Multiple Sclerosis

Multiple Sclerosis (MS) is a disease of the central nervous system (brain and spinal cord) that affects approximately 400,000 men and women in the prime of their lives. In its most serious form MS can be extremely disabling, making it difficult to perform even the simplest tasks.

Because MS is such as serious and life altering disease it is important to learn as much you can about the disease, how to treat it and most importantly how to live with it.

The central nervous system (CNS) is responsible for controlling all involuntary and voluntary functions of the body such as breathing, body movements, vision, etc. To be able to fully grasp the nature of this disease it's important to understand the roles and functions of the CNS, specifically the means by which the brain and spinal cord send messages throughout the body.

The brain sends messages via neurons to the spinal cord. The spinal cord in turn delivers the message to its intended target where it’s received and the desired action is performed. In the case of MS, myelin sheaths (see below) that cover the neurons become swollen and detached causing them to become scarred (sclerosis). The scarring causes a distortion in the messages sent by the brain and/or spinal cord to its intended target. This can result in impaired movement, vision and control of certain bodily functions.

Causes and Risks:

There is no clear cut reason why some people get MS. Some believe that MS resembles an autoimmune disease such as rheumatoid arthritis. In the case of an autoimmune disease the body’s immune system sees normal body components as invading foreign matter and tries to rid the body of the matter by sending out antibodies to destroy it. With MS it is thought that the body, for whatever reason, sees myelin as foreign matter and attacks it. The end result is the myelin becoming inflamed, detached, and thus leads to scarring on the neuron.

Other experts believe that viruses and/or bacteria enter the body and attack the myelin sheath. It is not clear what virus or bacteria if any are responsible.

Lastly, some believe that MS might be a genetic disorder, meaning individuals have genes that cause MS or at minimum predispose them to the disease.

Although several theories exist, experts are still unsure of what the root cause of MS is.

Signs and Symptoms:

Common MS symptoms experienced in the early stages of the disease include:

- Numbness or tingling in the arms and legs
- Blurred or double vision
- Fatigue
- Dizziness
- Muscle weakness
As the disease progresses the symptoms above become more pronounced and additional symptoms such as the ones below may occur.

- Slurred speech
- Depression
- Bowel and bladder problems
- Sexual problems
- Memory loss and shortened attention span
- Paralysis
- Blindness

Like symptoms, disease severity also varies from person to person. Because of this, in 1996 world-wide experts on MS came up with the following severity classifications:

- Relapsing-Remitting: periods of symptoms followed by periods without symptoms and with little, if any, disease progression. This is the most common form of MS making up about 85% of all cases.
- Primary-Progressive: slow but steady worsening of symptoms and disease progression with few periods of relief. About 10% of people with MS will have this form of the disease.
- Secondary-Progressive: appears initially to look like relapsing-remitting but eventually symptoms worsen and the disease continues to progress without periods of relief or remission. The MS Society estimates that about 50% of all relapsing-remitting patients will progress to this form of MS. However, advances in disease-modifying therapy may have lowered these numbers since they've been introduced.
- Progressive-Relapsing: continued disease progression with regular flare-ups with or without period’s of remission. Affects only about 5% of all MS patients.

Although very debilitating in its worst forms, MS is not fatal.

**Take Control:**

Since preventing MS is not possible, finding ways to manage and cope with the disease becomes the number one priority. A starting point should always be getting routine medical care from a doctor who specializes in treating MS. A specialist will be able to properly assess the severity of the disease as well as use the right treatments to minimize disease progression and treat symptoms as they appear.

Aside from quality and routine medical care, proper nutrition and exercise is a good way to take control of MS. Good nutrition is key because it lets the body perform at its maximum capacity. It also provides the vitamins and minerals which help to keep even the smallest body components like cells and nerves healthy. Eating a well-balanced diet with foods from all the major food groups is the best way to make sure you’re eating enough of the right foods. It also makes certain that you get the essential vitamins and minerals you need to stay healthy. They include:

- Vitamin D – improves immune system functions
- Vitamin A – promotes good vision and cell development
- Vitamin C – builds and sustains body tissues, also good for preventing urinary tract infections
- Vitamin E – prevents damage to cells membranes and possibly myelin
- Vitamin B12 - supports adequate CNS performance
- Selenium – an antioxidant which may be deficient in people with MS
- Calcium – promotes strong bones and teeth. Protect against osteoporosis which is prevalent among people with MS
- Zinc – seems to play a role in activating the immune system

Many people with MS struggle with weight issues because they are unable to remain active and stay in shape. Even eating the recommended amount of foods and calories can lead to weight gain. So it’s important to discuss your diet with a doctor immediately so they can get you on food plan that is right for you.

