

## Cyclosporine (Sandimmune) Side Effects

Cyclosporine is an immunosuppressant medication used to prevent organ rejection in transplant patients. It is also indicated in the treatment of psoriasis and rheumatoid arthritis. Keep in mind, patients taking cyclosporine should not drink grapefruit juice, as it prevents the drug from being metabolized and can lead to toxicity. Side effects of cyclosporine use include nephrotoxicity, hepatotoxicity, infection, hypertension, tremor, hirsutism, gynecomastia, gingival hyperplasia, and hyperkalemia. Plasma levels should be monitored periodically to ensure that levels do not become toxic or subtherapeutic.



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### Side Effects

#### Nephrotoxicity

[Kidney with Toxic-green-glow](#)

Lab values indicative of kidney function, such as BUN and creatinine, should be monitored closely in patients taking cyclosporine, as this medication can cause severe kidney damage characterized by decreased renal blood flow and decreased glomerular filtration.

#### Hepatotoxicity

[Liver with Toxic-green-glow](#)

Because cyclosporine is metabolized in the liver, high doses may cause liver damage. Bilirubin, AST, and ALT levels should be monitored periodically to evaluate liver function. Hepatotoxicity can usually be reversed by decreasing the dose of cyclosporine.

#### Infection

[Infectious-bacteria](#)

Suppression of the immune system increases a patient's risk of developing an infection. Early signs of infection, such as a fever, should be reported to a healthcare professional immediately. Cyclosporine does not cause bone marrow suppression; however, leukopenia may occur in some patients.

#### Hypertension

[Hiker-BP](#)

Increased blood pressure or hypertension may occur in up to 50% of patients taking cyclosporine. This condition can be treated with antihypertensive medication.

#### Hirsutism

[Bearded-lady](#)

Hirsutism or excessive hair growth can occur when taking this medication. Abnormal growth of breast tissue, also called gynecomastia, may also develop in males as a result of cyclosporine therapy, although it is less common.

#### Tremor

[Trimmer](#)

Tremor is a common side effect in patients taking cyclosporine.

### **Hyperkalemia**

#### [Hiker-banana](#)

Cyclosporine can cause retention of potassium, which can lead to hyperkalemia. For this reason, patients taking this medication should avoid foods high in potassium, such as bananas, dark leafy greens (spinach), and dried apricots.

### **Hypomagnesemia**

#### [Hippo-magnesium-magazine](#)

Cyclosporine, especially when given chronically, can lead to nephrotoxicity, resulting in magnesium wasting and hypomagnesemia.

### **Gingival Hyperplasia**

#### [Gums and Teeth Wind-up Toy](#)

Overgrowth of the gingiva or gums is a side effect associated with cyclosporine use.