

A LOOK AT

## Physical Therapy (PT)

By Payal Desai, LPT NDTC Physical Therapist



## Physical Therapy

*What is the role of a physical therapist?*

Physical therapists (PTs) are trained in movement and movement dysfunction to help strengthen a patient's physical abilities. They help relieve pain through the use of therapeutic exercise, heat, cold and electric stimulation. PTs also provide expertise in human mobility, analyzing gait patterns, prescribing treatment and recommending devices (such as braces or crutches) to enable independent movement. By increasing coordination, strength and endurance, a PT can help a patient recover from physical injuries and impairments.

PTs are specialists in evaluating and treating disorders of the human body by using physical means rather than drugs. They are legally and ethically responsible for planning, implementing and evaluating a physical therapy program. This responsibility often includes instructing patients and their families and supervising physical therapist assistants, physical therapy aides, students and other health care workers in carrying out the program or selected parts of it. The PT consults and works closely with the patient's physician

and other health care practitioners in establishing treatment objectives which are realistic and consistent with the patient's needs. They also provide services aimed at preventing the onset and/or slowing the progression of conditions resulting from injury, disease and other causes.

PTs work in:

- hospitals
- outpatient clinics
- rehabilitation centers
- nursing homes
- schools
- homes
- hospice facilities
- research centers
- athletic facilities
- academic centers as educators

Physical therapy treatment often includes exercise, especially for patients who have been immobilized or who lack flexibility, strength or endurance. PTs encourage patients to use their muscles to increase their flexibility and range of motion. More advanced exercises focus on improving strength, balance, coordination and

endurance. The goal is to improve how an individual functions at work and at home.

Electrical stimulation, hot packs or cold compresses and ultrasound to relieve pain and reduce swelling are modalities used by PTs. They may use manual techniques to relieve pain and improve circulation and flexibility. Therapists also teach patients to use assistive and adaptive devices, such as crutches, prostheses and wheelchairs. They also may show patients how to do exercises at home to expedite their recovery.

The traumatic brain injury (TBI) population is one of the most challenging that a physical therapist may encounter. Because of the multiple body systems affected by a brain injury and the strong likelihood of secondary impairments, a physical therapist must be proficient in a wide variety of examination procedures and intervention techniques. Owing to behavioral difficulties encountered during recovery, a PT working with the TBI population must also possess strong interpersonal skills, be able to react quickly and effectively to suddenly changing situations, and have keen observation skills.

Individuals with brain injuries are treated across a wide continuum of care, which includes acute hospitalization, rehabilitation centers, community reentry programs, outpatient therapy, schools,

---

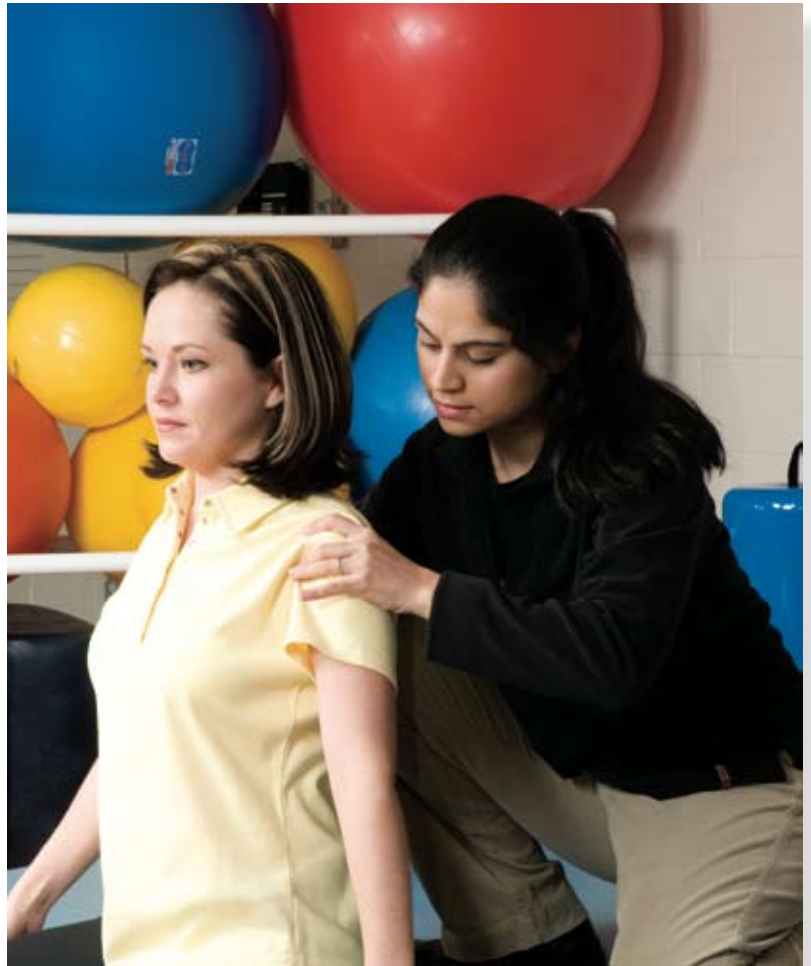
*Physical therapists are specialists in evaluating and treating disorders of the human body by using physical means rather than drugs.*

