

# Which injectable medication should I take for relapsing-remitting multiple sclerosis?

A decision aid to discuss options with your doctor

## This decision aid is for you if you:

- Have multiple sclerosis
- Have a new diagnosis of multiple sclerosis
- May be interested in starting an injectable medication

## What is multiple sclerosis?

Multiple sclerosis (MS) is a disease where your body's own cells attack the coating that covers the nerves in your brain and spinal cord. This coating is called myelin. Its job is to help electrical signals move quickly from your brain to the right parts of your body. If your body attacks myelin, then the nerves cannot work correctly in the area that is attacked. This causes symptoms such as numbness, weakness, problems walking, and changes in your vision. The most common form of the disease is called "relapsing-remitting." In this form, there are relapses, where you have new symptoms, and remitting times, where you do not have new symptoms and may improve.

Without treatment, multiple sclerosis can damage your brain and spinal cord. This may lead to permanent problems in the future. With effective treatment, the relapses may be less severe than without treatment. The number of relapses you have may decrease or even stop, which is called remission.

Multiple sclerosis is a progressive disease. This means that it is likely to get worse as you age. Doctors measure this worsening in steps. For example, an early step may mean that you can walk normally. A later step may mean that you need to use a cane to help you walk. Treatment can slow down how quickly you move from one step to the next. Even with treatment, multiple sclerosis can be a disease that gets worse with time. However, early and continued treatment is important to help prevent or delay long-term problems.

## What are your treatment options?



**Take an injectable medication:** One to four times a week, you inject medication under the skin of your stomach, upper arm, thigh, or buttock. A doctor or nurse will teach you how to do this. People who are afraid of shots can take these injections with little or no discomfort. The medicine needs to be stored in the refrigerator. If you feel discomfort when you take the medication, remove it from the refrigerator and let it warm up for 30 minutes before you inject it. You may get a bruise or a rash with these medications.



**Take an oral medication (not discussed here):** One to two times a day, you swallow a pill. The medication in the pills is new and usually not the best choice for new patients like you.



**Decline medications and wait to see if your symptoms get worse:** You may want to discuss other treatment options with your doctor.

## What are the injectable medications?

The two types of injectable medications are called beta-interferons and glatiramer acetate. All of the injectable medications have been around for 15-20 years and are safe for people like you.

**Beta-interferon injectable therapies:** We do not know exactly how beta-interferons work, but we think that they stop the body from attacking the myelin coating your nerves. These medications reduce how often you have relapses and how bad they are.

The beta-interferons are made under different brand names: Betaseron/Extavia, Rebif, Avonex and Plegridy. The side effects of these drugs are similar. The most common side effects are pain, itching, redness, or swelling over your skin where the injection is given, flu-like symptoms (muscle aches, fatigue, fever, headaches), worsening of depression, and abnormal liver and thyroid tests. Rarely, serious side effects have occurred, including liver failure. Your doctor will ask you about and watch for side effects. You may need to have a blood test to catch small problems before they become serious. Ibuprofen or Tylenol can help if you have flu-like symptoms.

**Betaseron/Extavia®** – (Interferon B1b subcutaneous) Inject under the skin *every other day*.

**Rebif®** – (Interferon B1a subcutaneous) Inject under the skin *three times per week* (e.g., Monday, Wednesday and Friday) at least 48 hours apart.

**Avonex®** – (Interferon B1a intramuscular) Inject into a muscle *once per week*.

**Plegridy®** - (Peginterferon B1a, subcutaneous) Inject under the skin *every two weeks*.

**Glatiramer acetate injectable therapy:** Glatiramer acetate is similar to one part of the myelin around your nerves. When you take this drug, your body attacks the drug instead of the myelin. This reduces how often you have relapses and how bad they are.

The most common side effects are pain, itching, redness, swelling, and puckering of your skin where the injection is given. Immediately after injecting the drug, you may experience chest pain, flushing, anxiety, fast heartbeat, shortness of breath, or itching. These symptoms disappear quickly and usually do not require treatment. If these symptoms do not go away after fifteen minutes, see a doctor.

**Copaxone®** – (Glatiramer acetate subcutaneous) Inject a small dose under the skin *once a day* or a larger dose under the skin *three times a week* (e.g., Monday, Wednesday, and Friday).

**NOTE:** In studies, all injectable medications (Copaxone, Betaseron/Extavia, Rebif) have been found to be about the same in reducing how often relapses occur and how bad they are, except for Avonex, which is a little less effective.