Studies have shown that exercise is a key factor in limiting disability and maintaining a good quality of life for people with MS. Improving heart health, and keeping muscles and bones tone will lead to:

- Improved bladder and bowel functions
- Better rest and sleep
- Decreased risk of depression
- Improved attitude and willingness to engage in social activities
Consult with a health care professional about the types of exercise you should be doing before starting an exercise routine. Many times they’ll recommend aerobic activities such as walking, riding a bike, swimming, etc. They might also recommend water exercise. Water exercise is great for people with MS because the buoyancy of the water relieves pressure from muscles, bones and joints during exercise. This allows those who’ve been impaired by MS to still engage in fun and healthy exercise.

**Treatment Options:**

Though there is no cure for Multiple Sclerosis, there are a number of effective treatments available that can slow the progression of the disease. The goals in treating MS are to reduce the number and severity of relapses and to prevent the disease from worsening. Some of the medications most widely used to slow MS progression, such as Avonex®, Betaseron®, and Rebif®, are called interferons. Other medications, which are not interferons, that do this as effectively are glatiramer acetate (Copaxone®) and mitoxantrone (Novantrone®) These drugs along with the interferons have proven to be some of the most effective medications for relapsing Multiple Sclerosis.

It is difficult to tell how well a treatment is working because symptoms of MS naturally come and go. Although attacks sometimes continue to occur, they tend to be shorter and less severe in people receiving these medications. Still, it is unlikely that any of these medications will reverse existing disabilities.

All these medications are effective and your doctor’s choice of which medication to use will normally be based on the following:

- The number of relapses
- The severity of symptoms
- The degree of disability
- The type of Multiple Sclerosis
- The duration of the disease
- The severity of your disease
- The findings of MRI scans
- The type of injection preferred

You and your physician should review your drug treatment options, assessing the risks and benefits each offer and choose the best treatment for you. Some people respond better to one drug than another, or have side effects on one and not another. It is important that the choice of treatment be tailored to your specific medical needs.

Patients with MS often times may experience symptom flare ups while on treatment with some of the medications listed above. Therefore, steroids (Solu-medrol®, prednisone, and dexamethasone) are often given to reduce the severity of these flare-up attacks.

Most people with Multiple Sclerosis will experience more than one symptom, and though there are symptoms common to many people, no person would have all of them. There are many recognized treatments for some of these symptoms which can be very effective. More information about some of the medications or treatments for these symptoms can be found by clicking on the symptom below.

**Spasticity / Muscle Spasms**

**Fatigue**

**Mood Problems**

**Pain**

**Difficulty with speech and swallowing**

**Depression**

**Bladder Control**

Physical therapy, speech therapy, occupational therapy, and support groups may also be useful in controlling or managing many of the symptoms listed above. These can help improve outlook, reduce depression, maximize function, and improve coping skills. A planned exercise program early in the treatment of Multiple Sclerosis can help with maintaining muscle tone. A healthy lifestyle is encouraged, including good general nutrition. Adequate rest and relaxation can help maintain energy levels. Attempts should be made to avoid fatigue, stress, temperature extremes, and illness to reduce factors that may trigger an MS attack. It is important to talk with your doctor about these options.

**Interferons**

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<th>Brand Name</th>
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<tbody>
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<td>Avonex</td>
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<tr>
<td>Betaseron</td>
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</tr>
<tr>
<td>Rebif</td>
<td>Interferon beta-1a</td>
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</table>
How do they work?

The precise way these medications work is not known. Interferons have many actions that affect the immune system or our body's own defense system. Interferon is a substance that is naturally made by our body's cells to fight infections and tumors. Many diseases such as MS, are thought to result from our body's own defense (immune system) attacking certain cells in our body. These man-made or synthetic versions of interferons have been made in order to adjust the body's defense system in such a way that it reduces the symptoms of this condition. Although these medications are not a cure for MS, they have been proven to slow the course of the disease.

