

Disease Modifying Anti-Rheumatic Drug (DMARD) Counselling for Rheumatology Patients

Rheumatology

Introduction

DMARD stands for Disease Modifying Anti-Rheumatic Drug. The intention of a DMARD is to 'modify' the progress of rheumatic diseases. This means it works differently to a simple painkiller (such as paracetamol or ibuprofen) and the intention is to reduce the underlying inflammatory activity of the disease, rather than just the symptoms. For the most detailed and up to date information please see the product insert in your medication - the patient information leaflet.

What DMARDs are we discussing?

Methotrexate, sulfasalazine, leflunomide, azathioprine, ciclosporine, apremilast, mycophenolate and hydroxychloroquine are the DMARDs that we discuss here.

Basics for all DMARDs: How long do they take to work?

All DMARDs may take between 3-12 weeks to have full effect. This means that treatment should normally be continued in the early stages, even if a quick benefit is not seen.

Thinking about how DMARDs are used

DMARDs may be given alone as a single drug, or in combination with another DMARD, or together with other types of rheumatic medication. This can make things a little complicated.

Some DMARDs are used for a number of different rheumatic conditions. For example, they can be used to treat rheumatoid arthritis, psoriasis related arthritis, lupus, vasculitis, and other inflammatory diseases. Your doctor will have discussed with you the reason for choosing the medication for you.

How do they work?

Each DMARD works in a different way, and they all tend to work by affecting how the bodies immune system reacts to your joints; which is still not fully understood by doctors and scientists. We have been using DMARDs for over 40 years.

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

Do I need any tests for these medications?

Tests before you start

These treatments may mildly suppress the immune system and sometimes may affect your reaction to some types of infection. You will therefore typically have some baseline tests. This will often include blood tests (blood counts, kidney and liver tests), and tests for viruses like hepatitis B and C, and you may also be checked for previous chickenpox exposure.

Monitoring tests

With the exception of hydroxychloroquine and apremilast, all DMARDs need to have blood test monitoring. This is to pick up abnormalities in blood counts or side effects from the medication that might otherwise go unnoticed, with possibly serious consequences. We talk about each drug in more detail later on in this guide.

Hydroxychloroquine does not need blood monitoring checks, but patients who take this have to be monitored in other ways. Apremilast does not need blood monitoring tests.

The number and frequency of tests required varies, but we follow a similar schedule for most DMARDs. Blood tests are usually done for blood counts (also known as a full blood count), kidney and liver tests and 'inflammation' checks (ESR and CRP): these are done every 2 weeks for 6 weeks and then if stable, every 4 weeks. Once doses have been stable for 3 months, in most cases, blood tests can be reduced to once every 12 weeks. Generally for at least the first 3 months of treatment, monitoring is done here at the hospital. Then, monitoring can usually be transferred to your GP if preferred, with the agreement of your GP.

Any increases in dosage will often mean going back to 2 weekly monitoring for 6 weeks and then, if stable, back to the usual 3-monthly regime, but this may depend on your doctor and nurse.

It is not safe to keep prescribing rheumatology medication if a patient does not have monitoring tests, so your treatment will be stopped if you do not attend your monitoring tests as required.

If you are starting methotrexate you will also normally have a chest x-ray, if one has not been performed recently.

Pregnancy and conception.

Women of childbearing age who are sexually active and men who are sexually active need to consider the impact of the treatments. Because no contraception is perfect, men and women who are sexually active need to understand important recommendations about how these treatments are given. Some treatments should only be used with highly effective contraception, as they are dangerous to a growing baby (foetus) if taken at the time of conception or pregnancy. We will explain what this is later. Talk to your doctor and nurse if you are thinking about becoming pregnant or planning a family.

Important things for All DMARDs: Contraception and pre-pregnancy advice for women of childbearing age.

If you are a woman of childbearing age, it is important to know that some drugs are not safe for use at the time of conception and pregnancy. The British Society for Rheumatology expert panel have judged some DMARDs to be safe during pregnancy. You can also look at the UK teratology website (<http://www.uktis.org>) to gain information and contribute data on your pregnancy to help future parents. This information can change over time.