## What are the oral medications?

Oral medications (pills) for multiple sclerosis became available about three years ago. They are fingolimod (Gilenya®), teriflunomide (Aubagio®), and dimethyl fumarate (Tecfidera®). Each oral medication works a little differently. Since they are so new, we do not have a lot of information about how safe they are, especially if you take them for many years. This is why your doctor may have recommended starting with injectable medications. Check with your doctor if you have questions about the oral medications.

## Choosing the right injectable medication for you:

There are many things to consider when choosing an injectable medication for your multiple sclerosis. Your doctor will work with you to answer your questions and help find the right medication for you.

## Working through the 4 steps of this decision aid may help you consider the options.

### What other health factors may affect your choice?

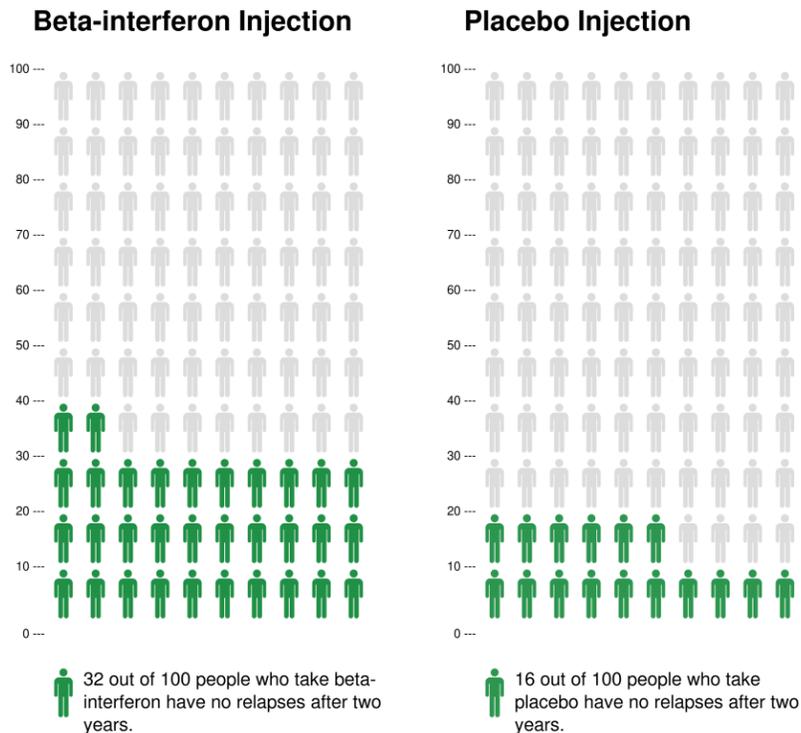
Check  any that apply and discuss your concerns with your doctor.

<input type="checkbox"/> I have liver failure with high liver enzymes	<input type="checkbox"/> I have a cardiac condition, such as chest pain or heart failure
<input type="checkbox"/> I have anxiety or depression	<input type="checkbox"/> I am pregnant or planning on becoming pregnant
<input type="checkbox"/> I am a heavy drinker or an alcoholic	
<input type="checkbox"/> <b>None</b> of these apply to me	

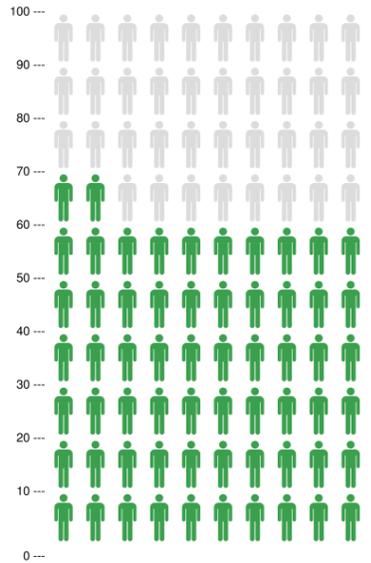
## Step 1: What are the benefits and side effects of the beta-interferons and glatiramer acetate?

The graphs that follow show what happens to **100 people** with multiple sclerosis who take beta-interferon injection or placebo injection (an injection without medication) for **2 years**. Even though the graphs only show the results for beta-interferon injection, research shows that beta-interferon and glatiramer acetate injections work equally well. There is no way to know how the medications will work for you.

