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Bactrim DS

Bactrim is a prescription-only combination antibiotic containing trimethoprim and sulfamethoxazole. It is used to treat specific bacterial infections such as urinary tract infections, skin infections, and certain types of pneumonia, and requires careful use due to the risk of serious allergic and skin reactions.

- **ActiveIngredient:** Sulfamethoxazole and Trimethoprim
- **DosageForm:** Oral Tablet & Oral Suspension
- **Dosage:** Regular Strength (SS): 400 mg Sulfamethoxazole / 80 mg Trimethoprim. Double Strength (DS): 800 mg Sulfamethoxazole / 160 mg Trimethoprim.
- **Indications:** Treatment of urinary tract infections (UTIs), acute otitis media, shigellosis, *Pneumocystis jirovecii* pneumonia (PCP), and traveler's diarrhea.
- **Manufacturer:** Roche (historically) / Various Generics
- **Storage:** Store at 20°C to 25°C (68°F to 77°F). Protect from light.
- **Market Price:**
- **Drug Status:** Prescription Only

Description

What is Bactrim? Bactrim is the brand name for a combination antibiotic containing two active ingredients: sulfamethoxazole and trimethoprim. This combination, often abbreviated as TMP-SMX or co-trimoxazole, works by blocking two consecutive steps in the production of essential proteins that bacteria need to survive and multiply. It is classified as a sulfonamide (“sulfa”) antibiotic. This is a critical distinction for patients with drug allergies. Bactrim is not a penicillin and is often an alternative for individuals with penicillin allergies. However, it is absolutely contraindicated in patients with a known hypersensitivity to sulfonamides. Bactrim is available in two main tablet strengths: the regular strength (400 mg sulfamethoxazole/80 mg trimethoprim) and the Bactrim DS (Double Strength) tablet, which contains 800 mg sulfamethoxazole/160 mg trimethoprim. The DS formulation is commonly prescribed for adults as it allows for less frequent dosing. For a broad overview of antibiotic classes, you can explore our antibiotics category.

General Instructions

How to Take Bactrim Correct administration is essential for Bactrim's effectiveness and to minimize the risk of side effects, particularly kidney-related issues. **Dosage and Timing** The typical Bactrim dosage for adults for many infections is one Bactrim DS tablet (800/160 mg) every 12 hours. For less severe infections or in certain populations, the regular strength tablet may be used. The specific dose and duration depend entirely on the type and severity of the infection, as determined by your doctor. Take each dose with a full glass of water (8 ounces/240 mL). Maintaining adequate fluid intake throughout the day is crucial to prevent the formation of crystals in the urine, which can damage the kidneys. **Course Completion** It is vital to complete the entire prescribed course of antibiotics, even if you start to feel better after a few days. Stopping treatment early can lead to a resurgence of the infection and contribute to antibiotic resistance. Never save leftover medication for future use. **Missed Dose** If you miss a dose, take it as soon as you remember. If it is almost time for your next dose, skip the missed dose and continue with your regular schedule. Do not take a double dose to make up for a missed one.

Side Effects

Side Effects of Bactrim Bactrim can cause a range of side effects, from common and mild to rare but severe. It is important to understand this spectrum and know when to seek help. Common and Serious Side Effects of Bactrim (TMP-SMX) Frequency Side Effects Action to Take Common Nausea, vomiting, loss of appetite Mild skin rash or itching Photosensitivity: Increased skin sensitivity to sunlight, leading to easy sunburn Taking with food may help with nausea. For photosensitivity, avoid prolonged sun exposure and use protective clothing and sunscreen. Report persistent symptoms to your doctor. Serious (Seek Immediate Help) Severe skin reaction: Rash with blistering, peeling, or sores in the mouth (signs of Stevens-Johnson Syndrome). Signs of an allergic reaction: hives, difficulty breathing, swelling of the face/lips/tongue/throat. Signs of liver problems: persistent nausea/vomiting, stomach pain, yellowing of skin/eyes, dark urine. Signs of blood cell problems: new fever, sore throat, mouth ulcers, unusual bruising/bleeding, severe fatigue. Signs of kidney problems: little or no urination, blood in urine, painful urination. Stop taking Bactrim and contact your doctor or seek emergency care immediately. Severe skin and allergic reactions are medical emergencies.