	Safe- conception, pregnancy and breastfeeding by national experts	Not safe
Notes	Felt to be safe by experts for pregnancy AND breastfeeding	Not safe for pregnancy or conception or breastfeeding - can cause birth defects or miscarriage: therefore highly effective contraception required.
Drug treatment	Hydroxychloroquine Sulfasalazine (needs to be taken with folic acid 5mg) Azathioprine (as long as dose is <2mg/kg body weight) Ciclosporin	Methotrexate Mycophenolate Leflunomide* Apremilast
Additional measures		These drugs should be stopped 3 months in advance of trying to become pregnant (continue highly effective contraception methods during this time (see below). For some cases a pregnancy test may be required before you start the drug (for example mycophenolate requires two pregnancy tests).

* Leflunomide can be present for many months, even years in the bloodstream - so for women and men, we recommend a 'washout' treatment that removes the drug from the body. This is general advice for women taking DMARD drugs. For any special circumstances, discuss these with your nurse specialist. Always read the medication insert (which will include any updates or new advice in this area).

What is highly effective contraception?

For drugs that are not safe in pregnancy the Medicines and Healthcare products Regulatory Agency (MHRA) recommends:

- ONE form of HIGHLY EFFECTIVE contraception (this is the **coil** or **implant contraceptive**)
- or
- TWO forms of EFFECTIVE contraception **in combination** (for example using the contraceptive pill **AND** a barrier method for example, a condom).

It is difficult to study the effects of medicines in pregnant women; this advice has been provided by experts to help women who are thinking about having children. For newer drugs there is insufficient evidence. Talk to your doctor or nurse for the latest guidelines (for example, Apremilast). If you do become pregnant, speak to your rheumatology doctor.

Advice for men who are sexually active

The British Society for Rheumatology in 2022 published guidelines that recommended that all of the DMARDs discussed here (with the exception of apremilast) are safe for men trying to start a family (men who wish to father a child). Drug manufacturers will often suggest using contraception for a period as a precaution (for example waiting for 90 days after the last drug treatment). We suggest you talk to your rheumatology team about this if you have further questions.

Advice for Men who are sexually active/ trying to start a family (Men who wish to father a child)	
Felt by experts to be SAFE in conception (although data is often limited)	NOT proven to be SAFE- limited data
<p>Hydroxychloroquine- safe for MEN</p> <p>Methotrexate <20mg- safe for MEN</p> <p>Leflunomide- safe for MEN</p> <p>Sulfasalazine*-safe for MEN</p> <p>Azathioprine-safe for MEN</p> <p>*conception may be aided by stopping drug for 3 months</p>	<p>Apremilast</p> <p>Mycophenolate*</p> <p>[*For mycopheolate, all sexually active men are advised by the manufacturer of the medication to use condoms during, and for 90 days after stopping treatment, even if they have had a vasectomy.</p> <p>In addition female partners of men are suggested to use highly effective contraception for 90 days after treatment has finished.]</p>

Important things for all drugs: Vaccinations

Inactivated vaccines (flu, pneumonia, and the COVID-19 vaccination) cannot cause the infection that they are given to prevent, and so these vaccines are generally safe for all rheumatology patients. We recommend patients who take a DMARD should have an annual flu vaccination and a pneumonia vaccination. To give perspective on this, many hospitals recommend all hospital doctors and nurses have the flu vaccine.

Live vaccines (for example MMR, rubella, rotavirus, varicella-zoster, yellow fever) contain a living virus that is weakened, so it is much less 'infectious' to people. These are safe in regular patients, but we need to be cautious using live vaccines in patients who have a weakened immune system, through conditions, or the medications they take. This means each patient has to be judged on a case by case basis but we tend **NOT** to give live vaccines to:

- Patients on high dose steroids (>20mg prednisolone daily) along with a DMARD
- Patients with other diseases that cause significant immunosuppression
- Patients taking additional rheumatology medication with their DMARD called **biologic** therapies (such as anti-TNF therapies)
- **Some** patients taking methotrexate, leflunomide, azathioprine, mycophenolate, and ciclosporin.

