

Multiple Sclerosis Nursing in 2003: A Global Perspective

Rehabilitation for Gluteal Weakness in MS

*By Pat Provance, PT
Kernan Rehabilitation Hospital and
Maryland Center for MS*

Gluteal weakness is a common problem in multiple sclerosis (MS)—and one that often is overlooked—partly because the patient is sitting on it!

Muscle weakness in MS occasionally is disease-related or may be caused by inactivity. Primary weakness, physiologic fatigue, and spasticity often are related to MS plaques in the central nervous system that slow nerve conduction. Balance problems may be related to primary weakness, cerebellar disease, visual impairment, or sensory loss.

However, several groups of muscles that are important for strength, stability, and balance frequently develop secondary weakness that may be attributed to disuse and prolonged positional stretch. People with MS commonly admit that their level of activity has gradually declined over a period of months to years. They sit to rest, watch TV, or work on computers, and many use wheelchairs or scooters for energy conservation while remaining ambulatory for short distances.

The gluteus maximus is a powerful, one-joint, hip extensor that of-

ten develops stretch and disuse weakness secondary to prolonged sitting. Adjacent to the gluteus maximus, the gluteus medius is an essential player in lateral hip and pelvic stability. The strength of these muscles is rarely tested during neurologic examinations.

Techniques for Evaluating Gluteal Strength

To properly evaluate the strength of this muscle group, the patient should be tested in prone and side-lying positions. However, because

most clinicians perform their evaluations while the patient is sitting, gluteal weakness frequently is overlooked. Since the patient's ability to maintain stability while standing on one leg relies primarily on the strength of the gluteal muscles and quadriceps, this can be a relatively simple method of screening for gluteal weakness after adequate quadriceps strength—with or without tone—has been confirmed.

To evaluate gluteal strength, the patient should be asked to stand and face the clinician, resting both hands on the clinician's hands. The clinician should note the degree to which the arms are needed to accomplish this. Then, the patient should try to stand on one leg using one of the following methods: 1) with the opposite leg lifted into hip flexion, 2) with the opposite knee bent and hip straight, or 3) with the opposite leg extended in front. This test then should be repeated with the other leg.

If gluteal weakness is present, the patient may have difficulty maintaining balance. The pelvis will deviate forward or sideways, the trunk may sway, and pressure on the clinician's hands may increase. Abdominal weakness, especially of the lower abdominal muscles, is part of this pattern because it may cause an anterior pelvic tilt and present an added strain on the gluteal muscles.



Hip flexion is the typical standing posture of patients with gluteal weakness.

The typical standing posture of patients with gluteal weakness is hip flexion (as shown in the illustration on the previous page) with locked knees and a tendency to brace the body with the arms due to significant weakness and fear of falling.

The Good News

Even when significant gluteal weakness is present, disuse weakness often is reversible with appropriate corrective exercises. Behavior modification techniques can play a big part in correcting this phenomenon and in preventing further deterioration. In addition, the use of ambulation aids may help the patient sustain erect posture and stability while promoting a “normalized” gait pattern. Appropriate exercises and behavior modification techniques are outlined in the sidebar.

Ambulation Aids

A qualified therapist who has knowledge, experience, and sensitivity about the challenges of MS should perform an evaluation of the patient’s ambulation needs. The most commonly prescribed assistive devices to help improve gait and balance include:

- Canes (which provide the least amount of support)
- Lightweight forearm crutches, such as those manufactured by Walk Easy Inc (www.walkeasy.com)
- Four-wheeled, rolling walkers with large swivel wheels, a flip-up seat, hand brakes, and backrest, such as those made by Dolomite Home Care Products (www.dolomitehpc.com) or Invacare (www.invacare.com)
- Ankle-foot orthoses, custom-made to correct or prevent footdrop

There is great potential for improvement in strength, function, and quality of life when disuse weakness has been identified and explained to the patient. The knowledge that noticeable strengthening is possible—because the weakness is due to sitting, not MS—can be a strong motivating factor in increasing patient compliance. In addition, the instruction to “do something corrective every 30 minutes” presents patients with an achievable alternative to performing exhausting, inappropriate calisthenics. Since progress usually is apparent after just a few weeks, this fuels the patient’s desire to continue. **MSX**

SUGGESTED READING

Kendall F, McCreary E, Provance P. *Muscles, Testing and Function*. 4th edition. Baltimore, Lippincott Williams & Wilkins; 1993.

BASIC CORRECTIVE EXERCISES FOR GLUTEAL WEAKNESS

Sit ↔ Stand: “Nose over toes,” “fold/unfold,” and so on with minimal or no use of hands and arms—except for instruction to lightly touch chair with fingers when sitting down for safety reasons.

Gluteal Sets: Isometric buttock squeeze whenever hip is straight—standing, prone, or supine. Hold for at least three breaths.

