

MODULE 6A

BEGINNING AN EXERCISE ROUTINE



Exercising during cancer can seem very daunting. Most patients (around 85%) are sedentary at the time of their diagnosis. Now, faced with fatigue, nausea, and the other side effects of treatment, exercise is probably the last thing you want to do!

However, research strongly demonstrates that exercise will help you feel better, tolerate your treatments better, reduce your side effects, and for some kinds of cancers – increase your likelihood of remission!

When getting started, it is important to talk with your physician about any contraindications to exercise. Find out if there is anything specific you should avoid. In addition, take it *slow*. Start where you are and progress from there. Be careful of pushing yourself too much, as that can actually cause your immune system to decline!

Ideally, during cancer treatment, you should strive for a whole-body workout that targets all the major muscle groups. The overall goal of the exercise program should be to minimize the general de-conditioning that often results from cancer treatment so that your medicines are better tolerated. In general, the exercise prescription should include a slow progression and demonstrate adaptability to changes in health status, which frequently change from day-to-day.

Each exercise training session should consist of the following components:

Warm up: Each session should begin with a 5- to 10-minute warm-up that stimulates blood flow to the working muscles. Warm-up activities may include brisk walking to increase the body temperature and other physiologic responses, as well as decrease your chance of injury. Warm-up activities are also important to help ensure that the muscles and cardiovascular system are prepared for the activities to come during the training session.

Aerobic Component: During the aerobic component of exercise, it is important to frequently monitor heart rate and rating of perceived exertion (RPE – Scale of 1-10) to monitor intensity. Based on this scale, a light-to-moderate intensity (RPE of 3 to 6) should be encouraged. If dizziness, nausea, or chest pain occurs, all exercise should be stopped. Frequent short breaks are sometimes encouraged to accommodate therapy-related fatigue.

Resistance Training: The type of resistance exercise performed will depend on your range of motion, tissue removal, and wound healing. Be sure to allow at least 48 hours of rest between each resistance training session. Therefore, it may be advisable to plan a whole-body approach to resistance training, where all major muscle groups are targeted in one day. If the you are unwilling or unable to participate in traditional modes of strength training, Yoga or Pilates may serve as an alternative form of strength exercise.

Although daily exercise is an ideal means to improving physical fitness, small modifications to your daily activities can contribute to an improvement to your overall fitness.

Consider the N.E.A.T principle which stands for, non- exercise activity thermogenesis. Simply put, the N.E.A.T principle describes all of the energy spent from activities other than sleeping, eating, and exercising.

Some N.E.A.T examples to help improve fitness:

- Stand while preparing meals or washing dishes
- Park your car farther from the entrance of a store to increase the time spent walking.
- Clean the house or work in the yard.
- Take frequent breaks from a task or while at work to stand or walk.
- Take the stairs instead of the elevator when and if possible.

	AEROBIC TRAINING	STRENGTH TRAINING	FLEXIBILITY TRAINING
FREQUENCY	3-5 days/week	2-3 days/week	2-7 days/week
INTENSITY	light-moderate	light-moderate	stretch to the point of mild discomfort
DURATION	20-60 min/session	1-3 sets, 8-12 reps per exercise	10-30 seconds per stretch
MODE	walking, cycling, cross trainers, swimming	free weights, machines, resistance bands, resistance balls	static stretching

RPE Chart (Rate of Perceived Exertion)

10	Max Effort Activity <ul style="list-style-type: none"> • Feels almost impossible to keep going. • Completely out of breath, unable to speak.
9	Very Hard Activity <ul style="list-style-type: none"> • Very difficult to maintain exercise intensity. • Can barely breathe, difficult to speak a single word.
7-8	Vigorous Activity <ul style="list-style-type: none"> • On the verge of becoming uncomfortable. • Short of breath, can speak a sentence.
4-6	Moderate Activity <ul style="list-style-type: none"> • Feels like you can exercise for hours. • Breathing heavily, can hold a short conversation.
2-3	Light Activity <ul style="list-style-type: none"> • Feels like you can maintain for hours. • Easy to breathe, can carry on a conversation.
1	Very Light Activity <ul style="list-style-type: none"> • Anything other than sleeping, watching TV, riding in a car, etc.

Contraindications to Exercise

Avoid/discontinue exercise session if you experience at least *ONE* of the following symptoms:

- Onset of nausea following exercise initiation
- Vomiting within the last 24 hours
- Leg pain
- Decreased heart rate and/or blood pressure with increased workload
- Chest pain
- Difficult or shallow breathing
- Unusual muscle weakness
- Numbness in the extremities
- Chemotherapy treatment within the last 24-hours
- Irregular pulse during exertion
- Disorientation and confusion
- Dizziness/loss of balance

Thera-Band Exercise Guide

In addition to general wellness and fitness programs, elastic resistance is recommended for use in a variety of impairments:

- Resistance training for postural impairments, motor function impairments, muscle performance impairments;
- Stretching exercises for muscle length impairments;
- Balance training for balance and gait impairments;
- Cardio training for cardiorespiratory impairment;
- Functional and sport specific training for functional limitations.