For some live vaccines (for example Rubella) that may be needed, discuss this with your rheumatologist.

So... all rheumatology patients can have the flu vaccine.

Not all rheumatology patients can have a live vaccine (for example shingles vaccine).

	Inactivated vaccines	Live Vaccines
Examples	Flu (for example: influenza, pneumonia, COVID-19), the new shingles vaccine (Nov 2023 onwards, Shingrix®)	MMR, rubella, rotavirus, the old shingles vaccine Zostavax®), yellow fever
What the vaccine contains	Inactivated virus or bacteria	Weakened virus / bacteria
Can all rheumatology patients who take a DMARD have this vaccine?	Yes	<p>No</p> <p>The following patients should NOT routinely have live vaccines</p> <ul style="list-style-type: none"> • Patients on high dose steroids (>20mg prednisolone daily) along with a DMARD • Anyone with other health problems that mean they cannot have a live vaccine. • Patients taking additional rheumatology medication with their DMARD called biologic therapies (such as anti-TNF therapies) • Some patients taking methotrexate, leflunomide, azathioprine, mycophenolate, and ciclosporin <p>Remember if you are not in one of the groups above, you can often have these vaccines safely. Discuss this with your doctor, nurse or pharmacist</p>

Important for all DMARDs: Serious infections

If you have a serious infection (for example, pneumonia), and you are taking the drug for a rheumatic disease, you should withhold the DMARD you are taking, and seek immediate medical advice. You should not restart until you have fully recovered from this, and have completed any antibiotic treatment. Rarely DMARDs can cause or increase the risk of serious infection (sepsis).

Because the DMARDs can affect the immune system, it is important that you report signs that could show that your immune system has been affected by the treatment. This includes:

- A fever (high temperature) or sore-throat
- Unexplained bruising or bleeding (like nose bleeds)
- Unexplained hot sweats or sweating
- Signs you could have other serious side effects such as
 - Yellow eyes (Jaundice)
 - Loss of appetite.

If these symptoms occur, talk to a doctor straight away. You may need a 'same day' urgent blood test and additional checks. Fortunately these cases are rare and in a hospital we only see a handful of such cases every year. This applies for almost all of the DMARDs (hydroxychloroquine is the exception; it hardly ever causes these side effects).

What about COVID-19?

The advice currently for COVID19 is that you should stop your DMARDs if you feel you have been infected or have tested positive for COVID-19, and only resume treatment when you have fully recovered, usually after at least 2 weeks. This guidance may change over time. It is safe for adults who take DMARDs to have the COVID-19 vaccination.

Important things for all DMARDs

Always read the product insert or leaflet that comes with your medication. This will present the most detailed and up to date information on the medication. Other sources, such as Versus Arthritis, and NRAS on the internet can also provide helpful resources.

What about having surgery whilst taking a DMARD

Inform your surgeon that you are taking a DMARD. In many cases the medication can be continued. Tell your pre-op assessment clinic; we have agreed guidelines with our orthopaedic department.

Good Advice for people on DMARDs

Avoid contact with people who are unwell. You should try to maintain a healthy body weight, eat five portions of fresh fruit or vegetables per day, and be careful how you prepare and store food. If you are a smoker, we recommend you stop.

Talk to your doctor about any herbal remedies you may wish to take; these are mostly safe but can rarely cause problems.

Talk to your doctor if you are being prescribed new or extra medication.

What if I have any questions or do not understand?

Talk to your doctor or nurse specialist.

Types of DMARDs

Methotrexate

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take methotrexate?

Methotrexate is taken most commonly in tablet form.

We recommend that all methotrexate is supplied only as 2.5mg tablets.

