**Physical Therapy for Patients with MS: What it is, Why it Matters, and When it’s Needed**  
Jessica Reynolds, SPT  
[jess\_reynolds@med.unc.edu](mailto:jess_reynolds@med.unc.edu)

**WHAT CAN A PT DO FOR PATIENTS WITH MS?**

* Provide a thorough evaluation of patient, including: functional mobility, falls risk, balance, strength, flexibility, spasticity, gait analysis
* Develop a treatment plan aligned to the patient’s goals. Typically, primary goals are designed around improving functional mobility to enhance community participation.
* Progress patients through a treatment plan at an appropriately challenging level.
* Educate patients about their condition, the importance of exercise, how to exercise with MS, energy management, thermosensitivity, and avoiding falls.
* Recommend and train patients on the use of assistive devices and/or orthoses (if necessary) to maximize safety and independence with ambulation.

**COMMON PHYSICAL THERAPY INTERVENTIONS**

|  |  |
| --- | --- |
| INTERVENTIONS | RATIONALE |
| Gait training (with or without an assistive device or parallel bars) | Train movement patterns for efficient, safe mobility |
| Standing and/or walking on uneven surfaces and over obstacles | Improved ability to ambulate on uneven ground, stepping over objects in one’s path, etc. |
| Narrow walking | Improved ability to ambulate in narrow paths (i.e. between two tightly parked cars in a parking lot) |
| Vestibulo-Ocular Reflex (VOR) exercises (in sitting, standing, or walking) | To improve the functioning of the vestibular system if VOR Reflex is impaired |
| Dynamic movements | Improved stability and balance |
| Responses to perturbations | Improved response to perturbations to maintain balance and avoid falls |
| Functional strengthening of antigravity muscles  (example: prone to quadruped to tall kneeling transitions and exercises, sit to stand transitions, marching, etc.) | Weakness is often shown initially in the hip flexors, knee flexors, and ankle dorsiflexors, which can impact gait. As the disease progresses, patients may have many secondary weaknesses from decreased activity (decreased core strength, decreased hip extension strength, decreased back extension strength, etc.) |
| Stretching | Patients may have shortened hip flexors or other tight muscles due to decreased activity. Stretching can also help to relieve spasticity. |
| Interval Training | Patients with MS are able to exercise longer by breaking activity into shorter, more manageable bouts. |
| Patient Education (energy management, safety at home, fatigue, thermosensitivity) | Patients are empowered to more successfully manage their condition. |

*Additional examples can be found at http://bit.ly/2lkbwK3*

**The APTA’s Summary of Physical Therapist Interventions Across Extended Disability Status Scale (EDSS) Levels**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rehabilitative** | | | |
| **EDSS 0-3.5 Little Disability** | **EDSS 4-5.5 Mild Disability** | **EDSS 6.0-7.5 Moderate Disability** | **EDSS 8-9.5 Severe Disability** |
| Promote active lifestyle  Maintain mobility  Maintain continued involvement in domestic, education, work, community, social, and civic life | Continue to promote active lifestyle with adaptations as needed | Promote maintenance of mobility and an active lifestyle | Maintain focus on rehabilitative strategies for deficits that have not yet become severe |
| Task-specific training of relevant skills (eg, balance, gait, reaching) | Task-specific training of relevant skills (eg, balance, gait, reaching) | Modify tasks and activities to maximize participation |  |
| Address pertinent and specific underlying impairments of flexibility and strength | Address pertinent and specific underlying impairments of flexibility and strength | Implement energy conservation methods and intermittent exercise to maintain and increase high volumes of mobility |  |
|  | Implement energy conservation methods |  |  |
| **Compensatory/Adaptive** | | | |
| **EDSS 0-3.5 Little Disability** | **EDSS 4-5.5 Mild Disability** | **EDSS 6.0-7.5 Moderate Disability** | **EDSS 8-9.5 Severe Disability** |
|  |  |  | Caregiver training to assist with basic functional tasks and mobility |
|  | Maintain cardiovascular and aerobic fitness using adapted equipment (recumbent bike, upper body ergometer [UBE]) if needed | Continue maintaining cardiovascular and aerobic fitness using adapted equipment (recumbent bike, UBE) if needed |  |
|  | Limit use of walking aids (ankle-foot orthoses [AFOs], canes), as they may lead to decreased mobility as much as falls prevention | Consider judicious use of walking aids (AFOs, canes), as they may lead to decreased mobility as much as falls prevention | Use positioning aids (wheelchair seating systems, splints, bed positioning devices) to maintain ROM, comfort, and skin protection |
|  | Task-specific training, emphasizing maintenance of independent performance of basic functional tasks | Task-specific training, emphasizing maintenance of independent performance of basic functional tasks |  |
| **Preventive** | | | |
| **EDSS 0-3.5 Little Disability** | **EDSS 4-5.5 Mild Disability** | **EDSS 6.0-7.5 Moderate Disability** | **EDSS 8-9.5 Severe Disability** |
| Falls prevention | Falls prevention programs | Continued falls prevention programs and initiation of appropriate caregiver training | Caregiver training in transfers, a home exercise program, and bed mobility to ensure patient safety |
| Vigorous aerobic, strengthening, and flexibility exercises to minimize deconditioning, relative dosage to be determined based on examination and evaluation | Aerobic, strengthening, and flexibility exercises to minimize risk of deconditioning | Aerobic, strengthening, and flexibility exercises to minimize risk of deconditioning |  |

American Physical Therapy Association Website. PT Now: Multiple Sclerosis Clinical Summary. <http://www.ptnow.org/ClinicalSummaries/QuickDetail.aspx?cid=343ee67d-7ea5-494c-92f2-95959b7c6781>. Published January 12, 2015. Accessed February 17, 2017