

Glatiramer acetate (Copaxone and Brabio)

This factsheet is about glatiramer acetate, a disease modifying therapy (DMT) for relapsing multiple sclerosis (MS). At the end of this factsheet you'll find where you can get more information on this drug, other drugs for MS and the benefits of early treatment.

This factsheet doesn't cover everything about this drug and shouldn't be used in place of advice from your MS specialist team. For more information speak to them, and read the online information from the drug's makers (see the section **More information and support**).

What is glatiramer acetate?

Glatiramer acetate is one of the oldest drugs used to treat MS. It was given a licence to be used against relapsing MS in the UK in 2000.

Glatiramer acetate is pronounced: gla-TIR-a-mer ASS-er-tate.

Its brand name is **Copaxone** (co-PAX-own). This drug is also now available under another brand name, **Brabio**.

Can I have this drug?

Glatiramer acetate can be taken for the treatment of 'active' relapsing MS, defined in guidelines as two or more relapses in the last two years. But more and more MS specialists define 'active' MS as one recent relapse and/or signs on MRI scans that MS is

active. These signs include 'lesions' (areas of damage) in your brain.

This drug is also used to treat Clinically Isolated Syndrome or CIS (see box on next page).

Glatiramer acetate has been used for years and doesn't usually have serious side effects. That's why it might be one of the first DMTs someone is given.

So you can take glatiramer acetate if you have:

Scotland, Wales and Northern Ireland

- relapsing MS and you've had a recent relapse and/or if MRI scans show new signs that your MS is active (you have new 'lesions')
- had a clinically isolated syndrome (CIS) and MRI scans show a high chance that you'll go on to get MS

In **England** you can have this drug if:

- you've had two relapses in the last two years

Glatiramer acetate can also be given to children with relapsing MS.

Whether you'll be offered this drug depends on if you qualify for it based on guidelines used by your MS specialist. These come from the Association of British Neurologists (ABN) and the National Institute for Health and Care Excellence (NICE).

In England there are also rules from NHS England about who can have each DMT and when. Scotland, Wales and Northern Ireland also have their own guidelines for many DMTs.

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Whether you can have this drug also depends on whether the NHS where you live will pay for it. NHS guidelines on this tend to follow what NICE says.

You won't get this drug if:

- you're already on another DMT that's controlling your MS well. You can't take more than one DMT at a time
- you have progressive MS

Glatiramer acetate won't work if you don't get relapses. So you won't be offered it if you have primary or secondary progressive MS. But several drugs are being tested to see if they work for people with these non-relapsing, progressive types of MS.

You might not be able to take this drug if you have some health conditions. So tell your MS specialist your full medical history, including any other health problems and medications you're taking.

CIS: Clinically isolated syndrome (CIS) is a first attack of MS-like symptoms. If it happens again, you'll be diagnosed with MS. CIS is caused, like MS, by damage to the coating (myelin) that covers nerves in your brain and spinal cord. MRI scans show if you're likely to go on to get MS (most people do if scans show lesions on their brain).

How do I take it?

You inject this drug once or three times a week using a pre-filled syringe. You can inject under the skin in your arm, thigh, hip or stomach. You can learn how to inject yourself, or a friend or relative can inject you.

Many people afraid of needles find they get used to their injections. You don't need to see the needle going in. That's because injecting often just means clicking on a 'pen' that holds the syringe against your skin.

You'll get instructions and a doctor or nurse stays with you for half an hour after you

inject for the first time. Your MS nurse or someone in your health care team can teach you the best way to inject. This should cut down the chance of side effects (such as infections) on the skin where you inject.

The leaflet these drugs come with has more information about how to inject, travelling with the drug and injecting equipment, and so on (see **More information and support**).

How does it work?

Your immune system fights off infections. But with MS it attacks the nerves in your brain and spinal cord by mistake. This leads to inflammation and damage, especially to the coating that covers your nerves (myelin).

This damage interferes with how signals travel along these nerves. Over time this affects your control over many parts of your body and causes symptoms of MS.

It's not clear exactly how glatiramer acetate works. It seems to attach itself to, then kill, the immune cells that attack the protective myelin coating around your nerves. It also reduces inflammation.

The drug doesn't affect other cells in your immune system. So your body can still fight off infections, though not quite as well as before.

How well does it work?

When DMTs, including glatiramer acetate, are working well, you have:

- fewer relapses (there's no evidence this drug makes relapses less severe)
- fewer new or bigger 'lesions' (or 'plaques') in your brain and spinal cord (lesions can be seen on MRI scans)
- a slowdown in your disability getting worse

Like other DMTs, glatiramer acetate works best the sooner you start it after you're diagnosed with MS. Taking it later can also have benefits, but it can't undo any permanent disability you may already have.