---

vocational rehabilitation and assisted living centers. At Rainbow the patient with brain injury benefits from having most of these settings at the same location. Because of the wide number of impairments and complications arising from a brain injury, it is vital that a strong team concept be employed when treating this population. A PT is an important member of this team and works with a wide variety of neuromuscular, cognitive, visual, perceptual and behavioral impairments that lead to functional limitation and disability.

PTs work on soft tissue mobilization and range of motion exercises early on after the injury to maintain joint integrity and mobility and prevent contractures. Positioning strategies are also important for more dependent patients who need assistance to maintain soft tissue length. They also coordinate with family and caregivers for long-term management.

*Pictured below: Physical therapist, Payal (left), and occupational therapist, Carole (right), utilize NDT with Renee (center) in a co-treatment session to help maximize her rehabilitation gains. Rainbow has several NDT certified therapists. NDT utilizes straightforward principles to help patients gain or regain normal movement.*



*Pictured above: Physical therapist Payal (right) works on matside sitting and posture control.*



Physical therapists also use neurodevelopmental treatment (NDT) with the TBI population. NDT emphasizes postural control for all skill learning. Normal movement patterns are encouraged, excessive tone and abnormal movements are inhibited, and activities that are functionally relevant and varied in terms of difficulty and environmental context are chosen.

Compensatory training which allows use of the less involved segments (lower and upper extremities) more than affected segments is discouraged, and carryover is promoted through a strong emphasis on patient, family and caregiver education. Prevention of falls for this population, which has a high incidence of balance deficiency, is an important goal of therapy. Lifestyle counseling is important to help recognize potentially dangerous situations and reduce the likelihood of falls. Substantial rehabilitation efforts are directed toward improving gait to restore or improve a patient's functional mobility and independence. Walking is frequently the number one goal of

