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prednisone



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What is prednisone, and how does it work?



Prednisone is an oral, synthetic (man-made) corticosteroid (steroid) used for suppressing the immune system and inflammation. It has effects similar to other corticosteroids such as:

- triamcinolone (Kenacort)
- methylprednisolone (Medrol)
- prednisolone (Prelone)
- dexamethasone (Decadron)


These synthetic corticosteroids mimic the action of cortisol (hydrocortisone), the naturally-occurring corticosteroid produced in the body by the adrenal glands. Corticosteroids have many effects on the body, but they most often are used for their potent anti-inflammatory effects, particularly in those diseases and conditions in which the immune system plays an important role, for example, arthritis, colitis, asthma, bronchitis, skin problems, and allergies. Prednisone is inactive in the body and, in order to be effective, first must be converted to prednisolone by enzymes in the liver. Therefore, prednisone may not work as effectively in people with liver disease whose ability to convert prednisone to prednisolone is impaired. The FDA approved prednisone in 1955.

What diseases and conditions does prednisone treat (uses)?

Prednisone is used in the management of inflammatory conditions or diseases in which the immune system plays an important role. Since this drug is used for the treatment and management of so many diseases and conditions, only the most common or FDA approved uses are listed.

- Several types of arthritis
- Ulcerative colitis
- Crohn's disease
- Systemic lupus
- Allergic reactions
- Asthma 
- Severe psoriasis 

It also is used the treatment of:

- Leukemias
- Lymphomas
- Idiopathic thrombocytopenic purpura
- Autoimmune hemolytic anemia
- Bronchitis 

Corticosteroids, including prednisone, are commonly used to suppress the immune system and prevent the body from rejecting transplanted organs.

Prednisone is used as replacement therapy in patients whose adrenal glands are unable to produce sufficient amounts of cortisol.

What is the dosage for prednisone, and how should it be taken?

The initial dosage of prednisone varies depending on the condition being treated and the age of the patient.

- It's recommended that you take this medication with food.
- The starting dose may be from 5 mg to 60 mg per day, and often is adjusted based on the response of the disease or condition being treated.
- Corticosteroids typically do not produce immediate effects and must be used for several days before maximal effects are seen. It may take much longer before conditions respond to treatment.
- When prednisone is discontinued after a period of prolonged therapy, the dose of prednisone must be tapered (lowered gradually) to allow the adrenal glands time to recover.

How should prednisone be tapered, and what are the withdrawal symptoms and signs?

Patients should be slowly weaned off prednisone. Abrupt withdrawal of prednisone after prolonged use causes side effects because the adrenal glands are unable to produce enough cortisol to compensate for the withdrawal, and symptoms of corticosteroid insufficiency (adrenal crisis) may occur. These symptoms include:

- Nausea
- Vomiting
- Weakness
- Fatigue
- Decreased appetite
- Weight loss

- Diarrhea
- Abdominal pain
- Shock

Therefore, weaning off prednisone should occur gradually so that the adrenal glands have time to recover and resume production of cortisol. Until the glands fully recover, it may be necessary to treat patients who have recently discontinued corticosteroids with a short course of corticosteroids during times of stress (infection, surgery, etc.), times when corticosteroids are particularly important to the body.

Is this drug available in generic form?

Yes, prednisone is available in generic form.

Do I need a prescription for this drug?

Yes, you need a prescription from your doctor or other medical professional to obtain this medication.

Prednisone side effects and adverse events

Side effects of prednisone and other corticosteroids range from mild annoyances to serious, irreversible organ damage, and they occur more frequently with higher doses and more prolonged treatment.



Common side effects include:

- Retention of sodium (salt) and fluid
- Weight gain
- High blood pressure
- Loss of potassium

- Headache
- Muscle weakness
- Nausea
- Vomiting
- Acne
- Thinning skin
- Restlessness
- Problems sleeping

Serious side effects include:

- Hiccups
- Puffiness of the face (moon face)
- Growth of facial hair
- Thinning and easy bruising of the skin
- Impaired wound healing
- Glaucoma
- Cataracts
- Ulcers in the stomach and duodenum
- Worsening of diabetes
- Irregular menses
- Rounding of the upper back ("buffalo hump")
- Obesity
- Retardation of growth in children


- Convulsions
- Anaphylaxis (severe allergic reactions like hives, itching, skin rash, swollen lips/tongue/face)
- Vision changes
- Congestive heart failure
- Heart attack
- Pulmonary edema
- Syncope
- Tachycardia
- Thrombophlebitis
- Vasculitis
- Allergic dermatitis
- Low blood pressure
- Amenorrhea (lack of menstruation)
- Newly onset diabetes 
- Hyperglycemia
- Hypothyroidism
- Pancreatitis
- Anemia
- Amnesia 