DMTs can be split into three groups, according to how big their effect can be:

High (they can work very well):

- alemtuzumab (Lemtrada)
- natalizumab (Tysabri and Tyruko)
- ocrelizumab (Ocrevus) when used for relapsing MS
- ofatumamab (Kesimpta)
- ublituximab (Briumvi)
- haematopoietic stem cell transplantation (HSCT)

Good (they can work well):

- cladribine (Mavenclad)
- dimethyl fumarate (Tecfidera)
- diroximel fumarate (Vumerity)

- ponesimod (Ponvory)
- siponimod (Mayzent) for active secondary progressive MS
- ozanimod (Zeposia)
- fingolimod (Gilenya)

Moderate (they can work fairly well):

- **glatiramer acetate (Copaxone and Brabio)**
- three different beta interferons (Avonex, Rebif and Plegridy)
- teriflunomide (Aubagio)
- ocrelizumab (Ocrevus) when used for early primary progressive MS

The effectiveness of glatiramer acetate is classed as ‘moderate’



Relapses dropped by: 34% compared to placebo

This means that in one trial, on average, people saw a 34% drop in the number of relapses they had. This was compared to people who took a placebo, a dummy treatment with no drug in it.


How many people stayed free of relapses when they took this drug?

77% of people who took glatiramer acetate stayed free of relapses over one year



66% of people who took the placebo stayed free of relapses.



 = no relapses

Disability getting worse was slowed down by: a modest amount compared to placebo

This means that in a trial, on average, people saw a modest drop in the risk of their disability getting worse. This was compared to people who took a placebo.

The evidence about the benefits of glatiramer acetate here comes from a 2013 trial involving 1,524 people over one year. In another trial there was no difference between this drug and dimethyl fumarate.

Glatiramer acetate might work much better for you than these average results - or it might not work well as well.

Long-term benefits: the study lasting one year didn't show much impact on how fast people's disability got worse. But a study over six years showed that glatiramer acetate (or beta interferon) does slow this down, and that this effect is much bigger than 'modest'.

Impact on CIS:

This drug can also reduce by about 40% someone's chances of going from having Clinically Isolated Syndrome (CIS) to getting more symptoms and a diagnosis of MS.

What side effects might I get?

Like all drugs, glatiramer acetate can have side effects, but not everyone gets them. Not many people stop taking it because of side effects.

The more effective a DMT is, the more risk of serious side effects. Glatiramer acetate (along with beta interferons) is the DMT that is least effective at controlling MS, but has the lowest risk of serious side effects. This drug has been used for MS for over 20 years, so we know it's generally safe.

Some DMTs might harm unborn babies but there's no evidence glatiramer acetate does this. The makers of one brand of it, Copaxone, say their drug can be used during pregnancy if the neurologist and woman agree. If you're a woman who might become pregnant and you want to take this drug, ask your neurologist for advice. For more on getting pregnant, see the section **I want a child. Can I take glatiramer acetate?**

At the beginning of treatment, side effects are common but tend to become less as time

goes on. Your neurologist, GP or MS nurse can give you advice about ways to deal with side effects.

The most common side effects reactions where you inject yourself (most people get some of the following)

- reddening, hardening, bruising, swelling or itching of the skin
- your MS specialist such as an MS nurse can help you learn good injection technique to help reduce these side effects
- injection reactions are less likely as time goes on
- people can get 'lipoatrophy' (in some studies half to three quarters of people get this)
 - this means they lose fat in small areas under the skin where they inject, leaving dents which usually don't go away
 - keep this to a minimum by looking out for early signs of dents and not injecting there but in a different part of the body each day

other common reactions

- some people (more than one in ten) have a reaction within a few minutes of their injection, with one or more of these symptoms: flushing (going red in the face or chest), shortness of breath or chest pain or palpitations (a pounding heart)
- these symptoms don't normally cause any problems and usually go within half an hour, but they could happen any time while you're taking this drug.

Other very common side effects

(more than one in ten get at least one of these)

- infections
- flu or flu-like symptoms
- anxiety or depression
- headache
- feeling sick or weak
- skin rash
- pain in the joints or back

If any of these symptoms last longer than an hour, see a doctor straight away or go to the casualty department of your nearest hospital. You might need emergency treatment.

An uncommon but serious side effect




A serious allergic reaction can happen with this drug called anaphylaxis. It's uncommon, but it can be life-threatening. If this happens, it's usually within an hour of injecting the drug. It's most likely when people first start taking glatiramer acetate. But it can also happen months or years into the treatment. Between one in every 100 people and one in every 1,000 people on glatiramer acetate has this reaction.

Symptoms of this reaction include wheezing, difficulty breathing, swollen lips, throat or face, and hives (a skin rash). This reaction can quickly become life-threatening, so immediate emergency medical help is needed. These symptoms can be similar to common injection reactions that come with this drug. So your health care team should tell you what to look out for, and what to do if you notice signs of the more dangerous (but uncommon) allergic reaction.

In **More information and support** you'll find where you can get a full list of all possible side effects and other information about this drug.

Side effects: weighing up the risks of DMTs

Only you can decide what level of risk you're happy to take. You'll need to weigh up:

-  possible risks against the benefits you could enjoy
-  taking a DMT with fewer side effects but less impact, against a DMT with better results but maybe more serious side effects
-  the risk of not being treated

This last point is now clear. We now know that damage could be taking place in your brain between relapses, when it might seem nothing is happening with your MS.

