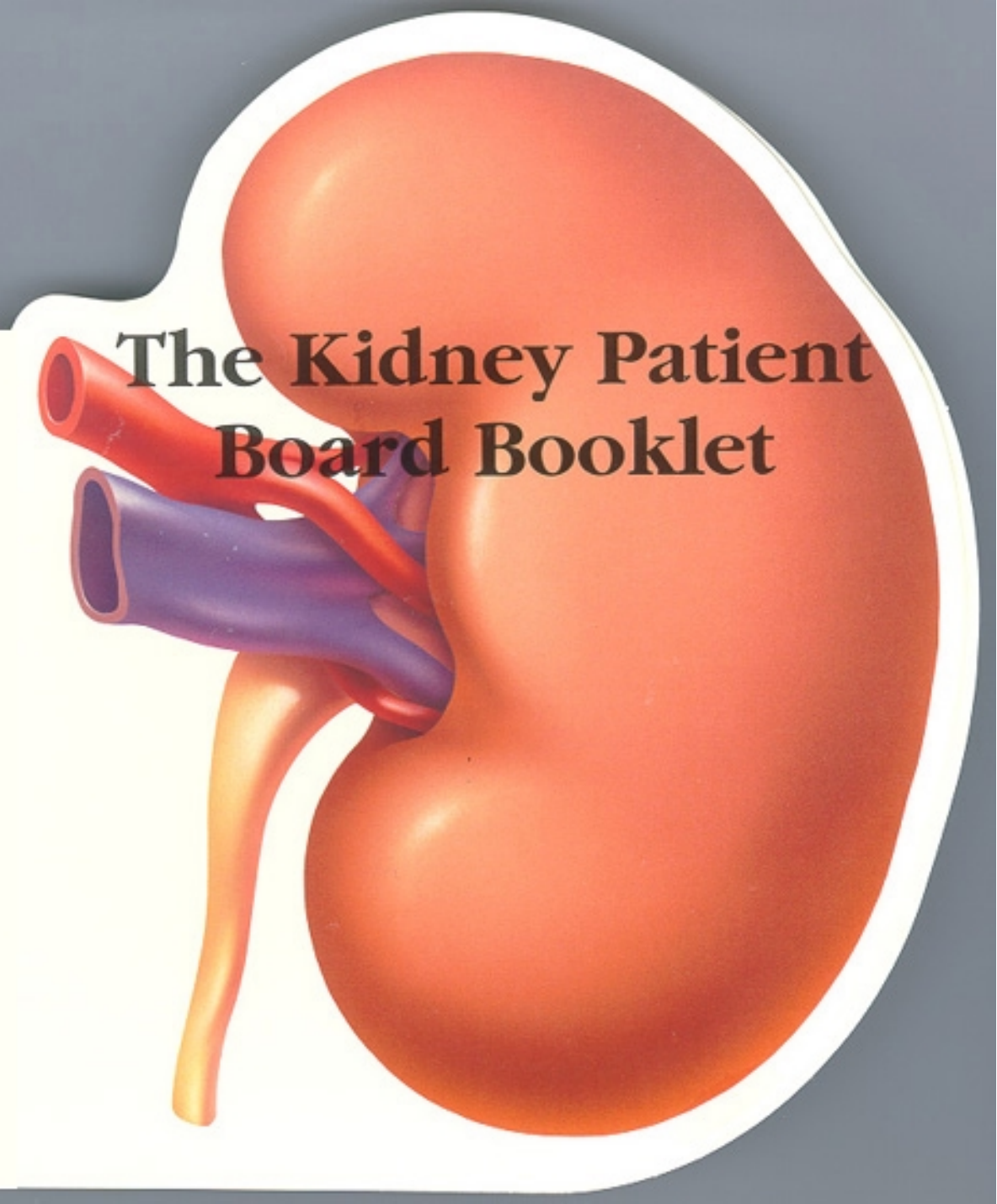