Methotrexate is normally taken **once a week (on same day of each week , for example, every Tuesday)**. The dose is usually between 5mg and 25 mg **once a week**. A folic acid tablet (5mg) is given on the day **following** methotrexate, to reduce the side effects of the treatment. Sometimes folic acid is given more frequently (e.g. 6 days a week) but never on the day of the methotrexate.

Methotrexate is often given in combination with other rheumatic tablets.

Sometimes methotrexate is given by injection form for patients who cannot tolerate a tablet therapy, but it is still given **once a week** with folic acid on the following day.

Special notes: Conception, pregnancy, breastfeeding

Methotrexate should **not** be used by anyone who is currently pregnant, or within 3 months before a woman intends to become pregnant. See the earlier advice in this leaflet.

For men - see our previous advice. It is now felt to be safe for men to try for a baby whilst taking methotrexate. Discuss this with your team.

You normally have a chest x-ray before you start this treatment.

Possible side effects

There are a large number of possible side effects which we have already discussed in the introduction, including an increased risk of infection.

Other rare side effects include: inflammation of the lung or breathlessness symptoms, called pneumonitis. This is rare, but requires urgent medical attention. If you are concerned, talk to your doctor.

The patient information leaflet, inserted with your medication, will contain detailed information about all of the possible side effects of the medication. We also have leaflets from the charity Versus Arthritis. Please ask your nurse or clinician if you would like a copy of these leaflets.

Remember the important side effects for all DMARDs - see earlier in the leaflet.

Vaccination

See the earlier section - live vaccines need to be discussed with your doctor. Flu and pneumonia jabs are fine.

Alcohol and methotrexate

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units per week for both men and women, which should be spread across the week.

Other medicines and methotrexate

This is important, particularly if your doctor does not prescribe your methotrexate, as they may not know you are taking this medication.

Methotrexate can have interactions with other tablets that you can take.

There are some to look out for.

Trimethoprim: usually used for urinary tract infections. You should **NOT** take these two drugs together, as it can harm the production of blood.

Co-trimoxazole / Septrin (trimethoprim / sulfamethoxazole) can also do this.

Your doctor may consider how other drugs (such as theophylline) are used. If you have any questions you can discuss this with your doctor, nurse, or pharmacist.

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Sulfasalazine

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions. The usual prescription is for sulfasalazine EN coated tablets.

How do you take sulfasalazine?

We tend to start sulfasalazine tablets as one 500mg tablet once a day. This is normally increased by one tablet every week, usually to a dose of 1000mg twice daily (two 500mg tablets, taken twice a day). They should be taken with water, and not crushed or chewed.

Special notes

If you are allergic to 'aspirin' (salicylate) you should not take sulfasalazine, as you may have an allergic reaction to this drug. This is very rare.

Special notes: Conception, pregnancy, breastfeeding

See the earlier advice regarding sulfasalazine.

It should be taken with folic acid 5mg daily for women who wish to become pregnant, or who are pregnant.

Stopping sulfasalazine may increase your chance of becoming pregnant; you can discuss this with your doctor.

For men, it can lower sperm counts, but this is reversible on stopping the treatment. Men can still father a baby whilst taking sulfasalazine.

Possible side effects

Sulfasalazine can change the colour of your urine to an orange or yellow colour. It may also change the colour of tears, and therefore change the colour of contact lenses.

People can have a range of side effects. The most common are simple tummy upset, sickness, and headaches.

The patient information leaflet inserted with your medication will contain detailed information about all of the possible side effects of the medication.

Vaccination

See the previous section - live vaccines need to be discussed with your doctor. Flu and pneumonia jabs are fine.

Alcohol and sulfasalazine

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units a week for both men and women, which should be spread across the week.

Other medicines and sulfasalazine

This is important particularly if your doctor does not prescribe your **Sulfasalazine**, as they may not know you are taking this medication.

Sulfasalazine can have interactions with other tablets that you can take, but mostly this does not cause a problem; check with your specialist.

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Azathioprine

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take azathioprine?

Azathioprine is a daily tablet dose. Normally your doctor will start a low dose (e.g. 50-100mg) and it will be increased over time. The dose will depend on your body weight. You will be monitored for your blood counts and liver tests whilst you take this medication.