## About the Author ...

### Payal Desai, LPT NDTC

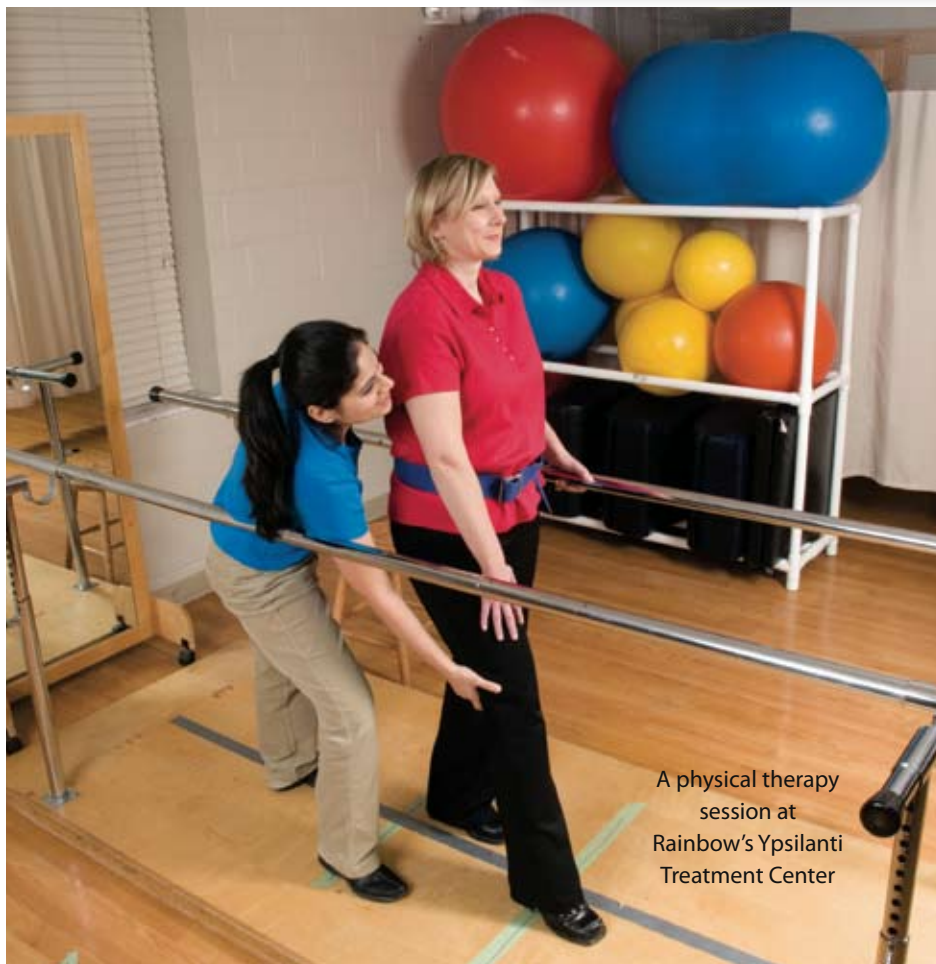
**Education:** Payal has a bachelor's in physical therapy and a PG Diploma in clinical psychology. She is certified in neuro-dynamic therapy from the Neuro-Dynamic Therapy Organization and has completed the Examination of Function and Dysfunction of Pelvis and Sacroiliac Joint through the American Rehabilitation Network and the Evaluation and Treatment of Extremities at Oakland University.

**Experience/Specialty:** Payal began her professional career working with children in a neonatal intensive care unit, an inpatient pediatric program helping children with developmental problems. She has also worked in an outpatient program focusing on children with cerebral palsy, autism and Down syndrome. She has outpatient orthopedic experience and has worked with the TBI population at Rainbow for the past five years.



patients above all other considerations.

As a part of the multidisciplinary team at Rainbow, the physical therapist performs evaluations, makes recommendations for individual and groups therapy, formulates and implements treatment plans, works toward discharge planning with other treatment team members, provides staff and family education and training, makes possible community access and mobility, assesses assistive devices and collaborates with other medical personnel to obtain the necessary items.



A physical therapy session at Rainbow's Ypsilanti Treatment Center

On a more personal note, I still remember my first week at Rainbow. Along with the moments of uncertainty, I was hopeful that as a physical therapist I would be able to make a change in my patients' lives, but instead they have made a change in mine. In the last five years, I have grown with every first step each patient has been able to take and will continue to cherish every heartfelt thank you as an achievement award. ❖

#### References:

American Physical Therapy Association (APTA). <http://www.apta.org>

O'Sullivan, Susan B., and Thomas J. Schmitz. Physical Rehabilitation. F. A. Davis Company. U.S. Department of Labor. <http://www.bls.gov/oco/ocos080.htm#nature>

Wikipedia. [http://en.wikipedia.org/wiki/Physical\\_therapy](http://en.wikipedia.org/wiki/Physical_therapy).