Avonex is given as a once-a-week intramuscular (IM) injection, usually in the large muscles of the thigh, upper arm or hip under the guidance and supervision of a physician.

Rebif is given three times a week subcutaneously (between the fat layer just under the skin and the muscles beneath). The physician or nurse will instruct you in the injection procedure, using a specially designed set of training materials. Do not attempt to inject yourself until you are sure that you understand the procedures.

Betaseron is injected subcutaneously (between the fat layer just under the skin and the muscles beneath) every other day. The physician or nurse will instruct you in the injection procedure, using a specially designed set of training materials. Do not attempt to inject yourself until you are sure that you understand the procedures.

Special patient directions come with each of these self injected medications. Read the directions carefully before using the medicine.

Rebif is injected subcutaneously as well, and is administered subcutaneously at the same time (preferably late in the afternoon or evening) on the same days of the week at least 48 hours apart, giving three injections per week. The physician or nurse will instruct you in the injection procedure, using a specially designed set of training materials. Do not attempt to inject yourself until you are sure that you understand the procedures.

Special patient directions come with each of these self injected medications. Read the directions carefully before using the medicine.

With any of these medications, make sure you understand:

- How to prepare the injection.
- Proper use of disposable syringes.
- How to give the injection.
- How long the injection is stable.

If you have any questions about any of this, please check with your health care professional.

Unwanted side effects cannot be predicted. If any develop or get worse, inform your doctor as soon as possible. Only your doctor can determine if it is right for you to continue therapy.

The more common side effects include: chills, diarrhea, fever, pain, unusual bleeding or bruising, unusual tiredness or weakness, and flu-like symptoms including headache, joint pain, muscle aches, and nausea. Most of these symptoms tend to disappear over time. If they continue, become more severe, or cause significant discomfort, be sure to talk them over with your physician.

Less common side effects include: stomach pain, chest pain, clumsiness or unsteadiness, convulsions (seizures), coughing, decreased hearing, difficulty in swallowing, dizziness, fainting, flushing, hives or itching, mood changes, especially with thoughts of suicide, muscle spasms, pelvic discomfort, aching or heaviness, redness, swelling or tenderness at place of injection, runny or stuffy nose, skin lesions, sneezing, sore throat, speech problems, swelling (face, lips, or eyelids), troubled breathing, and wheezing.

Since flu-like symptoms are a very common side effect associated with at least the initial weeks of taking these medications, it is recommended that these medications be taken at bedtime. Taking acetaminophen or ibuprofen thirty minutes before each injection will also help to relieve the flu-like symptoms.

Because injection site reactions (swelling, redness, discoloration, or pain) are relatively common, it is recommended that the sites be rotated according to a schedule provided for you by your physician. In order to avoid infection and other complications, you should report promptly any break in the skin, which may be associated with blue-black discoloration, swelling, or drainage of fluid from the injection site. Your physician will determine whether to continue treatment while the skin lesions are being treated.
The presence of other medical problems may be affected by the use of these medications. Make sure you tell your doctor if you have any other medical problems, especially:

- Depression, anxiety, or trouble sleeping
- Thyroid gland problems
- Blood problems such as bleeding or bruising easily, anemia, low white cell count
- Seizures
- Heart problems
- Liver disease

Because of the potential of some of these medications to affect the functioning of the liver and thyroid gland, and to cause a drop in the levels of white blood cells, red blood cells, and platelets in a person’s system, periodic blood tests are recommended.

If these medications are taken with certain other drugs, the effects of either could be increased, decreased, or altered. It is especially important to check with your doctor or pharmacist before combining it with your other medications.

I am pregnant or breast feeding. Is this medication safe for me to take?

These medications should not be used during pregnancy or by any woman who is trying to become pregnant. Women taking these medications should use birth control measures at all times. These medications have not been studied in pregnant women. However, studies in animals have shown that it may cause miscarriages. Be sure your doctor knows if you are pregnant or if you may become pregnant. It is not known whether these medications pass into breast milk. Because of the possibility of serious unwanted effects in the nursing infant, it is important that you discuss the use of this medicine with your doctor if you wish to breast-feed.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THESE MEDICATIONS.