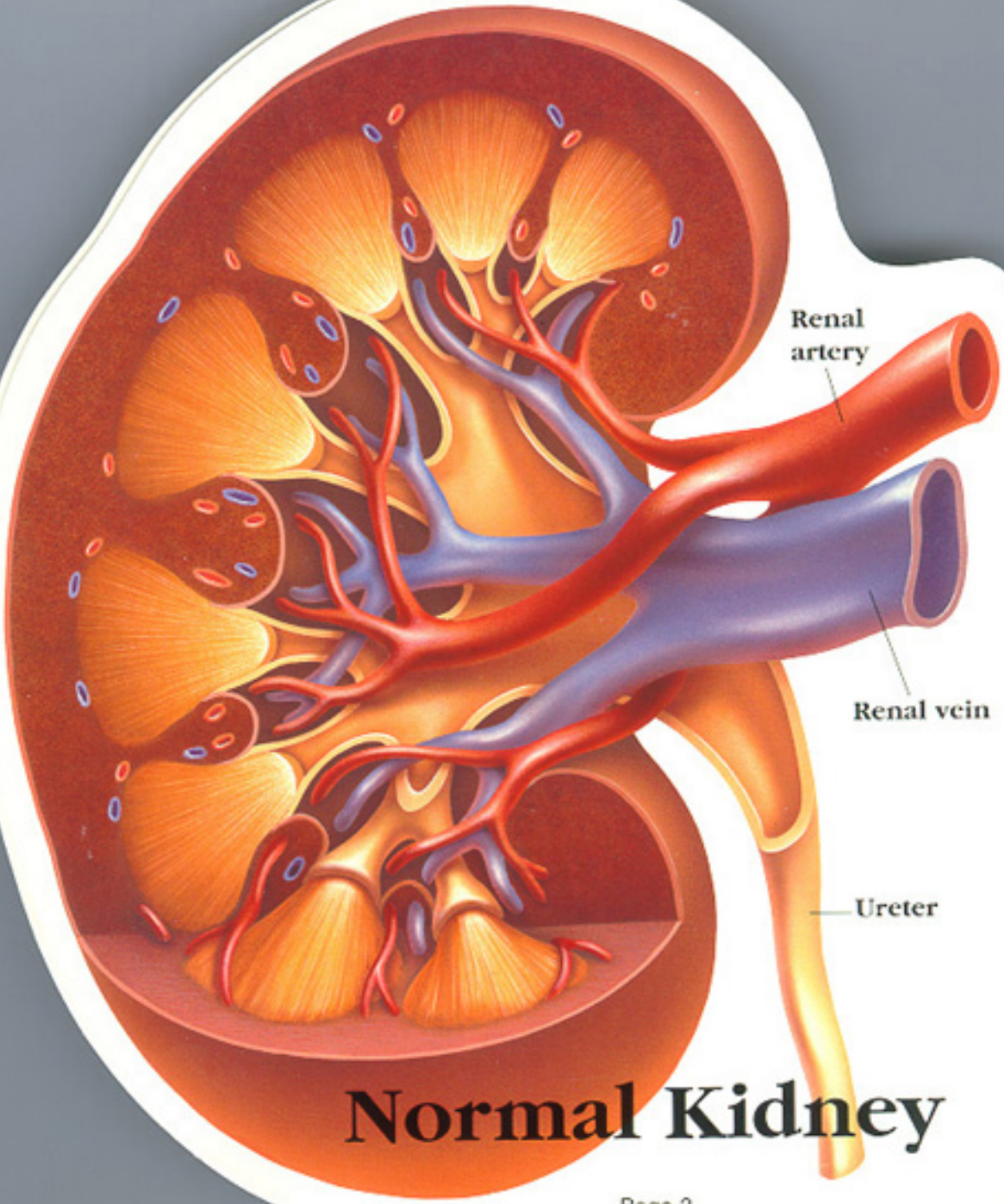
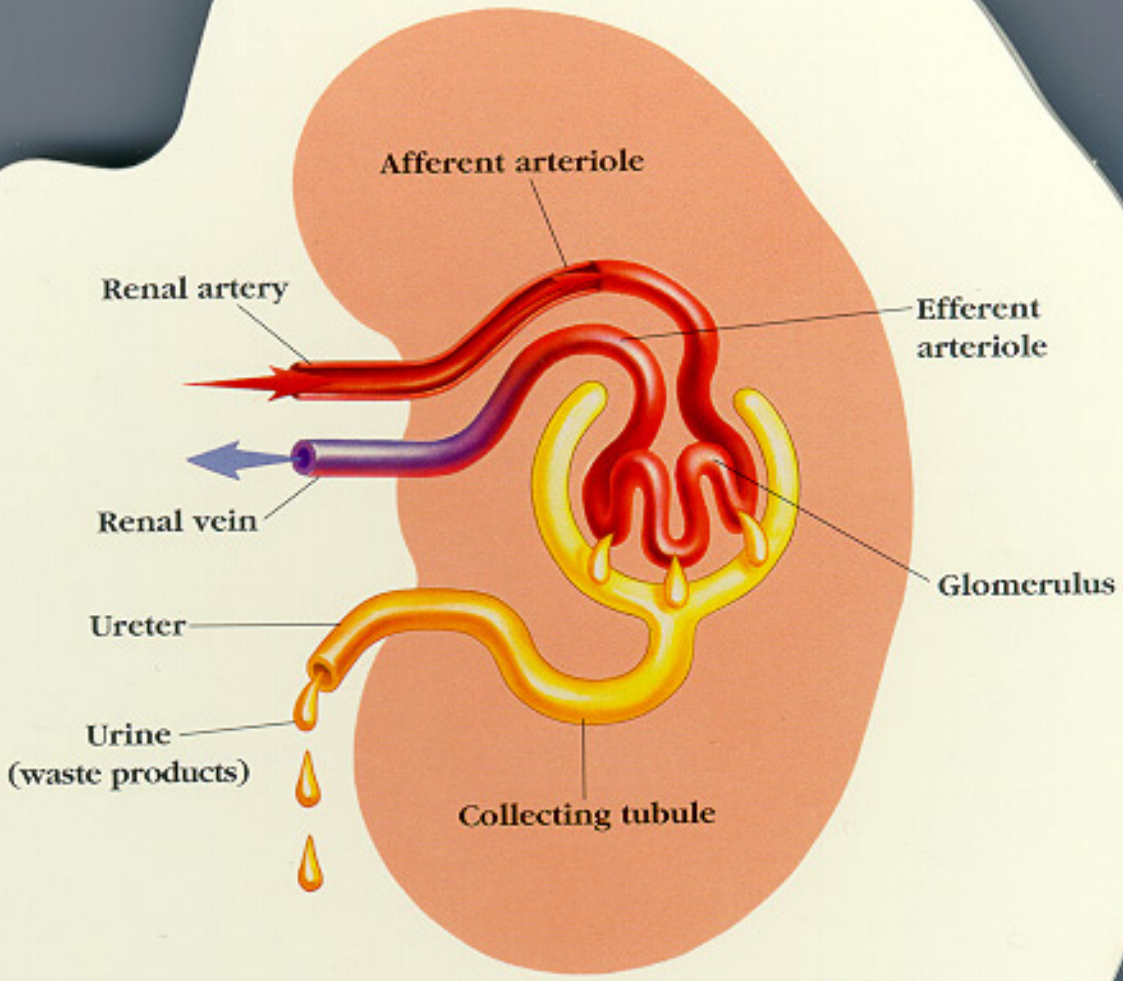
The Kidney Patient Board Booklet