### Benefits

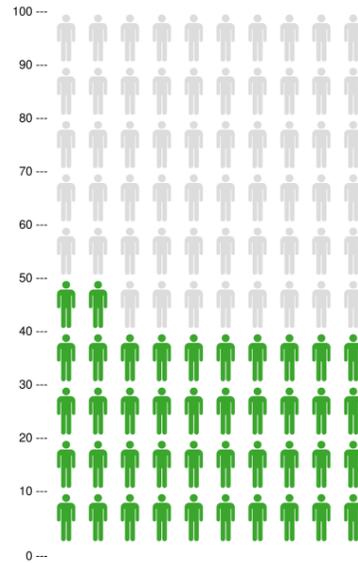


### Beta-interferon Injection



62 out of 100 people who take beta-interferon have no serious relapses after two years.

### Placebo Injection



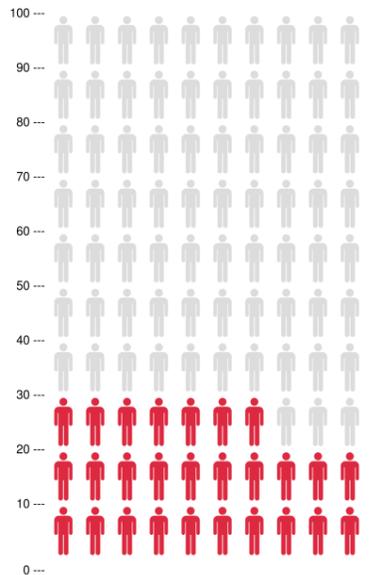
42 out of 100 people who take placebo have no serious relapses after two years.

Injectable medications delay the progression of multiple sclerosis by 9 months on average.

- If people take **beta-interferon injection** for 2 years, it takes an average of **21 months** for multiple sclerosis to progress to the next step.
- If people take **placebo injection** (injection without medication) for 2 years, it takes an average of **12 months** for multiple sclerosis to progress to the next step.

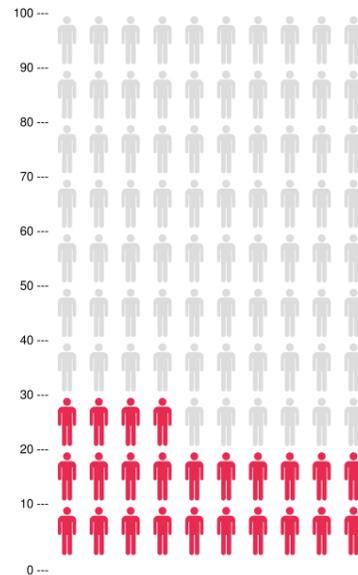
### Side Effects

#### Beta-interferon Injection



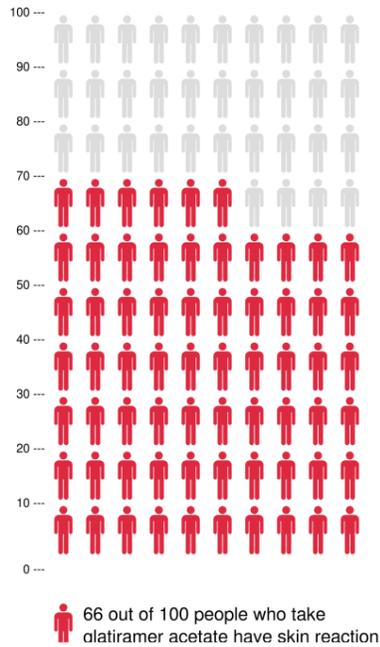
27 out of 100 people who take beta-interferon have flu-like symptoms.

#### Placebo Injection

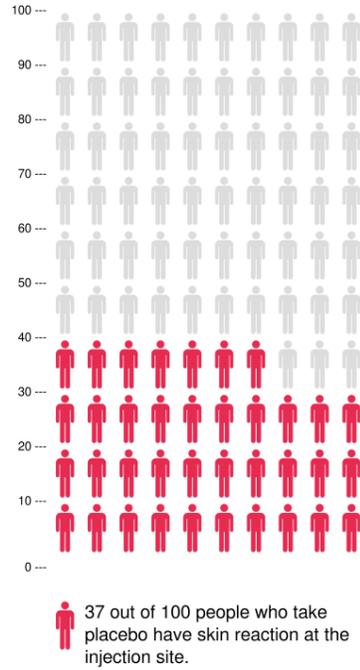


24 out of 100 people who take placebo have flu-like symptoms.

