

PHARMACY

Drug Information

Anti-Tumour Necrosis Factors (Anti-TNFs)



What are Anti-Tumour Necrosis Factors (Anti-TNFs)?

- Patients with autoimmune diseases such as rheumatoid arthritis (RA), psoriatic arthritis and ankylosing spondylitis often have an excessive amount of tumour necrosis factor (TNF, a type of substance that causes inflammation) in their body. This results in joint pain, swelling and joint damage. Anti-TNFs is a group of biological medications (manufactured with ingredients from living cells or organisms) which work by blocking the effects of TNF, reducing joint pain, swelling as well as joint damage.
- Anti-TNFs can be used to treat moderate to severe RA, psoriatic arthritis, ankylosing spondylitis and inflammatory bowel conditions.
- Anti-TNFs available include Adalimumab, Etanercept, Golimumab and Infliximab.

How are Anti-TNFs Administered?

- **Anti-TNFs such as Adalimumab, Etanercept and Golimumab** can be given as an injection under the skin (subcutaneous) on the front of the thighs or lower abdomen (at least two inches away from the belly button). Avoid scars, stretch marks or areas where the skin is painful, bruised, red, scaly or hard. Before administering the medication on your own, you or your carer should receive training from your rheumatology nurse clinician or pharmacist. Remember **to rotate the injection site each time**.
- **Infliximab is given as a short infusion (i.e. drip into vein) over several hours.**

Medication	Usual dose regime
Etanercept	50mg once a week
Adalimumab	40mg every two weeks
Golimumab	50mg once a month
Infliximab	Initial: 3-5mg/kg at week 0, 2 and 6 Maintenance / continued treatment: every 8 weeks

- **Anti-TNFs** do not work immediately, and it may take weeks before you see any results. Thus, it is important that you administer your medication regularly or you may not benefit at all.
- If you miss a dose, take the missed dose as soon as you remember. If it is almost time for your next dose, only take the usual dose. Do not double

the dosage.

Can Anti-TNFs be Administered With Other Medications?

- Anti-TNFs can be taken with other medications such as corticosteroids, non-steroidal anti-inflammatory drugs (NSAIDs) and other disease modifying anti-rheumatic drugs.
- Please inform your doctor, pharmacist or rheumatology nurse clinician if you are taking other medications such as over-the-counter medications, supplements or traditional/herbal remedies as they may interact with anti-TNFs.
- Discuss with your doctor before receiving any vaccines. Pneumococcal and influenza (flu) vaccinations are safe and may be given if required. Avoid live vaccines such as MMR (measles, mumps and rubella), OPV (oral polio vaccine), varicella/chickenpox, yellow fever or BCG (tuberculosis).

What are the Important Side Effects of Anti-TNFs?

- Medications prescribed by your doctor should be beneficial for your condition even though they may result in some unavoidable side effects.

Side Effect	Management
Common side effects: headaches, rashes	Consult your doctor if it persists.
Injection side reaction: itch, pain, swelling, bruising, skin redness, bleeding	These side effects are usually mild and should resolve within a few days.
Infusion side effects (with infliximab): flushing, shortness of breath, chest tightness, wheezing, low blood pressure	These side effects usually improves when infusion rate is reduced. Pre-treatment medications may be given for subsequent infusions.
Infections (Warning signs: fever exceeding 38°C, chills, cough, painful urination, blood in urine, tiredness)	Seek medical attention immediately. You should inform the doctor whom you are consulting with that you are on anti-TNFs as the medication may need to be stopped while you are having an infection.
Blood disorders (e.g. anemia, lymphopenia, neutropenia)	It is important to monitor the effects of your new treatment, particularly during the first three months of treatment. Your

	doctor will schedule regular blood tests for monitoring.
Rare side effects: Severe muscle weakness or seizure	Seek medical attention immediately.

If you develop rashes, swelling of the face or shortness of breath after taking the medication, you could be allergic to the medication. Please seek medical attention immediately.

What Test Do I Need to Do While I Am Taking Anti-TNFs?

- You will be tested for tuberculosis, hepatitis B and C infections before starting on anti-TNFs. A baseline chest x-ray will also be required.
- Regular blood tests are essential for early detection of side effects such as blood disorders and infections. Long term use of anti-TNFs may also increase the risk of certain cancers; hence it is important to adhere to your follow-up appointments and blood test schedules.

Are There Any Special Precautions That I Need to Take?

- Anti-TNFs may reduce your body's ability to fight against infections, hence you should avoid crowded places and direct contact with any sick person. Avoid consumption of raw or undercooked food. See a doctor immediately if you develop a fever or feel unwell. Please also inform the doctor whom you consult that you are on anti-TNFs.
- Information on the safe usage of anti-TNFs during pregnancy is limited but it may be considered for selected patients. Discuss with your attending doctor if you have plans to conceive as your treatment regime may need to be revised before conceiving. There is limited information on whether anti-TNFs are excreted/discharged into the breast milk, hence you are advised to avoid breastfeeding while on anti-TNFs.
- Patients with moderate to severe heart failure are not advised to take anti-TNFs. Please inform your doctor if you have a history of heart failure.
- Discuss with your doctor before undergoing any surgery as your anti-TNFs may need to be stopped temporarily.

How Do I Store Anti-TNFs?

- Store your medication in a refrigerator between 2°C to 8°C. Do not freeze the medication.
- After injecting your anti-TNFs, the used pen should be placed in a puncture-resistant container such as used metal tin or sharp bin (a hard plastic container used to safely dispose sharp medical equipment). You may bring the used metal tin or sharp bin to the pharmacy or clinic for proper disposal.

If you have any problem with your treatment, please contact your doctor, pharmacist or nurse clinician.

Please keep all medications out of reach of children.



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