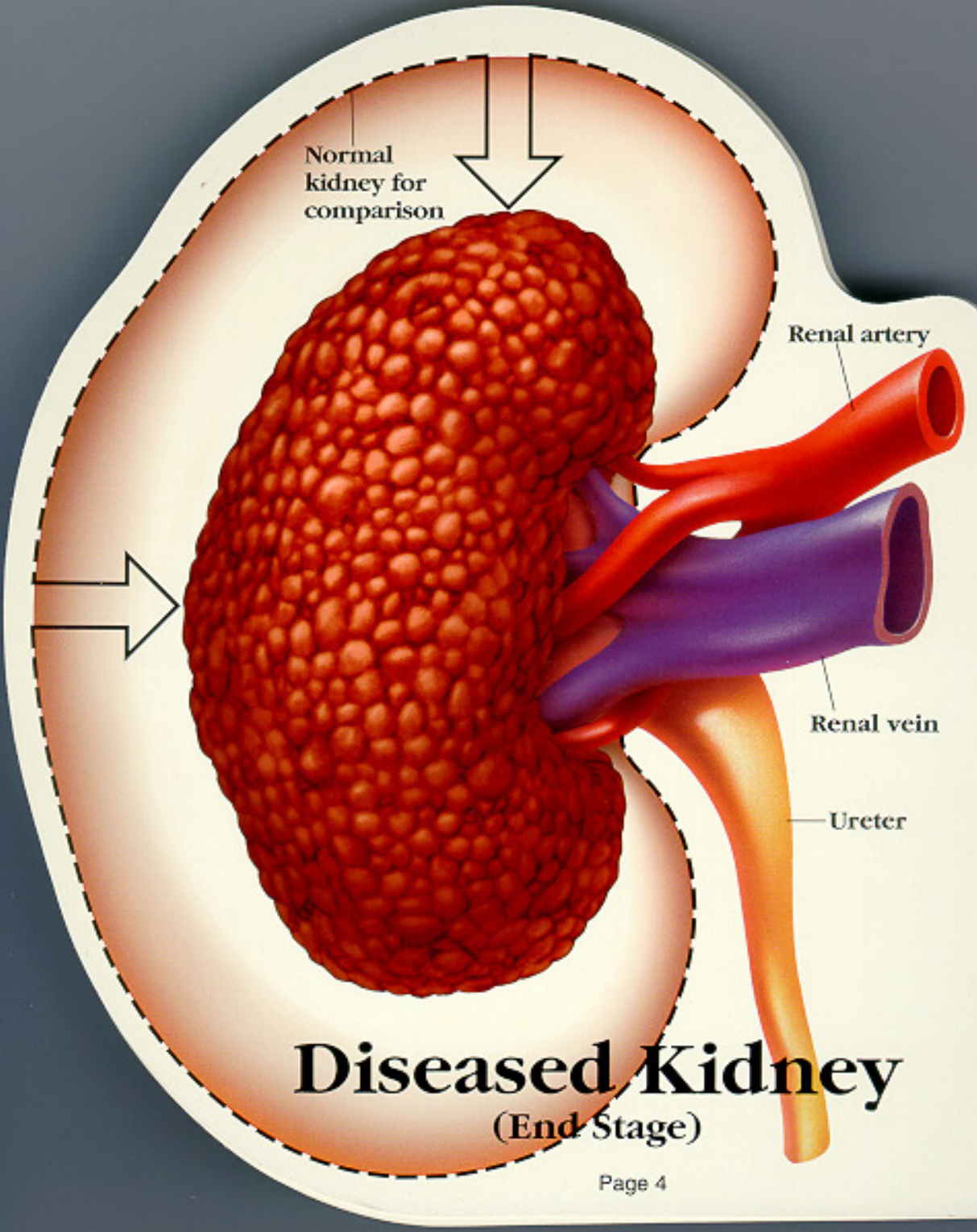
Normal Kidney

Normal Kidney Function

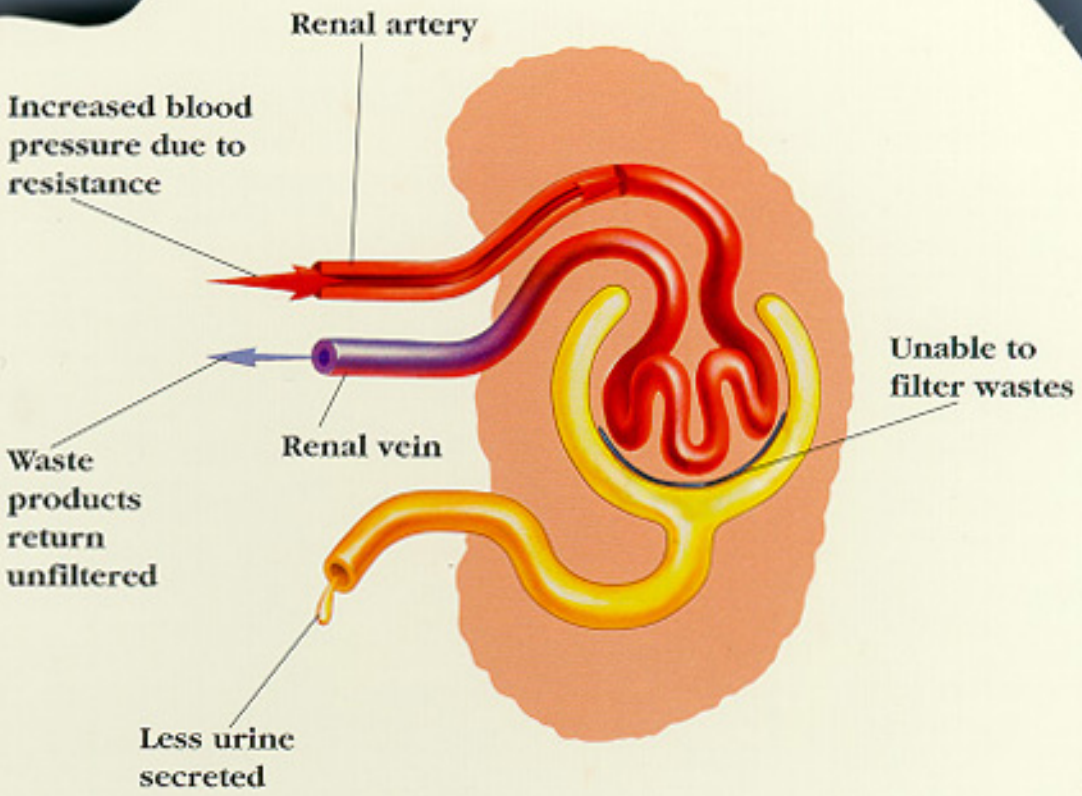


Kidneys with normal function can perform the following tasks with no difficulty:

- Filter waste products and excess sodium from the blood.
- Produce substances that regulate blood pressure.
- Control blood production.


Normal kidney for comparison
Renal artery
Renal vein
Ureter
Diseased Kidney
(End Stage)

Abnormal Kidney Function

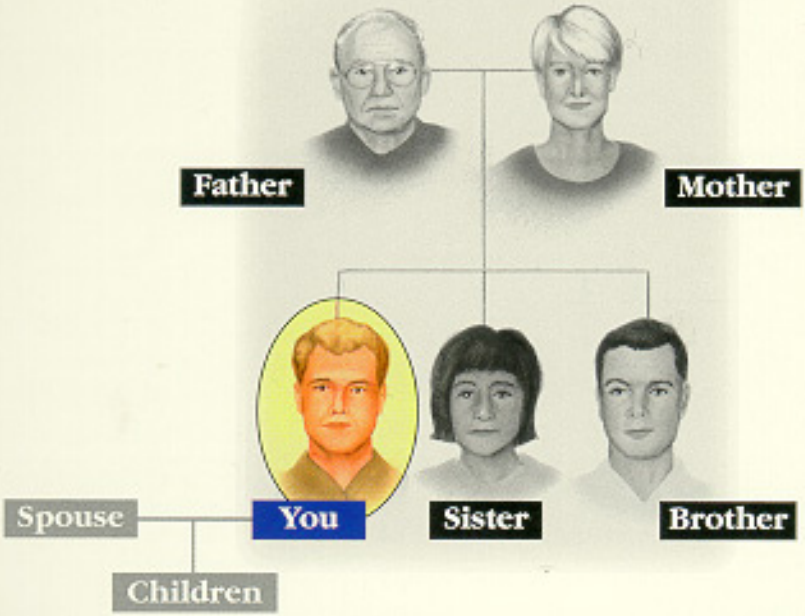


Diseased kidneys are unable to excrete toxic substances from the blood. This can lead to a build up of poisonous wastes, high blood pressure, fluid overload, and anemia.

Kidney Donor Sources

Living Donors

A living donor is a better choice for kidney transplantation, especially someone with a good match of tissue antigens.



Tissue Typing and Compatibility

- **Human Leukocyte Antigen (HLA)** - Compares tissue type of recipient and donor.
- **Crossmatch** - Recipient's blood is mixed with the cells of the donor to determine if the immune system will accept organ, or tissue from the donor.

Kidney Donor Sources

Non-Living Donors

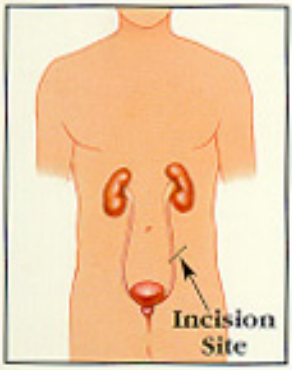
If there is no living donor available, then a cadaver (non-living) donor is used. Once the best match is found, the kidney is removed from the cadaver donor, cooled, and then quickly sent to the appropriate transplant center.