Copaxone

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<th>Generic Name</th>
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<tbody>
<tr>
<td>Copaxone</td>
<td>Glatiramer acetate</td>
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How does it work?

Multiple Sclerosis is thought to involve an autoimmune reaction in which the body’s own immune cells, also known as T cells, attack myelin. Myelin is the insulating material that surrounds the nerve fibers in the central nervous system (CNS). The CNS is made up of the brain, spinal cord and optic (in the eye) nerves. It is thought that this medication encounters and stimulates these T cells to change from “harmful” or pro-inflammatory T cells to “beneficial” or anti-inflammatory T cells. By doing this the medication is thought to target the site of the lesion and reduce inflammation. These beneficial actions help reduce the number of relapses in MS.

How do I take this medication?

The dose of this medications is individualized based on your condition and is injected subcutaneously (between the fat layer just under the skin and the muscles beneath) every day. Patients or family members who first receive proper training in aseptic injection techniques can perform the injections without medical supervision.

Special patient directions come with this self injected medication. Read the directions carefully before using the medicine. Make sure you understand:

- How to prepare the injection.
- Proper use of disposable syringes.
- How to give the injection.
- How long the injection is stable.

If you have any questions about any of this, please check with your health care professional.

Unwanted side effects cannot be predicted. If any develop or get worse, inform your doctor as soon as possible. Only your doctor can determine if it is right for you to continue therapy.

The more common side effects include: anxiety, bleeding, pounding heartbeat, hard lump, hives or welts, itching, pain, redness, or swelling at the place of injection, and flushing or redness and warm feeling in face.

Less common side effects include: agitation; bloating or swelling, chills, confusion, fainting, fever, migraine, muscle aches, purple spots under the skin where injection occurs, skin rash, small lumps under the skin; spasm of throat, strong urge to urinate, swelling of fingers, arms, feet, or legs, tightness in chest or wheezing.
Immediate post-injection reaction may occur with this medication. Approximately 13% (13 out of a 100) of individuals using this medication will experience, at one time or another, a transient (very temporary) reaction immediately after injecting it. This reaction, which usually occurs only once, includes flushing or chest tightness with heart palpitations, anxiety, and difficulty breathing. This reaction occurs very rarely (usually within minutes of an injection) and lasts approximately 15 minutes and resolves without further problem.

Because injection-site reactions (swelling, redness, discoloration, or pain) are relatively common, it is recommended that the sites be rotated according to a schedule provided for you by your physician. Do not use any one site more than once per week.

It is not known yet that if this medication is taken with certain other drugs, that the effects of either could be increased, decreased, or altered. It is always important to check with your doctor or pharmacist before combining it with your other medications. Tell your health care professional if you are taking any other prescription or nonprescription (over-the-counter [OTC]) medicine.

The presence of other medical problems may affect the use of this medication. Make sure you tell your doctor if you have any other medical problems.

I am pregnant or breast feeding. Is this medication safe for me to take?

The effects of this medication during pregnancy have not been adequately studied. However, this medicine has not been shown to cause birth defects or other problems in animal studies. If you are pregnant or plan to become pregnant, inform your doctor immediately. It is not known whether this medication passes into the breast milk. Although most medicines pass into breast milk in small amounts, many of them may be used safely while breast-feeding. Mothers who are taking this medicine and who wish to breast-feed should discuss this with their doctor.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THIS MEDICATION.

Novantrone

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<tbody>
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<td>Mitoxantrone</td>
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How does it work?

This medication belongs to the general group of medicines called antineoplastics or cancer medications. Prior to its approval for use in Multiple Sclerosis, it was used only to treat certain forms of cancer. MS is thought to involve an autoimmune reaction in which the body’s own immune cells, also known as T cells, attack myelin. This medication acts in MS by suppressing the activity of T cells, B cells, and macrophages that are thought to lead the attack on the myelin sheath. Myelin is the insulating material that surrounds the nerve fibers in the central nervous system (CNS). The CNS is made up of the brain, spinal cord and optic (in the eye) nerves. Therefore it reduces the number of relapses with the disease and the number of new lesions detected by magnetic resonance imaging (MRI).