This drug also causes psychiatric disturbances, which include:




- Depression

- Euphoria
- Insomnia
- Mood swings
- Personality changes
- Psychotic behavior

Other possible serious side effects of this drug include:

Prednisone and diabetes *IQ* : Prednisone is associated with new onset or manifestations of latent diabetes, and worsening of diabetes. Diabetics may require higher doses of diabetes medications while taking prednisone,
Allergic reaction *IQ* : Some people may develop a severe allergic reaction (anaphylaxis) to prednisone that includes swelling of the airways (angioedema) that may result in shortness of breath or airway  blockage.

Immune suppression: Prednisone suppresses the immune system and, therefore, increases the frequency or severity of infections and decreases the effectiveness of vaccines and antibiotics.

Osteoporosis: Prednisone may cause osteoporosis  that results in fractures of bones. Patients taking long-term prednisone often receive supplements of calcium and vitamin D to counteract the effects on bones. Calcium and vitamin D  probably are not enough, however, and treatment with bisphosphonates such as alendronate (Fosamax) and risedronate (Actonel) may be necessary. Calcitonin (Miacalcin) also is effective. The development of osteoporosis *IQ* and the need for treatment can be monitored using bone density  scans.

Adrenal insufficiency and weaning off prednisone: Prolonged use of prednisone and other corticosteroids causes the adrenal glands to atrophy (shrink) and stop producing the body's natural corticosteroid, cortisol.

Necrosis of hips and joints: A serious complication of long-term use of corticosteroids is aseptic necrosis of the hip joints. Aseptic necrosis is a condition in which there is death and degeneration of the hip bone. It is a painful condition that ultimately can lead to the need for surgical replacement of the hip. Aseptic necrosis also has been reported in the knee joints. The estimated incidence of aseptic necrosis among long-term users of corticosteroids is 3%-4%. Patients taking corticosteroids who develop pain in the hips or knees should report the pain **IQ** to their doctors promptly.

Which drugs or supplements interact with prednisone?

Prednisone interacts with many drugs, examples include:

- Prednisone may interact with estrogens and phenytoin (Dilantin). Estrogens may reduce the action of enzymes in the liver that break down (eliminate) the active form of prednisone, prednisolone. As a result, the levels of prednisolone in the body may increase and lead to more frequent side effects.
- Phenytoin increases the activity of enzymes in the liver that break down (eliminate) prednisone and thereby may reduce the effectiveness of prednisone. Thus, if phenytoin is being taken, an increased dose of prednisone may be required.
- The risk of hypokalemia (high potassium levels in the blood) increases when corticosteroids are combined with drugs that reduce potassium levels (for example, amphotericin B, diuretics), leading to serious side effects such as heart enlargement, heart arrhythmias and congestive heart failure.
- Corticosteroids may increase or decrease the response warfarin (Coumadin, Jantoven). Therefore, warfarin therapy should be monitored closely.

- The response to diabetes drugs may be reduced because prednisone increases blood glucose.
- Prednisone may increase the risk of tendon rupture in patients treated with fluoroquinolone type antibiotics. Examples of fluoroquinolones include ciprofloxacin (Cipro) and levofloxacin (Levaquin).
- The elderly are especially at risk and tendon rupture may occur during or after treatment with fluoroquinolones.
- Combining aspirin, ibuprofen (Motrin) or other nonsteroidal anti-inflammatory agents (NSAIDs) with corticosteroids increases the risk of stomach related side effects like ulcers.
- Barbiturates, carbamazepine, rifampin and other drugs that increase the activity of liver enzymes that breakdown prednisone may reduce blood levels of prednisone. Conversely, ketoconazole, itraconazole (Sporanox), ritonavir (Norvir), indinavir (Crixivan), macrolide antibiotics such as erythromycin, and other drugs that reduce the activity of liver enzymes that breakdown prednisone may increase blood levels of prednisone.

Is it safe to take prednisone over a long period of time?

No, prolonged therapy with prednisone causes the adrenal glands to atrophy and stop producing cortisol.

Is this drug safe to take if I'm pregnant or breastfeeding?

- Corticosteroids cross the placenta into the fetus. Compared to other corticosteroids, however, prednisone is less likely to cross the placenta. Chronic use of corticosteroids during the first trimester 📷 of pregnancy may cause cleft palate.

- Corticosteroids are secreted in breast milk and can cause side effects in the nursing infant. Prednisone is less likely than other corticosteroids to be secreted in breast milk, but it may still pose a risk to the infant.