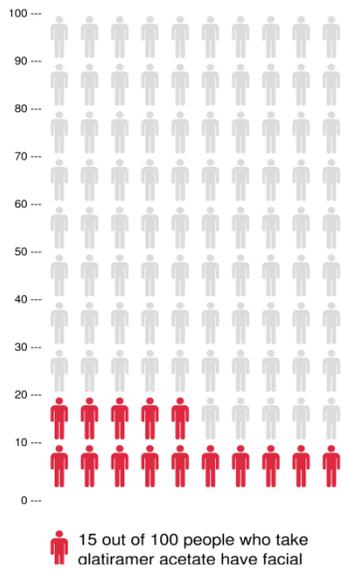
### Glatiramer acetate Injection



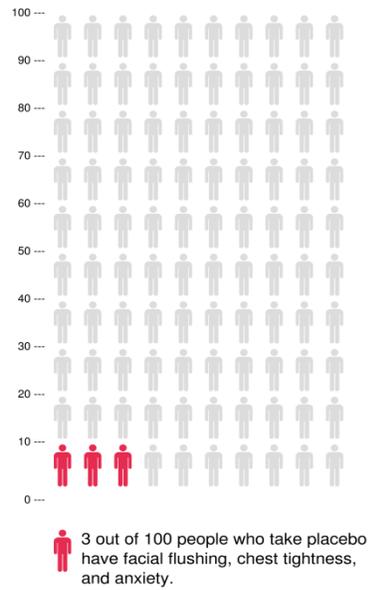
### Placebo Injection



### Glatiramer acetate Injection



### Placebo Injection



## Step 2. What matters most to you?

Common reasons to choose each option are listed below.

Check  how much each reason matters **to you** on a scale from 1 to 5.

'1' means it is **not** important to you. '5' means it is **very** important to you.



Should I take an injectable medication?	Not Important			Very Important	
How important is it for you to...	1	2	3	4	5
Have fewer relapses?	<input type="checkbox"/>				
Have less severe relapses?	<input type="checkbox"/>				
Reduce or delay progression to the next step in disability from multiple sclerosis?	<input type="checkbox"/>				



Adverse effects of <b>beta-interferon</b> or <b>glatiramer acetate</b> .	Not Important			Very Important	
How important is it for you to...	1	2	3	4	5
Avoid flu-like symptoms? (Caused by beta-interferons)	<input type="checkbox"/>				
Avoid temporary flushing and chest tightness? (Caused by glatiramer acetate)	<input type="checkbox"/>				
Avoid injections and injection site reactions? (Caused by glatiramer acetate)	<input type="checkbox"/>				
Have fewer injections?	<input type="checkbox"/>				

Injectable medications are the only things shown to result in fewer relapses, less severe relapses and reduce or delay progression of disability. If these outcomes are important to you, it is appropriate for you to consider taking an injectable medication.

**Now, think about which option has the reasons that are most important to you...**

### Which option do you prefer?

Check  one.

- Take beta-interferon
- Take glatiramer acetate
- Take an injectable medication and discuss your options with your doctor
- Decline an injectable medication and discuss other options with your health care provider
- I don't know

### Step 3: What else do you need to prepare for decision making?

**Find out how well this decision aid helped you learn the key facts.**

Check  the best answer.

	Taking injectable medication	Declining injectable medication	Don't know
1. Which option <u>increases your chance of</u> having fewer and less severe relapses/attacks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Which option <u>lowers your chance of</u> disability progression?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Which option has the <u>greater risk</u> of skin reactions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Which option has the <u>lowest risk</u> of flushing, chest pain and tightness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Check your answers at the bottom of the page.

**Find out how comfortable you feel about deciding.**



Do you know the benefits and harms of each option?

**Yes**

**No**




Are you clear about which benefits and harms matter most to you?




Do you have enough support and advice to make a choice?




Do you feel sure about the best choice for you?



If you answered 'No' to any of these, discuss with your neurologist. (The SURE Test © O'Connor & Légaré, 2008)

Answers for the key facts: 1. Taking an injectable medication 2. Taking an injectable medication 3. Taking an injectable medication 4. Declining an injectable medication

### Step 4: What are the next steps?

Check  what you want to do next.

- I have decided to take one of the beta interferons
- I have decided to take glatiramer acetate
- I have decided not to take an injectable medication
- I need to discuss the options with my neurologist and family.
- I need to read more about my options.
- Other, please specify \_\_\_\_\_

**This information is not intended to replace the advice of a health care provider.**

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