How do I take this medication?

The dose of these medications is individualized based on your condition and is given through a needle placed in a vein in your hand or arm. The dose takes about 5 to 15 minutes to deliver. This medication is usually given in your doctor’s office or the hospital or a special clinic. This medication is usually given once every 3 months for about 2 to 3 years (8 to 12 doses). However, this may differ for different patients.

What should I know about these drugs?

Unwanted side effects cannot be predicted. If any develop or get worse, inform your doctor as soon as possible. Only your doctor can determine if it is right for you to continue therapy.

The more common side effects include: nausea, hair thinning, loss of menstrual periods, bladder infections, and mouth sores. The nausea is usually mild and generally lasts for less than 24 hours. A small number of patients treated with this medication develop heart problems (see below). This medication is dark blue in color, so it may turn your urine a blue-green color for a few days after each dose.

Less common side effects include: blood in urine or stools, fast or irregular heartbeat, fever or chills, lower back or side pain, painful or difficult urination, pinpoint red spots on skin, swelling of feet and lower legs, unusual bleeding or bruising.

This medication may damage your heart during therapy or months to years after therapy ends. Heart damage caused by this medication is rare but can be serious and may cause death. Your doctor will perform certain tests to see that your heart is working normally before you start to take this medication. After you have received about 8 doses, your doctor will repeat these heart tests before you receive each additional dose. Your doctor will also perform these tests if you have any symptoms of heart problems. Because the risk to your heart may depend on the total amount of medication that is given, your doctor will limit the number of doses you get. Most patients will reach this limit after about 8 to 12 doses given over 2 to 3 years. After you have reached your limit, you should not receive any additional medication. You and your doctor should both keep track of how much medication you get.
The presence of other medical problems may be affected by the use of this medication or may be affected by this medication. Make sure you tell your doctor if you have any other medical problems, especially:

- heart disease
- cancer chemotherapy treatment
- blood-clotting problems
- low white blood cell counts
- infections
- any known allergies or sensitivities
- previous treatment with Novantrone
- radiation treatment to the chest area
- anemia or low red blood cell counts
- unusual or unexpected bleeding
- liver disease or problems

Because of the potential of this medication to affect the functioning of the liver, heart, and to cause a drop in the levels of white blood cells, red blood cells, and platelets in a person's system, periodic blood tests are recommended.

If this medication is taken with certain other drugs, the effects of either could be increased, decreased, or altered. It is especially important to check with your doctor or pharmacist before combining it with your other medications.

I am pregnant or breast feeding. Is this medication safe for me to take?

Women who are pregnant, are trying to become pregnant, or are breastfeeding should not take this medication because it may harm the baby. You should use birth control while taking this medication to avoid becoming pregnant. Your doctor also should give you a pregnancy test before each dose, and you should know the results of this test before you get each dose of this medication. If you plan on getting pregnant, talk with your doctor about stopping the treatments with this medication. If you do become pregnant, contact your doctor right away.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THIS MEDICATION.

Steroids

The most common treatment for severe flare-ups associated with Multiple Sclerosis is a short course of steroid therapy. These drugs are synthetic (man-made) versions of a hormone (cortisone) produced by the body that reduces inflammation. They do not change the course of the disease but can speed up recovery after an attack. Synthetic steroids, such as prednisone, prednisolone, methylprednisolone and dexamethasone, can be used to shorten the length and severity of an attack.

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<td>Decadron</td>
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<tr>
<td>Deltasone</td>
<td>Prednisone</td>
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<tr>
<td>Solu-Medrol</td>
<td>Methylprednisolone</td>
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<td>Intravenous – given in the vein</td>
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How do they work?

The precise way these medications work is not known. These medications have many actions that affect the immune system (our body's own defense system). Many diseases such as Multiple Sclerosis are thought to result from our immune system attacking certain cells in our body. These medications affect the body's defense system in such a way that it reduces some of the acute symptoms of this condition. Although these medications are not a cure for MS, they have been proven to help with acute flare-ups with the disease.

How do I take these drugs?

