

What to expect with Cancer Rehabilitation:

The role of the physical therapist is to evaluate a patient's muscle strength, mobility, and joint range of motion (ROM) to find areas of deficits. Treatment interventions may include therapeutic exercises to maintain or increase ROM, endurance activities, and mobility training (eg, transfers, gait, stair climbing). Treatment may also include manual therapy, aquatic therapy, and lymphedema therapy to treat more specific deficits.

There are four categories of cancer rehabilitation: preventative interventions, restorative interventions, supportive interventions, and palliative interventions. Preventative interventions lessen the effect of expected disabilities and emphasize patient education. Preventive measures also include approaches to improving the patient's physical functioning and general health status. Restorative interventions are procedures that attempt to return patients to previous levels of physical, psychological, social, and vocational functioning. Postoperative ROM exercises for patients undergoing mastectomy and reconstructive surgery for head and neck cancer represent this category of interventions. Supportive rehabilitation is designed to teach patients to accommodate their disabilities and to minimize debilitating changes from ongoing disease. Palliative interventions and goals focus on minimizing or eliminating complications and providing comfort and support. Palliative goals include pain control, prevention of contractures and pressure sores, and prevention of unnecessary deterioration from inactivity.

During cancer treatments, patients tend to develop the following side effects:

- Fatigue
- Muscle weakness
- Pain
- Peripheral neuropathy
- Reduced rib cage motion
- Decreased immune system
- Urinary/Fecal complications
- Endurance deficits
- Balance deficits
- Joint stiffness
- Scar restrictions
- Chemotherapy Induced Cognitive Impairment (chemo-brain)

Signs that you may need rehabilitation services:

- Feeling weaker now than when you were initially diagnosed.
- Having difficulty talking or swallowing.
- Experiencing pain that is not caused by cancer.
- Feeling more tired than you were before you were diagnosed.
- Having muscular or orthopedic problems.
- Having difficulty recovering from treatment and doing the things you used to do.
- Uncertain about how much to exercise or how to best exercise.
- Struggling with memory problems or difficulty concentrating.

Although each session is individualized to the patient, a typical treatment session will include aerobic conditioning, strengthening exercises, functional activities, stretching/ROM exercises, and modalities to decrease pain. A home exercise program will be given to each patient to allow for carryover between sessions.

Cancer-Related Fatigue

What is cancer-related fatigue?

Cancer-related fatigue (CRF) is defined as a “distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion.” This is related to “cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning. Compared to fatigue experienced by healthy individuals, CRF is more severe, more distressing and less likely to be relieved by rest.” CRF is the most reported side effect of cancer and cancer treatment and affects 70-80% of cancer survivors at ALL stages of disease and recovery.

Cancer-related fatigue can be a side effect of many common cancer treatments such as chemotherapy, radiation, surgery, and stem cell transplant. Other pre-existing health conditions may also increase fatigue symptoms.

SIGNS AND SYMPTOMS OF CANCER-RELATED FATIGUE:

- Feeling tired, weary, exhausted even after a good night’s sleep
- Lack of energy/prolonged tiredness after activity
- Weakness or heaviness in arms/legs
- Listlessness or irritability
- Trouble starting or finishing tasks due to tiredness

- Needing to sleep during the day
- Unable or needing help to do usual or desired activities
- Being too tired to eat
- Difficulty with concentration and memory
- Limiting social activities due to tiredness

How can Physical Therapy Help Me?

If CRF is affecting you, a physical therapist can perform an evaluation. There are often multiple components to your fatigue that can be addressed through a personally designed treatment program depending on the findings from your evaluation. Treatment interventions could include:

- Postural education
- Body mechanics education and training
- Strengthening exercises
- Aerobic exercise
- Stretching program
- Deep breathing and relaxation techniques
- Sleep hygiene
- Energy conservation education

Chemotherapy Induced Cognitive Impairment

What is Chemotherapy Induced Cognitive Impairment?

Chemotherapy Induced Cognitive Impairment (CICI) is an adverse effect experienced by some patients during and after chemotherapy treatment. It is characterized by difficulty with thinking, remembering, concentrating, and word retrieval as well as difficulty in efficiently processing information secondary to receiving chemotherapy. CICI is also known as, “chemo fog, chemo brain, chemotherapy-related cognitive impairment or cognitive dysfunction.” Long and/or short term quality of life can be negatively affected by CICI. CICI is shown to affect 16-75% of cancer survivors. Physical therapy can improve quality of life for cancer survivors with CICI.

Risk Factors:

- Radiation therapy to the brain
- Higher doses of chemotherapy or radiation
- Multi-agent chemotherapy combined with radiation
- Brain cancer

- Chemotherapy combined with whole-brain radiation
- Chemotherapy given directly to the central nervous system
- Hormone changes or hormone treatments
- Immune related dysfunction
- Genetic predisposition for genes associated with Alzheimer's Disease
- The cancer itself
- Tiredness (fatigue)
- Sleep problems
- Other illnesses, such as diabetes or high blood pressure
- Drugs such as steroids, anti-nausea, or pain medicines. Drugs used during surgery
- Depression
- Low blood counts
- Age
- Infection
- Nutritional deficiencies
- Stress, anxiety, worry or other emotional pressure

Common Symptoms of CICI:

- Forgetting things that are usually easy to recall (memory lapses)
- Trouble concentrating (can't focus, have a short attention span, may "space out")
- Trouble remembering details like names, dates, and sometimes larger events
- Trouble multitasking, such as answering the phone while cooking, without losing track of one task (they are less able to do more than one thing at a time)
- Taking longer to finish things (disorganized, slower thinking and processing)
- Trouble remembering common words (unable to find the right words to finish a sentence)

Chemotherapy Medications Commonly Associated with CICI:

- Adriamycin
- Cyclophosphamide
- Methotrexate
- 5-Fluorouracil
- Cisplatin
- Cytarabine
- Pain medications
- Sedatives
- Anti-nausea medications
- Risk escalates with increased dose and length of exposure!

Physical Therapy Interventions:

- Exercise, exercise, exercise!
- Cognitive Strategies:
 - Recommend the use of memory aids
 - Provide home exercise program in writing and with pictures
 - Videotape home exercise program for those who prefer to use a computer
- Referral to other Healthcare Professionals as needed such as: neurologists, psychologists, occupational therapists and speech therapists.