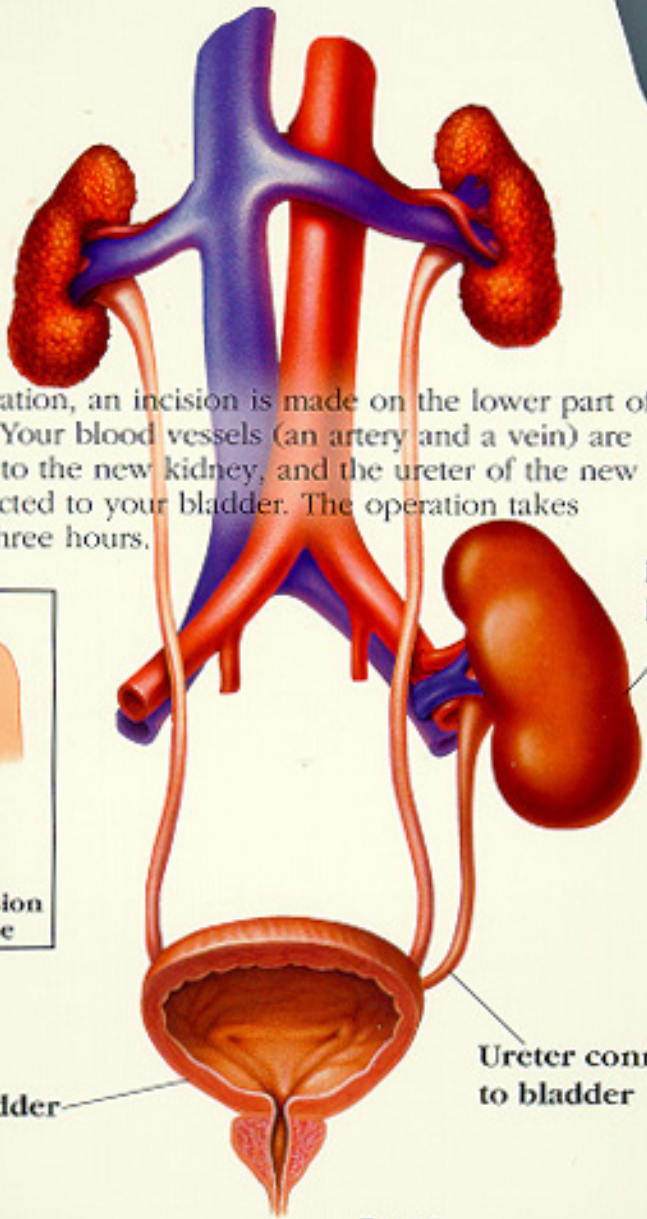
The recipient must get to the medical center immediately for transplantation.