The dose of these medications is individualized based on your condition and can be taken varying times a day depending on the medication used. A high dose steroid like Solu-medrol is usually given through the vein (intravenous or IV) over a period of a just a few days for acute flare-ups. Patients generally receive a four-day course of treatment (either in the hospital or as an outpatient), with doses of the medication spread throughout the day. In some cases, your physician may then switch to a form that is taken by mouth (i.e. prednisone or dexamethasone) and slowly lower the dosage of steroids over several days.

What should I know about these drugs?

Unwanted side effects cannot be predicted. If any develop or get worse, inform your doctor as soon as possible. Only your doctor can determine if it is right for you to continue therapy.
The more common side effects include: Although there are few side effects associated with the customary short-term use of steroids (which is normally used in MS) some people may experience the following side effects when steroids are taken continuously. Increased appetite, indigestion, nervousness or restlessness, trouble sleeping, headache, increased sweating, unusual increase in hair growth on body or face.

Less common side effects include: bone loss, greater chance for infections, a rounded, puffy face, referred to as a "moon face", acne, changes in blood sugar, stomach ulcers or changes in blood potassium levels and swelling of the feet or lower legs.

Since these medications can increase the appetite and increase water retention, it is advisable to follow a low-salt and/or potassium-rich diet and watch your caloric intake. Your physician will make specific dietary recommendations for you.

These medications can lower your body’s ability to fight infection and make any infection that you get more difficult to treat. Contact your physician if you notice any sign of infection, such as sore throat, fever, coughing, or sneezing.

These medications may affect the blood sugar levels of diabetic patients if taken at a high dose for long periods of time. If you notice a change in your blood or urine sugar tests, be sure to speak to your physician.

The presence of other medical problems may be affected by these medications or may affect the use of these medications. Make sure you tell your doctor if you have any of the following medical problems:

- HIV/AIDS
- Chickenpox (including recent exposure)
- Measles (including recent exposure)
- Diabetes—These medications may cause a loss of control of diabetes by increasing blood glucose (sugar)
- Stomach ulcer or other stomach or intestine problems.
- Glaucoma—These medications may cause the pressure within the eye to increase
- Heart disease
- High blood pressure
- Kidney disease (especially if you are receiving dialysis)
- High cholesterol levels—These medications may increase blood cholesterol levels
- Osteoporosis (bone disease)—These medications may worsen bone disease because they cause the body to lose more calcium

I am pregnant or breast feeding. Are these medications safe for me to take?

The effects of these medications during pregnancy have not been adequately studied. However, these medications have been shown to cause birth defects in animal studies. If you are pregnant or plan to become pregnant, inform your doctor immediately. Overuse of these medications during pregnancy may slow the growth of the infant after birth. These medications do pass into breast milk and may slow the infant’s growth. If you are nursing or plan to nurse, be sure to discuss this with your physician. It may be necessary for you to stop nursing while taking this medication.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THESE MEDICATIONS.

Talking With Your Doctor about Multiple Sclerosis:

Having a good relationship with your doctor is essential for getting the most out of your care. A good patient-doctor relationship is based on your ability to speak openly to your doctor, ask any question that concerns you, and ask why your doctor recommends a certain procedure or treatment over another.

Another helpful way to improve communication with your doctor is to bring a list of prepared questions to your appointment. Doing this accomplishes two things. First, it lets the doctor know you are serious about your care. Second, it ensures the doctor addresses your major questions or concerns. Here are some sample questions you might ask your doctor:

- How serious is my MS? What type is it?
- If I have MS will my children get it?
- Can I get pregnant if I have MS?
- Will I benefit from treatment? What are the benefits and risks of these treatments?
- Will I need somebody to take care of me?
- Is there a cure for MS?

In order to effectively manage MS for the long-term it’s very important to make sure that other areas of your health are also attended to. Some things you should pay close attention to include but are not limited to:

- Blood pressure; Weight; Blood sugar; Cholesterol; Vision and Bone Density
Additional Information:

There is a wealth of information about MS on the Internet. Be careful, though. Stick to the Websites that are sponsored by well-known organizations and agencies, such as the ones listed below. Note: these links take you from the Maxor Website to Websites not operated or maintained by Maxor. Maxor is not responsible for the content of those websites.

National Multiple Sclerosis Society- http://www.nmss.org

Multiple Sclerosis Foundation- http://www.msfocus.org