Uses

What is Bactrim Used For? Bactrim is prescribed for specific bacterial infections caused by susceptible organisms. It is ineffective against viral infections like the common cold or flu. Primary Medical Uses Urinary Tract Infections (UTIs): A first-line treatment for uncomplicated urinary tract infections and cystitis. Skin and Soft Tissue Infections: Used for cellulitis, wound infections, and abscesses, including those caused by methicillin-resistant *Staphylococcus aureus* (MRSA). For minor skin issues, see information on minor skin infections. Respiratory Infections: Treats acute exacerbations of chronic bronchitis. It is also a primary treatment and preventative for *Pneumocystis jirovecii* pneumonia (PCP), a serious lung infection in immunocompromised individuals (e.g., those with HIV/AIDS). Traveler's Diarrhea: Used in certain cases caused by susceptible *E. coli*. Ear Infections: Can be used for acute otitis media in children when first-line therapy is inappropriate. Comparison with Other Antibiotics For some infections, such as complicated UTIs, doctors may choose between Bactrim and other antibiotic classes, like fluoroquinolones (e.g., Cipro). The choice depends on local resistance patterns, patient allergy history, and other factors.

Safety advice

Interactions Alcohol:

- Use with caution
- Alcohol does not directly reduce Bactrim's effectiveness. However, both alcohol and Bactrim can cause nausea and stomach upset. Combining them may worsen these side effects. Alcohol can also strain the liver, and Bactrim carries a risk of liver toxicity. It is generally advisable to avoid or strictly limit alcohol during treatment.

Interactions Other Medications:

- Consult your doctor
- Bactrim interacts with many drugs. It can increase the effects of blood thinners (warfarin), leading to bleeding risk. It can also increase levels of certain seizure medications (phenytoin), diabetes drugs (sulfonylureas), and methotrexate, raising toxicity risks. Provide your doctor with a complete list of all your medications.

Special Groups Pregnancy:

- Unsafe
- Bactrim is generally contraindicated during pregnancy, especially in the first trimester and near term. It interferes with folate metabolism, which is critical for fetal development. Near term, it may increase

the risk of kernicterus (a type of brain damage) in the newborn. For general guidance, see [medication safety in pregnancy](#).

Special Groups Breastfeeding:

- Use with caution
- Bactrim passes into breast milk and may pose risks to the nursing infant, including diarrhea, rash, and interference with folate metabolism. Its use during breastfeeding should be avoided unless clearly needed, and the infant should be monitored for side effects.

Special Groups Elderly:

- Use with caution
- Elderly patients are more susceptible to Bactrim's side effects, particularly skin reactions, changes in blood counts, and increased potassium levels. Kidney function often declines with age, so dosage adjustments based on renal function are often necessary.

Special Groups Children:

- Safe if prescribed
- Bactrim is used in children over 2 months old for specific infections like middle ear infections and severe PCP prevention. Dosage is based on the child's weight. It should not be used in infants under 2 months due to the risk of kernicterus.

Effects on Activities Driving:

- Safe if prescribed
- Bactrim does not typically cause drowsiness or impair driving ability. However, if you experience dizziness or fatigue as a side effect, you should refrain from driving until these symptoms resolve.

Effects on Activities Operating Machinery:

- Safe if prescribed
- Similar to driving, operating machinery is generally safe. Use caution if you experience any side effects that could impair your coordination or alertness.

Concerns

Important Safety Concerns and Considerations

Sulfa Allergy (Hypersensitivity) This is the most critical concern. Bactrim contains a sulfonamide and is absolutely contraindicated in patients with a known allergy to "sulfa" drugs. Reactions can range from mild rash to life-threatening conditions like Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis. Inform all healthcare providers of this allergy.

Severe Skin Reactions Bactrim is associated with a higher risk of serious dermatological reactions compared to many other antibiotics. Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are severe, potentially fatal conditions characterized by widespread blistering and peeling of the skin and mucous membranes. Any new rash, blister, or mouth sore while taking Bactrim warrants immediate discontinuation and medical evaluation.