Doctors normally do a blood test to check the activity of an enzyme that helps your body to remove azathioprine. This test is called a TPMT level.

Special notes: Conception, pregnancy, breastfeeding

See the earlier advice regarding azathioprine. It is considered to be safe for use in conception and pregnancy if patients take a dose that is <2mg/kg body weight.

Possible side effects

The patient information leaflet inserted with your medication will contain detailed information about all of the possible side effects of the medication.

Azathioprine can suppress the production of white and red blood cells. Sometimes this can cause sickness, vomiting, headaches, and a range of general side effects. If you are concerned talk to your nurse, pharmacist or rheumatology team.

Azathioprine is one of the more 'powerful' DMARDs so it can increase your chances of developing an infection. For example azathioprine can affect how you respond to the chickenpox virus, which you can catch from people with shingles or chickenpox. If you are in contact, talk to your rheumatology team. Depending on your case, we may suggest stopping the tablets, and using medicines to reduce the risk of catching the virus. If you develop shingles or chickenpox, the same applies.

Some rare types of cancer may be increased by rheumatic diseases themselves, and by some treatments such as azathioprine. This includes some skin cancers, and blood cancers. Your doctor is aware of this. Please discuss any concerns you have with your team.

Vaccination

See the previous section - live vaccines need to be discussed with your doctor. For some vaccinations (for example, MMR, rubella, rotavirus, varicella-zoster, yellow fever) your doctor will need to discuss the risks and benefits of the vaccine.

Alcohol and azathioprine

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units a week for both men and women, which should be spread across the week.

Other medicines and azathioprine

This is important particularly if your doctor does not prescribe your **Azathioprine**, as they may not know you are taking this medication.

Azathioprine can have interactions with other tablets that you can take.

These are some to look out for; warfarin, gout treatments (febuxostat and allopurinol) and, some blood pressure tablets (ACE inhibitors like perindopril).

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Leflunomide

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take leflunomide?

Leflunomide is given as a daily tablet. Sometimes patients start on a lower dose.

Special notes: Conception, pregnancy, breastfeeding

See the earlier advice.

Leflunomide can stay in the body for a long time, and if you need to remove the drug for any reason another treatment can be used to 'wash out' the drug from the system. Talk to your doctor about this.

This means that for women of childbearing age, you may need to have 'washout' treatment, with checks that the drug is out of the system. There are recommendations that blood tests check that the leflunomide has gone from the system, and you need two of these tests, 14 days apart. If the washout is used, this can affect the effectiveness of the contraceptive pills, so alternative contraception is advised for this period.

Without the washout, it is recommended waiting for 2 years, and using contraception as described throughout this time.

If you were to become pregnant whilst taking a rheumatology medication, talk to your rheumatology team immediately; for example with leflunomide, you can still have the washout treatment.

Possible side effects

Leflunomide can sometimes cause tummy pain, weight loss and diarrhoea. We also monitor blood pressure when you first start treatment. Other side effects include weakness and pins and needles in the hands and feet.

You are monitored for problems with liver blood tests, but should you develop unexpected signs as previous (sore throat, bruising or bleeding, breathlessness or yellowing of the eyes, called jaundice), talk to your doctor immediately.

The patient information leaflet inserted with your medication, will contain detailed information about all of the possible side effects of the medication.

Vaccination

See the previous section - live vaccines need to be discussed with your doctor. Flu and pneumonia jabs are fine.

Alcohol and leflunomide

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units a week for both men and women, which should be spread across the week.

Other medicines and leflunomide

This is important particularly if your doctor does not prescribe your **Leflunomide**, as they may not know you are taking this medication.

Leflunomide can have interactions with other tablets that you can take. Most of the time this is not a problem.

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Hydroxychloroquine

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take hydroxychloroquine?

Hydroxychloroquine is normally taken once a day at a dose of either 200 or 400mg. The dose is often reduced over time, and sometimes later on it is given on five days of the week. The maximum dose depends on how much you weigh, normally it is maximum 5mg per kg body weight (for example 400mg or less for an 80kg man or woman).

