

# IMMUNOSUPPRESSANTS AND KIDNEY TRANSPLANT

When you get a kidney transplant, your body recognizes the new kidney as foreign and may attack it. Immunosuppressants block your body's ability to do this. The goal is to protect your new kidney while managing potential side effects.

**Immunosuppressants, or anti-rejection medicines,** lower your body's ability to reject a transplanted organ. Missing a dose increases the risk of rejection, so take it as soon as you remember and contact your clinic. Don't double up on doses unless advised by your doctor. Before clinic visits, ask your doctor if you should delay taking the medicine until after lab work.

## THERE ARE 3 TYPES OF ANTI REJECTION MEDICINES:

- 1. Induction medicines:** strong anti-rejection medicine used at the time of transplant
- 2. Maintenance medicines:** medicines that are taken for as long as you have your transplanted kidney
- 3. Rejection treatments:** medicines used if your body starts to reject your kidney

## MOST MAINTENANCE MEDICINES ARE IN 1 OF 4 CATEGORIES:

- 1. Calcineurin inhibitors:** tacrolimus, cyclosporine, modified cyclosporine
- 2. Glucocorticoids:** prednisone, methylprednisolone
- 3. Antimetabolites:** mycophenolate mofetil (often abbreviated MMF), mycophenolic acid (often abbreviated MPA or EC-MPS), azathioprine
- 4. Other:** sirolimus; everolimus; belatacept

## COMMON ANTI-REJECTION MEDICINES

Generic Name(s)	Brand Name(s)	By mouth	By infusion	How often	Other things to note
Tacrolimus	Prograf, Astagraf XL, Envarsus XR	●		Usually twice per day	No grapefruit or grapefruit juice
Cyclosporine	Sandimmune	●		Twice per day	
Modified cyclosporine	Neoral, Gengraf	●		Twice per day	
Prednisone		●		Once with a meal	Take in the morning since it can affect sleep
Mycophenolate mofetil (MMF)	Cellcept, Myfenax	●		Twice per day	Risk of birth defects and miscarriage
Mycophenolic acid (MPA or EC-MPS)	Myfortic	●		Twice per day	
Azathioprine	Imuran	●		Once per day	
Sirolimus	Rapamune	●		Once per day	Usually used if other medicines are causing problems or side effects
Everolimus	Afinitor, Zortress	●		Twice per day	No grapefruit or grapefruit juice
Belatacept	Nulogix		†	Every 2 or 4 weeks	(except IV belatacept)

† Available as an IV infusion only. Given every 2 weeks for the first few doses, then every 4 weeks.

## MEDICINES AND FOOD INTERACTIONS

Certain medicines, foods, and supplements can affect **how much medicine is in your blood**. Common examples include:

**Grapefruit/  
grapefruit juice**

**St. John's Wort**

**erythromycin**

**fluconazole**

**some anti-TB drugs**  
(rifampin, rifabutin,  
rifapentine)

**some anti-seizure drugs**  
(carbamazepine, phenytoin,  
phenobarbital)

**some heart medicines**  
(amiodarone, diltiazem,  
verapamil)



**This is not a full list.** Always review your medications and supplements with your transplant team to spot possible interactions and adjust accordingly.

## CHANGING YOUR ANTI-REJECTION MEDICINES

After a kidney transplant, taking immunosuppressants becomes part of your daily routine and must be taken as prescribed. Your doctor may change your medications for several reasons:

### Dosage

Early on, higher doses are needed to prevent rejection, but these are often lowered over time to balance effectiveness and side effects.

### Effectiveness

Medicines may work differently for everyone. If your medication isn't effective, your doctor may switch it.

### Side effects

Some side effects are manageable, but if they're severe, your doctor may adjust your dose or medication type.

### Health risks

Certain medicines can increase risks for conditions like high blood pressure, diabetes, or infections. If needed, your doctor may change your medication due to these risks.

### Blood tests

Regular blood draws monitor medicine levels. Too much can cause side effects; too little may not protect your kidney. Over time, you'll need fewer blood tests.

### Costs

Anti-rejection medicines can be expensive. Don't adjust doses to save money; this can harm your kidney. Contact your transplant center or Medicare counselors if you need help with costs.

### Remember

your medicines are crucial for your kidney's health. Use tools like pillboxes or alarms to stay on schedule and avoid missed doses.



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