Photosensitivity Bactrim can make your skin much more sensitive to sunlight (photosensitivity), leading to severe sunburn, rash, or blistering with minimal exposure. It is crucial to use sunscreen with a high SPF, wear protective clothing, and avoid tanning beds and prolonged sun exposure during and for several days after treatment. For effective sun protection strategies, see our guide on sunscreen use.

Crystalluria and Kidney Effects The sulfamethoxazole component can form crystals in the urine, especially in acidic urine or with low fluid intake. This can lead to kidney pain, blockage, or damage (kidney disease). Drinking plenty of water (at least 8 full glasses a day) is essential to dilute the urine and prevent crystal formation.

Hematologic Effects Bactrim can affect bone marrow, leading to a decrease in white blood cells, red blood cells, and platelets. This can increase the risk of infections, anemia, and bleeding. Regular blood tests may be recommended during prolonged therapy (more than 2 weeks).

Hyperkalemia (High Potassium) Bactrim can impair potassium excretion by the kidneys, leading to elevated potassium levels in the blood (hyperkalemia). This risk is higher in the elderly, patients with kidney impairment, and those taking

other medications that raise potassium (e.g., ACE inhibitors, potassium-sparing diuretics). Symptoms may include muscle weakness and irregular heartbeat.

Warnings

Critical Warnings for Bactrim Use

Absolute Contraindications Known hypersensitivity to trimethoprim, sulfamethoxazole, or any sulfonamide drug. Documented history of drug-induced immune thrombocytopenia (low platelets) with trimethoprim or sulfonamides. Pregnancy at term and during the nursing period due to the risk of kernicterus in the infant. Marked hepatic damage (liver disease) or severe renal insufficiency (kidney disease) when creatinine clearance is below 15 mL/min. Serious and Fatal Reactions Despite the focus on skin reactions, Bactrim can also cause sudden, severe liver injury, blood disorders (agranulocytosis, aplastic anemia), and severe allergic reactions (anaphylaxis, angioedema). These reactions, though rare, can be fatal. Ongoing clinical and laboratory monitoring is important, especially with long-term use.

Clostridioides difficile-Associated Diarrhea (CDAD) Antibiotic use, including Bactrim, can disrupt the normal gut flora, allowing overgrowth of *C. difficile*. This can cause mild diarrhea to life-threatening colitis. CDAD can occur even weeks after finishing antibiotics. Report severe, persistent, or bloody diarrhea to your doctor. Use in Patients with G6PD Deficiency Bactrim should be used with caution in individuals with glucose-6-phosphate dehydrogenase (G6PD) deficiency, as it may cause hemolytic anemia (destruction of red blood cells).

Dosage

Bactrim Dosage Information Dosage is determined by the type of infection, its severity, and the patient's renal function. The following are general guidelines; always follow your doctor's specific prescription.

General Bactrim (TMP-SMX) Dosage Guidelines

Infection Type	Standard Adult Dosage	Key Notes
Urinary Tract Infection (UTI) / Shigellosis	1 DS tablet (800/160 mg) every 12 hours for 3-14 days.	The standard Bactrim for UTI regimen is often 3 days for uncomplicated cystitis.
Acute Exacerbation of Chronic Bronchitis	1 DS tablet every 12 hours for 14 days.	Traveler's Diarrhea
Skin and Soft Tissue Infection	1-2 DS tablets every 12 hours for 7-14 days.	Dose depends on severity; MRSA infections often require the higher end of dosing.
Pneumocystis jirovecii Pneumonia (PCP)	Treatment 15-20 mg/kg (based on TMP component) per day in 3-4 divided doses for 14-21 days.	This is a high-dose regimen requiring careful medical supervision.
Pediatric Dosage	(?2 months old) Based on weight: 6-12 mg TMP/kg/day in two divided doses.	Maximum dose should not exceed adult dosage. Use pediatric suspension for accurate dosing.
Important Administration Notes	Available Strengths: Regular Strength Tablet: 400 mg sulfamethoxazole / 80 mg trimethoprim. Double Strength (DS) Tablet: 800 mg sulfamethoxazole / 160 mg trimethoprim.	Contains twice the active ingredients as the regular tablet.
Oral Suspension	200 mg sulfamethoxazole / 40 mg trimethoprim per 5 mL.	Renal Impairment: Dosage must be reduced in patients with creatinine clearance below 30 mL/min. Not recommended if clearance is below 15 mL/min.
Fluid Intake	Maintain high fluid intake to prevent crystalluria and kidney stone formation.	

