



Surgical Procedures: Nephrectomy Due to Cancer

What is a nephrectomy and how is it done?

The kidneys are two fist-sized organs that are in the back of the upper belly. The jobs of the kidneys are to:

- Filter waste from the body.
- Filter fluid and electrolytes from the blood.
- Make urine.
- Maintain the correct level of minerals in the body.
- Make hormones that control blood pressure and the making of red blood cells.

A nephrectomy is the removal of all or part of one or both kidneys. A nephrectomy can be done to treat conditions such as renal cell cancer in adults and Wilms' tumor in children.

There are two types of nephrectomy:

- **Partial Nephrectomy (Nephron sparing surgery):** Only part of the kidney is removed. The healthy part of the kidney is left in the body and continues to work.
- **Radical Nephrectomy (Complete nephrectomy):** The whole kidney is removed. Sometimes part of the ureter (the tube that connects the kidney to the bladder), the adrenal gland (found above the kidney), and the nearby fat are removed.

The removal of both kidneys is called a bilateral nephrectomy.

There are a few ways that a nephrectomy can be done. Ask your provider which will be used. They are:

- **Open Surgery:** An incision (cut) is made along your side or abdomen (belly). A lower rib may be removed to get to the area.
- **Laparoscopic Surgery:** Small incisions are made on the belly and a tube with surgical tools is placed through them. At times, a larger incision will be made to remove the kidney.
- **Robot-Assisted Surgery:** A machine controlled by a surgeon removes the kidney. This allows for the surgeon to see the space better, for smaller incisions, and precise tissue removal.

Patients who have laparoscopic or robotic procedures often have less pain after surgery, a shorter hospital stay, smaller incisions, and it takes less time to recover.

What are the risks associated with a nephrectomy?

The possible risks can be:

- Infection.
- Bleeding.
- High blood pressure.
- Chronic kidney disease and/or kidney failure.

- Dialysis (the regular use of a machine to filter and remove extra fluid from your blood).

What is recovery like?

A hospital stay of 1 to 7 days is often needed after a nephrectomy, based on the procedure you have had. You may have a catheter to drain urine from your bladder. You will be told how to care for your incision before you leave the hospital.

Your medical team will discuss with you the medications you will take at home. These may include medications for blood clots, constipation and infection prevention, pain, and nausea management.

Often, you will be told to:

- Slowly walk more each day and use stairs as you can.
- Avoid strenuous activity and heavy lifting until you are told that it is ok.
- Do not drive while taking narcotics for pain management.
- Avoid tub bathing until you are told by your team that it is ok.

Be sure to contact your healthcare team with symptoms such as:

- Warmth, redness, swelling, drainage, or opening of your incision.
- Fever. Your team will tell you at what temperature you should contact them.
- Changes in how you urinate.
- New or worsening pain.

How can I care for myself?

You may need a family member or friend to help you with your daily tasks until you are feeling better. It may take some time before your team tells you that it is ok to go back to your normal activity.

Be sure to take your prescribed medications as directed to prevent pain, infection, and/or constipation. Call your team with any new or worsening symptoms.

There are ways to manage constipation after your surgery. You can change your diet, drink more fluids, and take over-the-counter medications. Talk with your care team before taking any medications for constipation.

Taking deep breaths and resting can help manage pain, keep your lungs healthy after anesthesia, and promote good drainage of lymphatic fluid. Try to do deep breathing and relaxation exercises a few times a day in the first week, or when you notice you are extra tense.

- Example of a relaxation exercise: While sitting, close your eyes and take 5-10 slow deep breaths. Relax your muscles. Slowly roll your head and shoulders.

Long Term Considerations

Your body can work with only one kidney. You can get chronic renal insufficiency (CRI), which is the loss of kidney function over time. This is a rare issue that can lead to kidney failure and the need for dialysis. Dialysis is the use of a machine to filter the blood and do the work of the kidneys. Side effects of CRI are hypertension (high blood pressure), anemia, neuropathy (nerve damage), and a higher risk of heart disease. Partial nephrectomy lowers the risk of CRI in survivors.

Risk of kidney problems is higher in those who:

- Have had radiation to the kidney/abdomen.

- Chemotherapies that cause kidney damage.
- Have diabetes, high blood pressure, or are a smoker.

Kidney cancer survivors should:

- Have an annual physical by their healthcare provider. During this exam, their blood pressure and blood sugar should be checked.
- Survivors should not smoke.
- Kidney damage may present as a decrease in kidney function, protein in the urine, or hypertension (high blood pressure).
- Avoid damage to the remaining kidney. This includes not playing contact sports. You should also wear a seatbelt to lower the risk of organ damage in a car accident.

This hand-out provides general information only. Please be sure to discuss the specifics of your surgical plan and recovery with your surgeon.

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