Hydroxychloroquine is often given in combination with other medications.

Special notes: Conception, Pregnancy, breastfeeding. See the earlier advice; this is felt to be safe in conception and pregnancy. You do not need blood test monitoring for hydroxychloroquine.

Possible side effects

We are now recommending more detailed eye assessments for patients who take hydroxychloroquine. This is because of recent evidence suggests that side effects in the eyes are more common than previously reported. We now suggest:

- All patients planning to be on long-term treatment should receive a baseline detailed eye check (including photographs of the back of the eye and special scan called an 'OCT') within 6–12 months of starting the treatment.
- Annual screening is recommended in all patients who have taken hydroxychloroquine for greater than 5 years, or yearly if you have kidney problems or if you also take certain tablets like tamoxifen.

Rarely hydroxychloroquine can cause a range of other problems such as sickness, light sensitivity and rashes, and thinning of the hair.

The patient information leaflet inserted with your medication will contain detailed information about all of the possible side effects of the medication.

Vaccination

See the previous section - live and inactivated vaccines are safe with this drug.

Alcohol and hydroxychloroquine

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units a week for both men and women, which should be spread across the week.

Other medicines and hydroxychloroquine

This is important particularly if your doctor does not prescribe your **Hydroxychloroquine**, as they may not know you are taking this medication.

Hydroxychloroquine can have interactions with other tablets that you can take, although these are less common than for other rheumatic tablets.

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Ciclosporin

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions. Ciclosporin is only used rarely to treat rheumatological diseases.

How do you take ciclosporin?

Ciclosporin is normally taken at a dose of 75mg-175mg, divided up into a twice daily dose. The capsules should be swallowed whole. It's best to use water. Rarely, some juice drinks such as grapefruit juice and pomelo juice, or even the fruits themselves, can increase the amount of ciclosporin that gets into the body by inactivating substances in the gut. Other juices such as purple grape juice can reduce the amount, so best stick to water!

You will normally have your blood pressure and a sugar level (glucose) taken at each clinic visit.

Blood tests are typically done once a month for the duration you take ciclosporin; even if you stay on this for a long time.

Special notes

There are different brands of ciclosporin; we will try and only give you one brand of this.

Conception, pregnancy, breastfeeding. See the earlier advice. Felt to be safe in pregnancy and for potential fathers.

Possible side effects

Ciclosporin can have a range of side effects such as reduced appetite, tiredness, hair changes, and changes to the gums. It can affect blood pressure and the kidneys in the longer term. Sometimes it can cause nausea, extra hair growth and signs of tiredness.

The patient information leaflet inserted with your medication, will contain detailed information about all of the possible side effects of the medication.

Vaccination

See the previous section - live vaccines need to be discussed with your doctor. Flu and pneumonia jabs are fine.

We do not recommend the shingles vaccine for patients on ciclosporin, so if you are eligible for this, we suggest having this before treatment.

Alcohol and ciclosporin

We recommend that you do not drink more than the national recommended limit for alcohol, which is set at 14 units a week for both men and women, which should be spread across the week.

Other medicines and ciclosporin

This is important particularly if your doctor does not prescribe your **ciclosporin**, as they may not know you are taking this medication.

Ciclosporin can have interactions with other tablets that you can take. This includes a range of different tablets and antibiotics (too long to list here).

Avoid grapefruit, and pomelo juice.

You need to be careful with anti-inflammatories. For example, we suggest if you want to take additional anti-inflammatory tablets like ibuprofen, you should discuss this first with your rheumatology team or pharmacist.

Further advice

Always read the patient information leaflet inserted with your medication, that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Mycophenolate Mofetil

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take mycophenolate?

You normally take mycophenolate as a tablet, and typically the dose is increased over several weeks. For example 500mg a day, increasing by 500mg a week until you reach a dose of 1000mg twice a day. The tablets should not be crushed or chewed.