Interactions

Drug Interactions with Bactrim Bactrim interacts with a significant number of medications. Inform your doctor about all prescription, over-the-counter, and herbal products you use.

Common and Significant Drug Interactions with Bactrim (TMP-SMX)

Interacting Substance Class	Effect	Recommendation
Oral Anticoagulants (Warfarin)	Warfarin (Coumadin) Bactrim potentiates the anticoagulant effect, significantly increasing the risk of bleeding.	Close monitoring of prothrombin time (INR) is essential.
Sulfonylurea Hypoglycemics	Glyburide, glipizide Bactrim may increase the blood levels of these diabetes drugs, raising the risk of hypoglycemia (low blood sugar).	Blood sugar should be monitored closely.
Angiotensin-Converting Enzyme (ACE) Inhibitors	Lisinopril, enalapril Concomitant use can increase the risk	

of hyperkalemia (high potassium). Potassium levels should be monitored. Diuretics (Potassium-Sparing) Spironolactone, amiloride Increased risk of hyperkalemia. Avoid combination if possible; if used, monitor potassium closely. Anticonvulsants Phenytoin (Dilantin) Bactrim can increase phenytoin levels, leading to toxicity (nystagmus, ataxia, lethargy). Phenytoin levels require monitoring. Methotrexate Methotrexate Bactrim can increase methotrexate blood levels and its toxic effects on bone marrow and kidneys. This combination is generally avoided. Cyclosporine Cyclosporine Bactrim may reduce cyclosporine levels, potentially reducing its immunosuppressive effect, and may increase the risk of kidney toxicity. Monitor levels and renal function.

FAQs

- **What is the difference between Bactrim and Bactrim DS?**

Bactrim DS (Double Strength) tablets contain twice the amount of active ingredients (sulfamethoxazole and trimethoprim) as the regular strength Bactrim tablets. A typical adult dose for many infections is one DS tablet every 12 hours, whereas it would require two regular strength tablets to achieve the same dose. It is crucial to take the specific strength prescribed by your doctor.

- **I am allergic to penicillin. Can I take Bactrim?**

Bactrim is chemically unrelated to penicillin. It is often a suitable alternative for patients with a documented penicillin allergy. However, you must **not** have a known allergy to sulfonamides ("sulfa" drugs). Always inform your doctor of all drug allergies.

- **Should I take Bactrim with food?**

Bactrim can be taken with or without food. Taking it with food or a full glass of water may help reduce the risk of stomach upset or nausea, which are common side effects.

- **How quickly does Bactrim work for a UTI?**

Symptoms of an uncomplicated urinary tract infection, such as burning during urination and urgency, often begin to improve within 1 to 2 days of starting Bactrim. However, it is essential to complete the entire prescribed course (often 3 days for simple cystitis) to fully eradicate the bacteria and prevent recurrence or resistance.

- **Why is drinking extra water so important with Bactrim?**

The sulfamethoxazole component can crystallize in the kidneys, especially if the urine is concentrated. This crystalluria can cause kidney damage, pain, or stones. Drinking plenty of fluids (aim for 8 full glasses of water daily) helps dilute the urine and flush the kidneys, preventing this complication.

Other Details

Additional Information Storage and Handling Store Bactrim tablets and oral suspension at room temperature (20°C to 25°C or 68°F to 77°F), in a tightly closed container, away from light, excess heat, and moisture. Keep all medications out of the reach of children and pets. Do not use the oral suspension after the expiration date printed on the bottle. Reporting Side Effects If you experience a side effect, report it to your doctor. You are also encouraged to report adverse drug events to your national health authority (e.g., the FDA in the United States). This contributes to ongoing drug safety monitoring. Historical Fact The combination of trimethoprim and sulfamethoxazole was developed in the late 1960s. It was found that the two drugs, which inhibit different steps in the same bacterial metabolic pathway, produced a synergistic antibacterial effect, meaning the combination was more powerful than either drug alone. This made Bactrim a widely used broad-spectrum antibiotic for decades.

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