Bridging: Lie on back with knees bent. Tighten abdominal muscles and lift buttocks until hips are straight. Hold for three breaths.

Standing Weight Shifts: With hand support as needed. May be done at kitchen or bathroom counter or with back against wall and walker in front for support. Smoothly shift weight from one leg to the other without hip drop or trunk sway, consciously tightening the quadriceps and gluteal muscles on the supporting leg while keeping hips and shoulders still.

Supported Single Leg Stand: Erect posture with hand support as needed.

Abdominal Strengthening: Can be done in any position, since the abdominal muscles do not cross the hip joint.

- 1) External obliques: Pull *up and in* with lower muscle girdle.
- 2) Transverse abdominal muscles: With hands at waist, pull inward with the abdominal muscles to make the waistline smaller.

Hip Flexor Stretching: Adaptive shortening of the hip flexor muscles is common with prolonged sitting. Lying on back, with both legs straight, pull one knee up toward the chest to help flatten the lower back, then press the opposite leg down, tightening buttocks muscles until a stretch is felt at the front of the upper inner thigh.



Behavior Modification Strategies

- Change position or do a corrective exercise every 30 minutes; a kitchen timer or computer reminder helps. If sitting, perform sit ↔ stand and gluteal sets while maintaining erect posture.
- Rest in a horizontal position, lying on stomach with a small pillow or folded towel under waist, *not* hips.
- Gradually increase duration and frequency of controlled standing and walking.

Registry Links MS Patients to Appropriate Clinical Trials

Developing more effective therapies to slow and even stop the progression of MS, improve symptomatic therapies, and enhance care services for people with this disease are some of the main objectives of the CMSC. With these goals in mind, the consortium initiated the North American Research Committee on MS (NARCOMS) Patient Registry in 1996. The registry is a recruitment database that links investigators with patients who are potential candidates for clinical studies.

According to Olympia Hadjimichael, MPH, coordinator of research for the registry, “patients with MS are strong advocates for research, want to know a great deal of information about current studies, and tend to be cooperative about collaborating on research projects.”

The NARCOMS Patient Registry is a patient-reported database in the form of a long-term study. Participants update their information every six months and respond to surveys on MS-related questions. The registry has enrolled more than 21,000 participants in the United States thus far. Registration is voluntary, confidential, and free of charge to patients.

“The registry is a recruitment database,” notes Ms. Hadjimichael. “However, due to its large size, it provides researchers with clear profiles of MS patients.” Data gathered include basic demographics such as marital status, living situation, educational level, and employment status. Patients also are presented with questions about the impact of MS on their ability to work, third-party health insurance sources, and information about family history of the disease.

Diagnostic evaluations include queries about relapse and attack frequency and past and present use of immunologic and symptomatic therapies. A self-reported disability scale (Patient Determined Disease Steps) and a handicap scale (Performance Scale) are used to describe the patient’s clinical status.

Any individual who has received a diagnosis of MS is eligible to enroll by calling (800) 253-7884, emailing narcoms@chw.edu, or registering online in the “MS Patients” section of the CMSC Web site at www.mscares.org.

Following is a list of some current clinical trials:

- ▶CNTO 1275 Investigational Drug, Molecule that Regulates Immune Response. Contact: Yale Center for MS Treatment and Research; (203) 764-8498; email: jasmine.kenny@yale.edu.
- ▶Combination Therapy with Avonex®, and Bi-Monthly High Dose IV Methotrexate. Contact: Laurie A. Dressman, RN; (816) 753-8800, ext. 124; e-mail: ldressman@cinpc.com.
- ▶High Dose Chemo/Radiotherapy and Hematopoietic Stem Cell Transplant. Contact: Peggy Bates; (713) 394-6243; e-mail: mbates@tmhitmc.com.
- ▶Induction Therapy With a Single High Dose Bolus of Intravenous Methotrexate With Leucovorin Rescue, Prior to Initiation of Avonex Treatment in Patients Presenting with a First Acute Demyelinating Event: Comparison with CHAMPS Results. Contact: Laurie A. Dressman, RN; (816) 753-8800,ext.124; e-mail: ldressman@cinpc.com.
- ▶Novantrone® and Avonex OR Novantrone and Copaxone®. Contact nearest center: Baltimore: (410) 328-5605; Cleveland: (216) 444-6800 New Haven, Conn: (203) 764-8498; New York City: (212) 241-4264.
- ▶Novantrone Quality of Life and Cost of Illness Study. Contact: Sonna Hunsley, RN, Barrow Neurological Institute in Phoenix; (602) 406-3343; e-mail: shunsle@chw.edu.
- ▶Pseudobulbar Affect in MS Patients. Contact: National Multiple Sclerosis Society at www.nationalmssociety.org or call (800) FIGHT MS (344-4867).
- ▶Rolipram to Treat RRMS and SPMS. Contact: NIH Patient Recruitment and Public Liaison Office; (800) 411-1222; e-mail: prpl@mail.cc.nih.gov.
- ▶Study of Oral Fampridine-SR on Walking Ability in MS. Contact: Dianne Pennington at Acorda Therapeutics; (914) 347-4300, ext. 112; e-mail: dpennington@acorda.com.
- ▶Treatment of RRMS With Copaxone and Albuterol. Contact: Sandra Cook; (617) 713-2006; e-mail: scook@partners.org.
- ▶Zenapax® to Treat MS. Contact: NIH Patient Recruitment and Public Liaison Office; (800) 411-1222; e-mail: prpl@mail.cc.nih.gov. **MSX**