What brand names are available for prednisone?

Prednisone Intensol, Rayos

What else should I know about this medicine?

Prednisone is available as:

- Tablets of 1, 2.5, 10, 20, and 50 mg.
- Extended Release Tablets of 1, 2, and 5 mg.
- Oral solution or syrup of 5mg/5ml

Keep this drug stored at room temperature 20 C -25 C (68 F -77 F), and keep away from moisture.



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Summary

Prednisone is a drug that belongs to the corticosteroid drug class, and is an anti-inflammatory and immune system suppressant. It's used to treat a variety of diseases and conditions, for example: inflammatory bowel disease (Crohn's disease and ulcerative colitis), lupus, asthma, cancers, and several types of arthritis.

Common side effects are weight gain, headache, fluid retention, and muscle weakness. Other effects and adverse events include glaucoma, cataracts, obesity, facial hair growth, moon face, and growth retardation in children. This medicine also causes psychiatric problems, for example: depression, insomnia, mood swings, personality changes, and psychotic behavior. Serious side effects include reactions to diabetes drugs, infections, and necrosis of the hips and joints.

Corticosteroids like prednisone, have many drug interactions; examples include: estrogens, phenytoin (Dilantin), diuretics, warfarin (Coumadin, Jantoven), and diabetes drugs. Prednisone is available as tablets of 1, 2.5, 10, 20, and 50 mg; extended release tablets of 1, 2, and 5mg; and oral solution of 5mg/5ml. It's use during the first trimester  of pregnancy may cause cleft palate. This medicine is secreted in breast milk and can cause side effects in infants who are nursing. You should not stop taking prednisone abruptly because it can cause withdrawal symptoms and adrenal failure. Talk with your doctor, pharmacist, or other medical professional if you have questions about beta-blockers. Talk with your doctor, pharmacist, or other medical professional if you have questions about prednisone.

If you notice other effects not listed above, contact your doctor or pharmacist. In the US -Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088. In Canada - Call your doctor for medical advice about side effects. You may report side effects to Health Canada at 1-866-234-2345.

Multimedia: Slideshows, Images & Quizzes

Atopic Eczema (Atopic Dermatitis) Quiz: Test Your Skin Disorders IQ

Does dry, itchy, flaky, scaly, red, inflamed skin sound familiar to you? Take the Atopic Eczema (Atopic Dermatitis) Quiz to learn...

Acne (Pimples) Quiz: Test Your Medical IQ

Acne is the most common skin disorder in the world. If you suffer from acne, you are not alone and many treatment options are...

Celiac Disease Quiz: What Is Celiac Disease?

Could celiac disease be the cause of your tummy troubles? Take the Celiac Disease Quiz to learn what certain foods may be doing...

Ulcerative Colitis Quiz: Diet, Symptoms & Treatment

What is ulcerative colitis and what risks are associated with suffering over the long term? Take this Ulcerative Colitis Quiz to...

Asthma Quiz: Test Your Medical IQ

Asthma is a chronic disease of the airways of the lungs, which can be managed with proper treatment. Triggered by two main...

COPD (Chronic Obstructive Pulmonary Disease) Quiz

COPD is a combination of three conditions? Take this quiz to



Related Disease Conditions

Acne (Pimples)

Acne is a localized skin inflammation as a result of overactivity of oil glands at the base of hair follicles. This...

Juvenile Idiopathic Arthritis (Juvenile Rheumatoid Arthritis)

Juvenile idiopathic arthritis (juvenile rheumatoid arthritis or JRA) annually affects one child in every thousand. There are six...

Asthma

Asthma is a condition in which hyperreactive airways constrict and result in symptoms like wheezing, coughing, and shortness of...

Aseptic Necrosis

Aseptic necrosis (avascular necrosis or osteonecrosis) develops when blood supply diminishes to an area of bone and causes bone...

Crohn's Disease (Symptoms, Causes, Diet, Treatment, Life Expectancy)

Crohn's disease is a chronic inflammatory disease, primarily involving the small and large intestine, but which can affect...

Cushing's Syndrome

Cushing's syndrome, sometimes referred to as hypercortisolism, is a hormonal disorder caused by prolonged



Treatment & Diagnosis

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MEDICATIONS

FDA DRUG LABELS ON RXLIST.COM

dexamethasone

hydrocortisone oral, A-Hydrocort, Solu-CORTEE, Cortef

prednisolone (Flo-Pred, PEDIAPRED, Orapred, Orapred ODT)

methylprednisolone, Medrol, Depo-Medrol, Solu-Medrol

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See more info: [prednisone on RxList](#)

Medically Reviewed on 7/28/2016

References 