

PHYSICAL THERAPY

For Patients Undergoing Transplant and Cellular Therapy (TCT)

What is Physical Therapy?

Physical therapy (PT) is a type of rehabilitation medicine. PT can improve your quality of life and functional independence through prescribed exercise, hands on care, and patient education. PT can ease pain and make it easier for you to move, and to carry on with your daily activities. PT uses specialized exercises, equipment, and therapies.

What Does a Physical Therapist Do?

Physical therapists are movement experts who work with you to reach your functional and physical goals. They:

- prescribe exercises/stretchers as part of a treatment plan
- provide hands on care and patient education
- teach you how to prevent or manage your symptoms for long term health benefits

Physical therapists examine each person and develop a personalized plan of care based on that exam, the therapist's clinical judgement, best available evidence, and the patient's goals or needs. Your plan may include:

- improving your ability to move
- restoring function
- reducing pain
- minimizing disability

Physical therapists can also work with you to develop fitness and wellness programs to prevent the loss of mobility before it occurs.

Goals of Physical Therapy

Your physical therapist will work with the other members of your healthcare team to meet your needs and provide effective and efficient care. The goal(s) of your personalized plan of care will depend on many factors including your capabilities and your personal goals.

Benefits of Physical Therapy

Improved

- Outcomes after stem cell transplant or cellular therapy
- Overall function
- Mobility
- Strength
- Endurance
- Balance
- Quality of life

Decreased

- Fatigue due to chemotherapy or neutropenia
- Risk of falls
- Pain
- Swelling (edema)
- Stress and anger
- Anxiety and distress
- Long term fatigue from residual effects of transplant after (blood cell) count recovery

Preparing for Your Hospital Stay

Chemotherapy, medications, or long hospital stays before your transplant can change your:

- balance
- functional independence
- range of motion
- strength
- endurance
- sensation
- coordination
- level of fatigue
- cognition

These changes can affect your ability to move around safely and might make it hard for you to physically tolerate your hospital stay.

Exercise is safe with proper guidance! If you are admitted for transplant or cellular therapy (TCT), a physical therapist can help you maintain or improve your independence, strength, and endurance through a daily exercise program.

1. You will have at least 1 PT evaluation before you are considered for TCT. A physical therapist will test your strength, balance, coordination, and endurance. Information from this evaluation will be shared with your physician/medical team to help decide the best course of treatment. If needed, additional physical therapy, either outpatient or in your home, may be recommended before your admission.
2. Once you are admitted for your transplant or cellular therapy, a physical therapist will perform another evaluation. The physical therapist will review exercises with you to maintain your strength, endurance, and balance.

Commonly prescribed exercises include:

- walking 1 mile (throughout the day)
- step ups
- sit to stands

If appropriate, there is a treadmill and a NuStep recumbent bike on the TCT units. Other exercises may be included as needed.

Steroid Myopathy

- High dose steroids are often used to treat graft versus host disease (GvHD), neurotoxicity, or other inflammatory conditions that may occur during or after TCT.
- Steroid myopathy is a side effect of prolonged exposure to steroids such as methylprednisolone/Medrol®, dexamethasone/Decadron®, beclomethasone, and budesonide/Entocort®.
- Steroid myopathy is considered a non-inflammatory toxic myopathy that usually causes **muscle weakness**, not muscle aches or tenderness.

What are Signs and Symptoms of Steroid Myopathy?

- **Legs often get weak before the arms.** This may begin as difficulty with standing or getting up from soft or low surfaces, going up stairs, standing up from a chair without pushing off with your hands, getting in or out of a car, reaching over your head, and/or carrying out your activities of daily living (ADLs).
- **Your core strength may be affected.** You may have poor posture as certain core strength muscles (pelvis, lower back, hips, and abdomen) may get weak. Decreased core strength may affect the muscular stability you need for tasks such as standing, walking, and using the stairs.
- **Generalized fatigue and a loss of motivation** to get up and do daily activities, chores, or exercise; loss of interest in previously enjoyed activities; taking more frequent naps; muscles get tired; you are taking more rest breaks during and between activities that use physical effort.

What Else Should I Know About Steroid Myopathy?

- Weakness may not occur for weeks to months after starting steroids. It may begin without warning or you may notice
 - Your knees feel wobbly/shaky/rubbery.
 - It is harder, or you are not able, to complete all the repetitions of your sit to stands or step ups.
 - It is harder, or you are not able, to get up off the ground or get up from a low surface.
- Strength and weakness can vary within a single day or hour-to-hour. Once weakness starts, consider how you feel each time you get up before starting to move.
 - Patients tend to notice a decrease in strength about 24 hours after a tapered dose of steroids.
 - Sit back down if you feel weak when standing.
 - Take longer or more frequent rest breaks when performing household chores, exercise, daily activities.
 - Ask for help, if needed.
- Exercise and/or physical therapy can help you maintain strength or minimize the amount of strength lost while your steroids are tapered off.
 - It may take 2-3 weeks after you have been weaned off the steroids before you start to make larger improvements towards baseline level of strength.
 - Targeted exercise prescribed by a physical therapist can minimize progressive weakness and help maintain/improve strength.

Key Take Home Points

- **“The more you lay, the longer you stay.”**
Participate in your exercise program to improve your chances of a shorter and less complicated hospital stay.
- Research shows that the stronger you are before your hospitalization, the better you will do. Improve your starting level of function, strength, and endurance to improve your outcomes from the transplant or cellular therapy. This may include participating in formal home or outpatient physical therapy before your hospital stay.
- The more you exercise before your hospitalization, the more ‘reserve’ you can create. This reserve can help you recover from complications quicker.
- The muscles used to complete step ups and sit to stands are different than what is used for walking. That is why ALL exercises prescribed are important to complete.
- High dose steroids are likely to decrease your leg strength. It is difficult to understand the effect that steroids can have on your muscles until your body is going through it. Use this as motivation to improve your strength before entering the hospital and to participate in your exercise program while you are in the hospital.
- You may get weak at any time, regardless of your steroid dose.

**FOR MORE INFORMATION CALL
REHABILITATION SERVICES AT 716-845-3271**