

Resource

Anti-TNFs

The anti-TNF drugs were the first of the biologic drugs to be introduced for RA, the first of which came in 1999. They work by targeting the ‘TNF?’ cells.

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Background

The anti-TNF drugs were the first of the biologic drugs to be introduced for RA, starting with infliximab, in 1999. They are expensive to develop and produce therefore had to go through appraisal by the National Institute for Health and Care Excellence (NICE), who determine whether or not such new medicines are cost-effective and clinically effective for use in the NHS. NICE also determined the eligibility criteria to allow people access to such high-cost medicines and the appropriate clinical pathway of medicine use. Therefore, not everyone has access to them if they don’t meet the criteria due to their disease severity and response to standard disease-modifying medications.

How do they work?

RA is an auto-immune disease, meaning that the body’s own immune system is attacking the body (in the case of RA, by attacking the lining of the joints). Biologic drugs work by targeting proteins called cytokines, which are responsible for the inflammation caused by the immune system’s response. In the case of ‘anti-TNF’ drugs, the cytokines being targeted are called ‘TNF’ (Tumour Necrosis Factor-alpha). Here is a list of the current anti-TNF medications available both originator and biosimilar version.

Original Biologic drug	Biosimilars (up-to-date at time of printing- not all may be available in the UK)	Method of administration
Adalimumab (Humira)	Hyrimoz, Imraldi, Hulio Amjevita, Cyltezo	subcutaneous (under the skin) injection every other week
Certolizumab pegol (Cimzia)	N/A	subcutaneous injection at weeks 0, 2 and 4 (given as two injections), and then one injection every other week thereafter

Etanercept (Enbrel)	Benepali, Erelzi	subcutaneous injection, once or twice a week
Golimumab (Simponi)	N/A	monthly by subcutaneous injection
Infliximab (Remicade)	Remsima, Inflectra, Flixabi	intravenous infusion, repeated 2 weeks and 6 weeks after the first infusion, then every 8 weeks

Summary table of anti-TNF drugs

Most commonly reported side effects

As with any medication, the anti-TNF drugs have a number of possible side effects, although it is important to remember that these are only potential side effects. They may not occur at all.

Common side effects may include:

- High blood pressure (known as hypertension)
- Skin problems, including rash and dry skin
- Dizziness
- Indigestion (known as dyspepsia)

Skin cancer

Skin cancer is reported as a potential side effect of anti-TNF medications. These drugs target the TNF cells, which play a role in fighting off cancerous cells within the body. The possibility of increased risk of cancer has, therefore, always been a concern with these drugs. However, information gathered by The British Society of Rheumatology Biologics Register for Rheumatoid Arthritis (published 2016) has shown that: "To date, analyses of data from the BSRBR-RA have not identified an increased risk of non-melanoma skin cancer or solid organ cancer." The risk of any type of cancer will continue to be monitored closely, and current guidelines suggest that these drugs should not be used, unless clinically necessary, in patients with a history (within the last 10 years) of cancer.

More information on side effects can be found in the patient information leaflet for your individual anti-TNF drug.

Remember to report any concerns about possible side effects to the doctors and nurses.

Anti-TNFs with other medicines

Some biologic drugs are known to interact poorly with other biologics. You may therefore be asked to leave a gap between stopping one biologic drug and starting another so that the first drug has time to work its way out of your system.

The anti-TNF drugs certolizumab pegol and infliximab are known to interact poorly with the anti-

psychotic drug 'clozapine'.

Anti-TNFs during pregnancy and breastfeeding

Adalimumab:

Adalimumab should be avoided during pregnancy, and the drug manufacturers recommend that breastfeeding is avoided until at least 5 months after the last dose was taken.

Certolizumab pegol:

In early 2018, The European Medicines Agency approved a label change for Cimzia, making it the first biologic to become a possibility for use in pregnancy and while breastfeeding. However, as pregnant women would not be used in a drugs trial, there have only been a limited number of pregnancies occurring on this drug. It would therefore only be considered if it is deemed clinically necessary and should be discussed with your rheumatologist.

Etanercept:

Etanercept is not recommended during pregnancy. Because the drug has been found to transfer to breastmilk, the decision of whether or not to stay on the drug while breastfeeding, and whether or not to continue breastfeeding should be discussed with your rheumatologist and will weigh up the benefits of breastmilk to your baby with the benefits to your health of being on this drug.

Golimumab:

The use of golimumab during pregnancy is not recommended and should only be given if clearly needed, following discussion with your rheumatologist. The drug manufacturer recommends that women must not breastfeed during and for at least 6 months after golimumab treatment.

Infliximab:

Though there have been successful pregnancies in women taking infliximab, due to the limited available clinical data, infliximab should only be used during pregnancy if clearly needed. The drug manufacturer recommends that women must not breastfeed during and for at least 6 months after golimumab treatment.

Anti-TNFs and alcohol

You can drink alcohol on these medications. However, it is not uncommon when taking a biologic drug to be on other medications, where different guidance applies. Methotrexate, for example, can affect the liver, so for those taking methotrexate alongside their biologic, moderate intake of alcohol is recommended in line with government guidelines.

Anti-TNFs and immunisations/ vaccinations

Live vaccines (measles, mumps, rubella, i.e. MMR, chickenpox, oral polio (NOT injectable polio),

BCG, oral typhoid and yellow fever) cannot be given to anyone already taking an anti-TNF drug. If the treatment has not yet been started, it is important to seek advice on how long a gap to leave after having a live vaccine.

Medicines in rheumatoid arthritis

We believe it is essential that people living with RA understand why certain medicines are used, when they are used and how they work to manage the condition.

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