Thera-Band Exercise Benefits

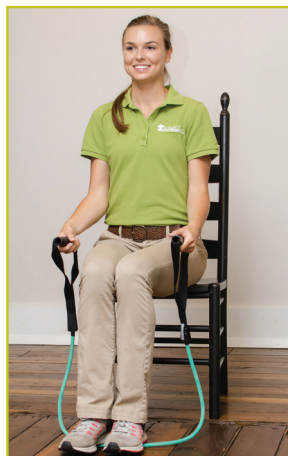
- Increase strength
- Increase power
- Improve balance and proprioception
- Prevent falls
- Improve posture
- Decrease pain
- Improve gait
- Increase grip strength
- Improve cardiovascular fitness
- Decrease blood pressure
- Decrease disability and Improves function

Instructions: Exercises may be performed seated or standing. Each exercise should be performed for 2 sets of 15 at a resistance that provides fatigue near the end of the second set of exercises. Perform a warm-up of stretches followed by the band exercises. Be sure to keep proper alignment of spine during each of the exercises outlined.

Thera-Band Elbow Flexion (Bilateral) in Sitting

Wrap the middle of the band around both feet and grasp each end of the band with palms facing forward. Keep elbows at the side. Keeping wrists straight, bend elbow, bringing the hands to shoulders. Slowly return to the starting position.

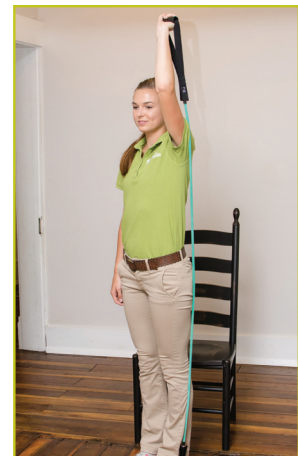
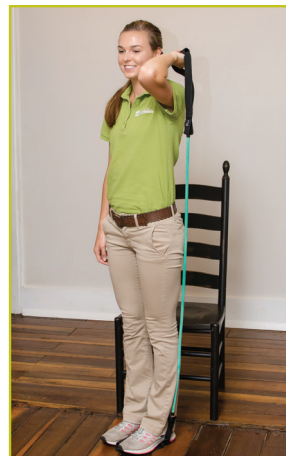
TIP: Keep the back straight! Don't slouch or lean forward.



Thera-Band Shoulder Bench Press Sitting

Begin with band wrapped around the upper back. Grasp both ends of band with elbows bent and palms facing inward. Push band forward, extending the elbows to shoulder level. Slowly return to starting position.

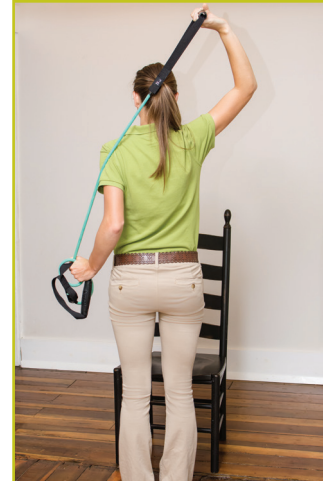
TIP: Keep the back and neck straight. Don't shrug shoulders. Don't hold breath.



Thera-Band Elbow Extension Sitting

Stabilize one end of band in opposite hand with elbow straight. Grasp band with elbow bent. Keep elbow behind the side. Straighten the elbow, pulling the band backward. Hold steady with opposite hand. Slowly return to the starting position. Repeat on other arm.

TIP: Keep the stabilizing arm straight.



Thera-Band Shoulder Seated Row

Extend the legs and wrap middle of band around feet. Be sure band is secure by wrapping the middle around the feet so it won't slip. Grasp both ends of band with elbows straight. Pull band upward and back, bending elbows. Slowly return to starting position.

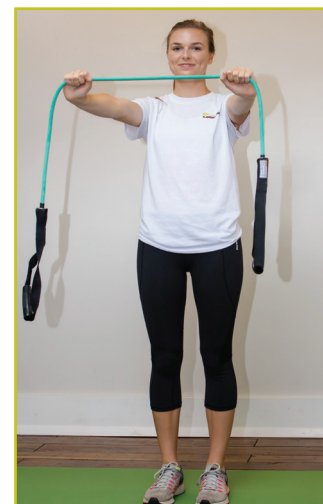
TIP: Keep the knees and back straight.



Thera-Band Shoulder Horizontal Abduction

Grasp the ends of the band in front at shoulder height, and take up the slack. Pull the band outward, keep the elbows straight and pinch the shoulder blades together. Slowly return.

TIP: Keep the lower back straight. Don't hold breath, and relax after each repetition.



Thera-Band Knee Extension

Sit on the edge of a sturdy chair with feet together. Begin by looping the center of the band around the ankle of the exercising leg. Bring the ends of the band underneath the foot of the opposite leg to stabilize and grasp the ends by the knee. Slowly extend the leg so the knee is straight against the band. Hold 1 to 2 seconds and slowly return.



Thera-Band Knee Mini-squats

Begin with center of band under feet. Grasp ends of bands with hands by sides. Keep tension in the band with elbows straight. Keeping the elbows straight, slowly bend the knees while leaning forward slightly at the hips. Slowly return to starting position.

TIP: Keep the back straight.



Thera-Band Hip Adduction

Securely attach one end of the band to a sturdy object. Attach the band above the ankle. Keeping the knee straight, bring the leg inward toward the opposite leg. Hold and slowly return. Use a sturdy object nearby for balance if needed.



Source: Karvinen et al. 2014. SpringerPlus. 3:15.