Kidney Transplantation

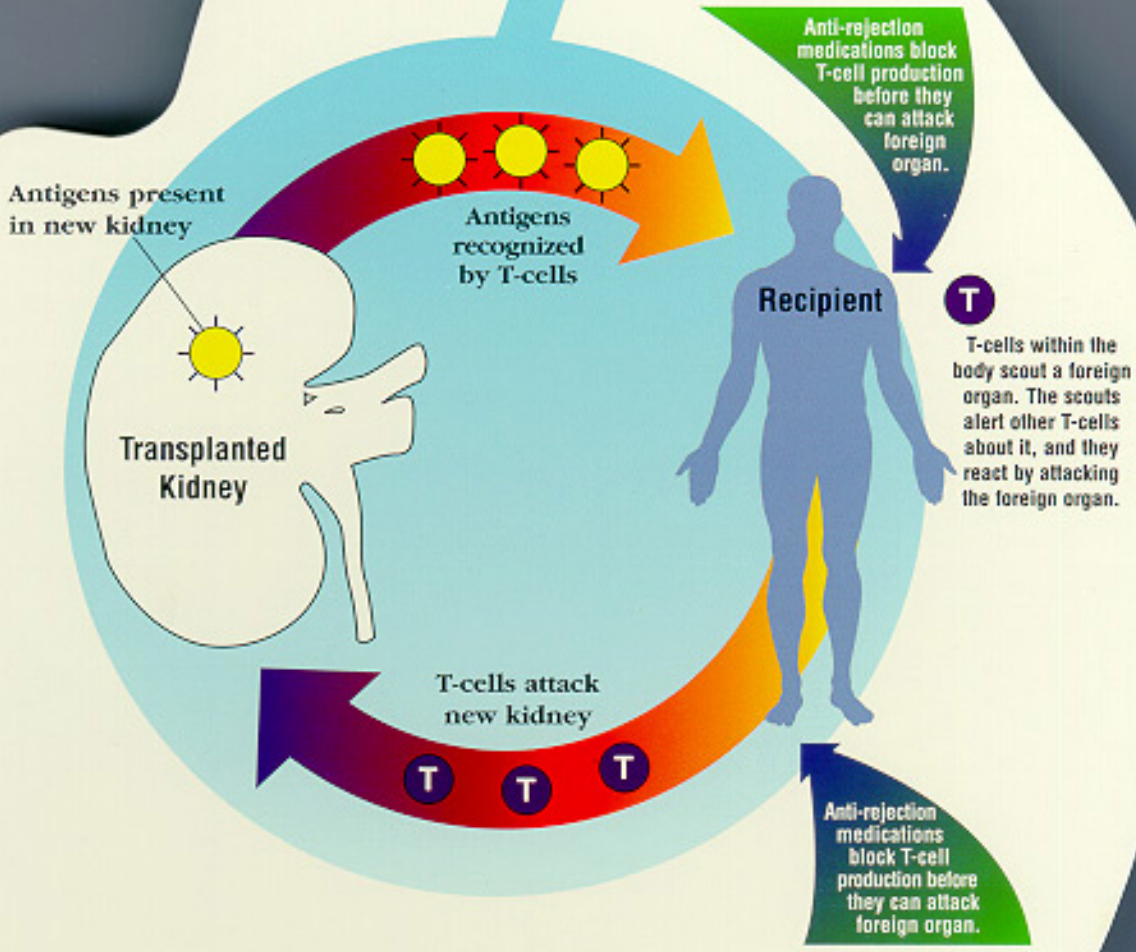
The Operation

During the operation, an incision is made on the lower part of your abdomen. Your blood vessels (an artery and a vein) are then connected to the new kidney, and the ureter of the new kidney is connected to your bladder. The operation takes approximately three hours.





Rejection



One or more episodes of rejection may occur shortly after the operation. Your immune system may recognize the transplanted tissue as "foreign" and try to combat it.

Anti-rejection medicines can significantly reduce the incidence of rejection episodes following transplantation.

Common Drugs Metabolized through Cytochrome P450 3A4

Alfentanil	Doxorubicin	Nifedipine
Alprazolam	Dronabinol	Nimodipine
Amitriptyline (minor)	Erythromycin	Nisoldipine
Amlodipine	Estrogens (oral contraceptives)	Ondansetron
Astemizole	Ethosuximide	Paclitaxel
Atorvastatin	Etoposide	Pravastatin
Busulfan	Felodipine	Prednisone
Cannabinoids	Fentanyl	Quinidine
Carbamazepine	Fexofenadine	Quinine
Cisapride	Ifosfamide	Rifampin
Clindamycin	Imipramine	Ritonavir
Clomipramine	Indinavir	Saquinavir
Clonazepam	Isradipine	Sertraline
Cocaine	Ketoconazole	Sirolimus*
Cyclobenzaprine	Lansoprazole (minor)	Tacrolimus
Cyclophosphamide	Lidocaine	Tamoxifen
Cyclosporine	Losartan	Temazepam
Dapsone	Lovastatin	Testosterone
Dexamethasone	Miconazole	Triazolam
Dextromethorphan	Midazolam	Verapamil
Diazepam (minor)	Navelbine	Vinblastine
Diltiazem	Nefazodone	Vincristine
Disopyramide	Nelfinavir	R-warfarin
Donepezil	Nicardipine	Zileuton

Common Inhibitors of Cytochrome P450 3A4

Amiodarone	Indinavir	Norfloxacin
Cannabinoids	Itraconazole	Quinine
Clarithromycin	Ketoconazole	Ritonavir
Erythromycin	Omeprazole (slight)	Saquinavir
Fluconazole	Metronidazole	Sertraline
Fluoxetine	Miconazole	Troleandromycin
Fluvoxamine	Nefazodone	Zafirlukast
Grapefruit juice	Nelfinavir	

Common Inducers of Cytochrome P450 3A4

Carbamazepine	Dexamethasone	Ethosuximide
Phenobarbital	Phenytoin	Primidone
Rifabutin	Rifampin	Troglitazone

From: Michalets EL. Update: clinically significant cytochrome P-450 drug interactions. Pharmacotherapy 1998;18(1):84-112.

*Please refer to sirolimus product information.

Rehabilitation

Within a few weeks, most patients are able to leave the hospital, and begin the most important stage of the transplant: rehabilitation.

1. Take medication as prescribed by your physician.

2. Eat healthy and follow special dietary guidelines.

3. Begin a light exercise program.

4. Visit your physician regularly for monitoring and blood tests.

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