Cultural Issues in MS Nursing

“Cultural sensitivity” seems to be one of the latest catch-phrases in medicine. Although the issue appears to receive plenty of lip service, the primary goal behind a culturally sensitive approach is to improve patient care by attempting to break down some of the barriers among cultures and establish greater trust between health care providers and their patients. Since a trusting relationship is especially important in the treatment of patients with a chronic, life-altering disease like MS, how can clinicians most effectively treat all patients, regardless of cultural origin?

As a first step, health care professionals must recognize the diversity of the populations they serve, says Elida J. Greinel, RN, Clinical Coordinator for the Multiple Sclerosis Specialty Clinic of New Mexico in Albuquerque. According to Ms. Greinel, awareness of cultural differences must be created among MS nurses so they can better serve members of ethnic and cultural minority groups. Then, strategies can be implemented to ensure patients receive the best care possible while having their unique cultural viewpoints and practices respected.

Practical Considerations

One obvious obstacle to care is a possible language barrier. In a recent survey by the Robert Wood Johnson Foundation, one fifth of Spanish-speaking people living in the United States reported that they did not seek medical treatment due to such barriers. Those surveyed said that speaking a language other than English made it harder to fully explain symptoms, ask questions, and follow through with getting prescriptions filled. It also affected the level of trust patients had toward the health care system, leading them to believe that clinicians did not understand their needs.¹ For such patients, Ms. Greinel suggests, “it’s helpful to use an interpreter who not only speaks the person’s language but has some kind of medical background.”

Another factor that must be taken into consideration, according to Ms. Greinel, is the special work situation that may exist for someone of another culture. Since medical clinics usually are open on weekdays during typical office hours, an immigrant field worker, for instance, may not be able to take time off from a job for medical appointments. Such people would be much better served if clinics had more flexible hours, she advises.

In addition, some individuals may be in the United States illegally and think that a medical clinic might re-

port them to immigration services. “We have to make it clear to them that this is not our role or intention,” Ms. Greinel emphasizes.

Finding a Compromise

The ways that different cultures perceive health and illness also may create rifts between clinicians and patients. For instance, some Hispanic cultures have a predominantly spiritual view of illness and believe that if people are ill they have somehow failed God or Providence, she explains. Although the views of other cultures sometimes come into conflict with the beliefs of conventional medicine, it is crucial to take into account patients’ cultural or spiritual beliefs, especially when they are facing a chronic and unpredictable disease like MS. The traditions of a heritage or religion can create a strong foundation for patients by providing them with guidance at a time when they seem to have lost a sense of control over their lives.

“As nurses, our role is not to challenge other people’s belief systems, but to guide and educate them,” Ms. Greinel suggests. The role of the health care provider is to find some compromise by attempting to understand the patient’s point of view while explaining to him or her some of the advantages of the clinician’s approach, she adds. “Sometimes, MS patients may feel desperate, so they are more susceptible to being swayed by alternative treatment approaches and more vulnerable to quackery. So, educating the patient is extremely important.

“If dignity and respect are central to the health care provider’s approach, however, culture is not going to be a problem,” Ms. Greinel concludes. “Having and showing respect for the individual transcends any cultural, religious, or ethnic boundary.”

MSX

1. The Robert Wood Johnson Foundation. New survey shows language barriers causing Spanish-speaking Latinos to skip care. *Vital Signs*. 2002. Available at: www.vsigns.com.

GET CERTIFIED! MARK YOUR CALENDAR FOR THE NOVEMBER IOMSN CERTIFICATION EXAM

A Multiple Sclerosis Nursing International Certification Examination will be given nationally and internationally on November 1, 2003. For details on exam locations and to obtain the handbook for candidates, which includes all application materials and a list of suggested readings, visit the Professional Testing Corporation’s Web site at www.ptcny.com.

All candidates for certification must be registered nurses. It is recommended that nurses have at least two years of experience in MS or neurologic nursing. The application deadline is September 15.