## **United Network for Organ Sharing (UNOS)**

[www.unos.org](http://www.unos.org)  
[www.transplantliving.org/after-the-transplant](http://www.transplantliving.org/after-the-transplant)  
888-894-6361  
[@UNOSNews](http://www.facebook.com/UnitedNetworkForOrganSharing)

UNOS is a private, nonprofit organization that administers the OPTN. Its Transplant Living website includes detailed information on healthy living after an organ transplant. It covers everything from medication management to lifestyle changes, and provides links to support services and prescription drug assistance. The UNOS online store also carries a number of free patient education materials available by mail or download.

\*The referenced organizations are provided for informational purposes only. They are not affiliated with, and have not provided funding to, Walgreens Specialty Pharmacy for this booklet. Walgreens Specialty Pharmacy does not endorse or recommend any specific organization.











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