Before deciding, talk to others and get the information you need. Some ideas are in **More information and support**.

What tests will I need?

Most people won't need blood tests while on this drug (unless they had heart or kidney problems before they started it). As part of your treatment ABN guidelines say it's a good idea to have MRI scans to see how well the drug is controlling your MS.

When should I stop taking this drug?

Glatiramer acetate is meant to be taken long term. If this drug is controlling your MS well and side effects aren't a problem, you should be able to take it for years. Your neurologist might recommend you stop taking glatiramer acetate and switch to another DMT. This can happen if you have bad side effects or the drug isn't controlling your

MS. Switching drugs usually only happens after you've taken a drug for six months. You'll need to stop taking glatiramer acetate if your MS changes to secondary progressive MS.

DMTs available now can't help people whose MS doesn't have relapses or inflammation on MRI scans. But many clinical trials are underway testing drugs for these non-relapsing progressive types of MS.

You'll also need to discuss with your neurologist whether to stop taking glatiramer acetate if you're a woman thinking about getting pregnant (see next section for more details).

I want a child. Can I take glatiramer acetate?

Some DMTs might harm unborn babies, but there's no evidence that glatiramer acetate does this. Over 20 years, and in thousands of pregnancies, no harm has been seen to any babies of women who take this drug.

In 2017 the makers of Copaxone, one of the two brands of glatiramer acetate, said it could be used during pregnancy. Its makers say a woman should talk to her neurologist about whether to take Copaxone during pregnancy. Leading MS specialists believe it's safe for women to take.

Ask your neurologist for advice if you're a woman trying to get pregnant, if you're already pregnant, or think you might be.

If you're a woman who decides to stop taking this drug before getting pregnant, you need to wait until the amount of it in your body drops to a certain level. The time this takes is called the 'washout period'. Doctors might recommend a month or less for this drug. Blood tests check that the level of drug in your blood has dropped low enough.

Women who've just had a baby are more likely to have a relapse. So it's recommended that if they stop taking their DMT, they restart it soon after giving birth.

If you're a mother who wants to breastfeed, ask your neurologist for advice about feeding

this way while taking glatiramer acetate (and for a month after you stop taking it). There's no evidence this drug gets into breast milk. It seems unlikely that would happen.

Men and women with MS who want to have a child should discuss this with their neurologist. Women who think they may be pregnant should also talk to a neurologist.

More information and support

If you search our website for 'early treatment', you'll find more about treatment, a report on the evidence for early treatment, and links to our basic guide to DMTs and factsheets on other DMTs.

Guidelines say everyone should have a review of their MS and treatment with a specialist at least once a year. But if you're not happy with the treatment you're offered, find tips about what to do at: mssociety.org.uk/about-ms/treatments-and-therapies/getting-treatment-for-ms

Elsewhere on the MS Society site you'll find the latest updates on research into drugs for the different types of MS.

Patient information leaflets

Every DMT comes with detailed information about doses, how to store and take it, side effects and results from trials. Find the one for this drug at medicines.org.uk and search for 'glatiramer acetate' or 'Copaxone' or 'Brabio'. The circle with 'PIL' on it has information written for patients. The circle with 'SPC' on it has information for doctors.

Your MS specialist team

Your neurologist, MS nurse and other members of your specialist team can give you information and support, as can your GP often. MS nurses, if you have one where you are, can be especially helpful if you need support taking a DMT.

mssociety.org.uk/forum

On this and other online forums you can talk to others thinking about treatment or already taking it.

About this resource

With thanks to Louise Coghlin and all the neurologists and people with MS who contributed to this factsheet.

Disclaimer: We have made every effort to ensure that the information in this publication is correct. We do not accept liability for any errors or omissions. Availability and prescribing criteria for drugs in various parts of the UK may change. Be sure to seek local advice from the sources listed.

Let us know what you think

If you have any comments on this information or on the work of the MS Society, please send them to resources@mssociety.org.uk

References

A list of references is available on request. Call **0300 500 8084**.

Further information from the MS Society

Resources

Our award winning information resources cover every aspect of living with MS.

- **0300 500 8084**
- shop@mssociety.org.uk
- www.mssociety.org.uk/publications

Helpline

The Freephone MS Helpline offers confidential emotional support and information for anyone affected by MS, including family, friends and carers.

Information is available in over 150 languages through an interpreter service.

- **0808 800 8000** (closed weekends and bank holidays)
- helpline@mssociety.org.uk

We're the MS Society. Our community is here for you through the highs, lows and everything in between. We understand what life's like with MS.

Together, we are strong enough to stop MS.

Contact us

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Lines are open Monday to Friday, 9am – 5pm
- Visiting us at: **mssociety.org.uk/donate**
- Posting your donation to: MS Society, Carriage House, 8 City North Place, London N4 3FU. Please make cheques payable to the 'MS Society.'

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This factsheet will be reviewed within three years of publication.

