etanercept (e-tan-er-sept)

**Classification**
Therapeutic: antirheumatics (DMARDs)
Pharmacologic: anti-TNF agents

**Pregnancy Category B**

**Indications**
To decrease progression, signs and symptoms of rheumatoid arthritis, juvenile arthritis, ankylosing spondylitis, psoriatic arthritis or plaque psoriasis when response has been inadequate to other disease-modifying agents. May be used with other agents.

**Action**
Binds to tumor necrosis factor (TNF), making it inactive. TNF is a mediator of inflammatory response. **Therapeutic Effects:** Decreased inflammation and slowed progression of arthritis, spondylitis or psoriasis.

**Pharmacokinetics**
Absorption: 60% absorbed after subcut administration.
Distribution: Unknown.
Metabolism and Excretion: Unknown.
Half-life: 115 hr (range 98–300 hr).

**TIME/ACTION PROFILE (symptom reduction)**

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<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<td>Subq</td>
<td>2–4 wk</td>
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**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; Active infection (including localized); Lactation; Untreated infections; Granulomatosis with polyangiitis (receiving immunosuppressive agents); Concurrent cyclophosphamide or anakinra.

Use Cautiously in: History of chronic or recurrent infection or underlying illness/treatment predisposing to infection; (including advanced or poorly controlled diabetes), History of exposure to tuberculosis; History of opportunistic infections; Patients residing, or who have resided, where tuberculosis, histoplasmosis, coccidioidomycosis, or blastomycosis is endemic; Pre-existing or recent demyelinating disorders (multiple sclerosis, myelin optic neuritis); Lates allergy (rash due to biologic range contains latex), Gynec: May be risk of infections; Pedi: Children with significant exposure to varicella virus (temporarily discontinue etanercept; consider varicella zoster immune globulin); S/A risk of lymphoma (including lymphoma-associated T-cell lymphoma [HSTL]), leukemia, and other malignancies; OR: Use only if needed.

**Adverse Reactions/Side Effects**
CNS: headache, dizziness, weakness.
EENT: rhinitis, pharyngitis.
Resp: upper respiratory tract infection, cough, respiratory disorder.
GI: abdominal pain, dyspepsia.
Derm: psoriasis, rash.
Hemat: pancytopenia.
Local: injection site reactions.
Misc: INFECTIONS (including reactivation tuberculosis and other opportunistic infections due to bacterial, invasive fungal, viral, mycobacterial, and parasitic pathogens), MALIGNANCY (including lymphoma, HSTL, leukemia, and skin cancer), infections.

**Interactions**
Drug-Drug: Concurrent use with anakinra risk of serious infections (not recommended). Concurrent use of cyclophosphamide may risk of malignancies. Concurrent use with azathioprine and/or methotrexate may risk of HSTCL. May antibody response to live-virus vaccine and risk of adverse reactions (do not administer concurrently).

**Route/Dosage**
Subcut (Adults): Adult rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis—50 mg once weekly; adult plaque psoriasis—50 mg/two weekly for 4 mos, then 50 mg once weekly.
Subcut (Children 4–17 yr): 63 kg—0.8 mg/kg/wk (up to 50 mg) as a single injection; 31–62 kg—0.8 mg/kg/wk divided and given on two separate days 3–4 days apart; <31 kg—0.8 mg/kg/wk as a single injection.

**NURSING IMPLICATIONS**
Assessment
- Assess range of motion, degree of swelling, and pain in affected joints before and periodically during therapy.

**Drug Characteristics**
- **Genetic Implication:** CAPI TALS indicate life-threatening, underlines indicate most frequent. Strikethrough indicate discontinued.
Assess patient for injection site reaction (erythema, pain, itching, swelling). Reactions are usually mild to moderate and last 3–5 days after injection.

Monitor patients who develop a new infection while taking etanercept closely. Discontinue therapy in patients who develop a serious infection or sepsis. Do not initiate therapy in patients with active infections.

Assess for signs and symptoms of systemic fungal infections (fever, malaise, weight loss, sweats, dyspnea, pulmonary infiltrates, serious systemic illness with or without concomitant shock). Ascertain if patient lives in or has traveled to areas of endemic mycoses. Consider empiric antifungal treatment for patients at risk of histoplasmosis and other invasive fungal infections until the pathogens are identified. Consult with an infectious diseases specialist. Consider stopping etanercept until the infection has been diagnosed and adequately treated.

Monitor CBC with differential periodically during therapy. May cause leukopenia, neutropenia, thrombocytopenia, and pancytopenia. Discontinue etanercept if symptoms of blood dyscrasias (persistent fever) occur.

Potential Nursing Diagnoses

Impaired physical mobility (Indications)

Implementation

Do not confuse Enbrel with Levbid.

Administer a tuberculin skin test prior to administration of etanercept. Patients with active latent TB should be treated for TB prior to therapy.

Needle cover of the pre-filled syringe contains latex and should not be handled by people with latex allergies.

Subcut: Prepare injection with single dose pre-filled syringe or multi-dose vial for reconstitution.

Solution in pre-filled syringe may be allowed to reach room temperature (15–30 min); do not remove needle cap during this time.

For multi-dose vial, reconstitute with 1 mL of the bacteriostatic sterile water supplied by manufacturer for a concentration of 25 mg/mL. If the vial is used for multiple doses, use a 25-gauge needle for reconstituting and withdrawing solution and apply “Mixing Date” sticker with date of reconstitution entered. Inject diluent slowly into vial to avoid foaming. Some foaming will occur. Swirl gently for dissolution; do not shake or vigorously agitate to prevent excess foaming. Solution should be clear and colorless. Do not administer solution that is discolored or contains particulate matter. Dissolution usually takes ~10 min. White/cream solution into syringe: Some foam may remain in syringe. Amount in syringe should approximate 1 mL. Do not dissolve reconstituted solution during preparation or administration. Match a 25-gauge needle to inject. Administer as soon as possible after reconstitution; viable up to 6 h if refrigerated. Solutions and pre-filled syringes are stable if refrigerated and used within 14 days.

May be injected into abdomen, thigh, or upper arm. Rotate sites. Do not administer within 1 inch of an old site or into areas that is tender, red, hard, or bruised.

Storage Incompatibility: Do not mix with other solutions or dilute with other diluents.

Patient/Family Teaching

Instruct patient on self-administration technique, storage, and disposal of equipment. Post-injection should be administered under the supervision of a health care professional. Provide patient with a puncture-proof container for used equipment.

Advise patient not to receive live vaccines during therapy. Patients should be advised that children should complete vaccinations in the 2 years before initiation of etanercept. Patients with significant exposure to varicella virus (chickenpox) should temporarily discontinue therapy and varicella immune globulin should be considered.

Advise patient that methotrexate, antithrombotics, NSAIDs, corticosteroids, and salicylates may be continued during therapy.

Instruct patient to notify health care professional if upper respiratory or other infections occur. Therapy may need to be discontinued if serious infection occurs.

Advise patient of risk of malignancies such as hepatosplenic T-cell lymphoma. Instruct patient to report signs and symptoms (splenomegaly, hepatomegaly, abdominal pain, persistent fever, night sweats, weight loss) to health care professional promptly.

Evaluation/Desired Outcomes

Reduction in symptoms of rheumatoid arthritis. Symptoms may return within 1 mo of discontinuation of therapy.

Why was this drug prescribed for your patient?