



Treatment of Acute Multiple Sclerosis Attacks

For persons with multiple sclerosis

**If you have an attack call:
206-598-3344 (during
business hours) or
206-598-6190 (after hours
and on weekends) – ask
for the resident doctor on
call for the Rehabilitation
Medicine or Neurology
Department. We can help
you decide what
treatments or evaluations
are needed.**

If you believe that you are having an attack, call the clinic at 206-598-3344. A nurse will talk with you about your symptoms and help you decide what treatments or evaluations are needed. It is important to determine if your symptoms are due to an MS attack, or caused by an infection (which can cause a “pseudo-attack”). If an infection is present, it should be identified and treated. However, if a true attack is occurring, it should be treated as outlined below. Our experience has been that the earlier an attack is treated, the better the results. If an attack occurs on the weekend, after hours, or on holidays, you can reach the Rehabilitation Medicine or Neurology on-call resident doctor at 206-598-6190.

Multiple sclerosis (MS) attacks are the same as exacerbations or flares. Most, but not all, MS patients have attacks. During an attack, the immune system suddenly causes damage to the myelin. This occurs only in a small part of the nervous system. Most attacks occur in silent areas of the brain and the patient has no symptoms. With no symptoms, we would only know about the attacks if an MRI scan happened to be taken at that time. Other attacks lead to symptoms. Which symptoms occur depends on what area of the nervous system is involved. Attacks occur at random

Two treatments are used for acute attacks. They are intravenous (IV) corticosteroids or plasma exchange.

locations so that they can have almost any neurological symptom. This is why patients with MS have so many different symptoms and courses.

A typical attack occurs over a few hours or days. The worst symptoms typically occur during the first few days of an attack. Symptoms then slowly improve. The period of improvement can last for weeks or months, though most of the improvement occurs in the first few months.

Treatments for Attacks

There are currently two treatments for acute attacks: corticosteroids or plasma exchange. Minor attacks may not need any treatment. More serious attacks require corticosteroids. If corticosteroids fail to improve a very serious attack, then plasma exchange can be done. Corticosteroids speed the recovery of an attack and recent evidence suggests that their use may lead to a slight improvement in the long-term outcome of the attack.

Corticosteroids (Steroids)

There are many methods of giving steroids for MS attacks. Most MS centers prefer intravenous (IV) steroids. The dose of steroids that can be given intravenously is much higher than that which can be given by mouth (orally). Some believe that the higher dose leads to greater improvement in symptoms than the lower oral dose. When oral and intravenous steroids were compared in patients with optic neuritis, both types of steroids helped patients recover from the attack more quickly. However, when followed for a year afterwards, the patients treated with oral steroids alone had more attacks than those treated with intravenous steroids. With the risk of increased attacks with oral steroids, we prefer intravenous steroids.

Intravenous (IV) Steroids

Most patients receive intravenous steroids in University of Washington Medical Center's Infusion Center because it is cheaper than at home. Home health services may give the medication in the home, though this is almost always more expensive and may not be approved by insurance. When IV steroids are given, an IV line is placed. Depending on preference, the IV line may be left in place for all three days, or it can be removed after each day's infusion. The medication (methylprednisolone) is then infused over about an hour. This is typically done each day for three days, but in severe cases, may be as long as five days. An oral steroid medication (prednisone) is then given for the next 11 days for a total of 14 days. The lengths of time and the doses used may vary based on a patient's needs.

Most of the side effects from steroids are because of long-term use. Short courses of steroids avoid most of these side effects. The primary side effects from short courses are:

- Metallic taste in the mouth.
- Stomach irritation.
- Difficulty sleeping.
- Restlessness, anxiety or mood change.
- Increase in appetite, weight gain.
- Fluid retention.
- Puffy face.
- Swelling between the shoulder blades.
- Sweating.
- Redness of the face.
- Acne.
- Damage to bones of the hip (extremely rare from short courses such as this).

Questions?

Call 206-598-3344

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC Clinic staff are available to help at any time.

**Western Multiple
Sclerosis Center at
UWMC
206-598-3344**

After hours:
206-685-6190

UNIVERSITY OF WASHINGTON
MEDICAL CENTER

UW Medicine

**Western Multiple Sclerosis
Center at UWMC**

Box 356157

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206-598-3344

Plasma Exchange

Plasma exchange is used only for severe attacks that do not respond to corticosteroids. The treatment is given by University of Washington Medical Center's Renal Services if done as an inpatient, or by the Puget Sound Blood Bank if done as an outpatient.

Treatments require that large intravenous lines be placed in the arm or groin. Sometimes these may require the placement of lines by a surgeon using a local anesthetic. During the treatment, blood is removed from one intravenous line, processed by a machine, and the processed blood is returned into the patient. The machine removes the liquid part of the blood. This liquid is replaced by plasma from blood donors, or albumen solutions. The process takes several hours depending on the speed that blood can be removed from the intravenous line. The treatment is given daily, Monday through Friday for 2 weeks (10 treatments).

This treatment is quite expensive and needs to be preauthorized with most insurance plans.

Side effects include:

- Bleeding due to placement of the intravenous lines.
- Infection due to placement of the intravenous lines.
- Damage to lungs or other tissues due to placement of the intravenous lines.
- Episodes of low blood pressure during treatments.
- Episodes of irregular heartbeats during treatments.
- Allergic reactions (such as rashes, difficulty breathing, or swelling) to portions of the blood plasma that is given.