It is more commonly given for vasculitis and lupus rather than rheumatoid arthritis.

There are different types of mycophenolate, in rheumatology we use 'mycophenolate mofetil'. You should not switch between brands.

Special notes: Conception, pregnancy, breastfeeding

See the earlier advice. This tablet is not safe for men or women to have a baby, so contraception is required. For women, we suggest two pregnancy tests, 14 days apart prior to starting treatment, alongside the use of highly effective contraception, for at least 90 days after you have finished taking the treatment (for both men and women). All men are recommended to use condoms whilst taking mycophenolate, and for 90 days after stopping treatment (even those with a vasectomy).

Possible side effects

The patient information leaflet will contain detailed information about all of the possible side effects of the medication. Sometimes this can cause sickness, vomiting, headaches, and a range of general side effects. If you are concerned talk to your nurse, pharmacist or rheumatology team.

Mycophenolate is one of the more 'powerful' DMARDs so it can increase your chances of developing an infection. For example mycophenolate can affect how you respond to the chickenpox virus, which you can catch from people with shingles or chickenpox. If you are in contact, talk to your rheumatology team. Depending on your case, we may suggest stopping the tablets, and using medicines to reduce the risk of transmission. If you develop shingles or chickenpox, the same applies.

Vaccination

See the previous section - live vaccines need to be discussed with your doctor. For some vaccinations (for example, MMR, rubella, rotavirus, varicella-zoster, yellow fever) your doctor will need to discuss the risks and benefits of the vaccine.

Other medicines and mycophenolate

This is important particularly if your doctor does not prescribe your **mycophenolate**, as they may not know you are taking this medication.

Mycophenolate can have interactions with other tablets that you can take, so let your doctor or pharmacist know.

Further advice

Always read the patient information leaflet that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

Apremilast

What is the drug, and what is the aim of treatment?

DMARDs are discussed in the introduction to this document. It can be used to treat a whole range of rheumatology conditions.

How do you take apremilast?

Apremilast is a tablet treatment, which starts at a low dose and is then increased over six days. This is included in a special 'starter pack' and most patients will then stay on a set dose of 30mg twice a day.

Special notes: Conception, pregnancy, breastfeeding

This is not safe for pregnancy, breast-feeding or the conception period. Effective contraception should be used. Apremilast is a relatively new drug so information in this area is not widely available.

Possible side effects

Apremilast can cause some changes in appetite, tummy pain, and headaches. If unexplained weight loss occurs, discuss this with your doctor.

There may be a link between apremilast and suicidal thoughts and / or behaviour. This is still being investigated, so the drug is used with caution in people with previous problems in this area. Patients and carers should be notify the rheumatology team of any changes in behaviour or mood, and of any suicidal ideation

Vaccination

See the previous section - live and inactivated vaccines are safe with this drug.

Other medicines and apremilast

This is important particularly if your doctor does not prescribe your **apremilast**, as they may not know you are taking this medication.

Further advice

Always read the patient information leaflet inserted with your medication that comes with your product, and talk to your doctor, nurse, or pharmacist if you have any questions.

This resource is aimed at patients and is intended to supplement medical care from trained rheumatology professionals. Information on the selection and clinical use of medicines is separate to this advice. All information should be interpreted in the context of the most detailed information on medications, which will be included in the supplied patient information leaflet. Although the authors make reasonable efforts to update the information in this resource, the authors make no representations, warranties or guarantees, whether express or implied, that the content is accurate, complete or up to date. So far as permitted by law, Royal Wolverhampton NHS Trust will not accept liability for damages, in any form, arising from or in relation to this resource, or for any inability to access this resource.

Date of last review

Resource updated September 2023 to reflect new guidelines.

Sources of evidence

Summary of product characteristics:
<https://www.medicines.org.uk/emc> accessed 09.23

British National Formulary September 2023.

Executive Summary: British Society for Rheumatology guideline on prescribing drugs in pregnancy and breastfeeding: immunomodulatory anti-rheumatic drugs and corticosteroids. 2022. PMC10070067.

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。