

## Class 7

# Chapter 8: Get a Move On

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## Review Class 6 Homework

- ▶ Determine your eating out style >>> what do you want to change?
- ▶ Research your favorite restaurants and compare different items. Make a list of healthful choices that you will like and will support your goals.
- ▶ Identify portions sizes at home.
- ▶ Practice slowing down and being mindful.
- ▶ Assess your skills
  - ▶ What do you need to learn? What do you need to improve?
- ▶ Assess your kitchen equipment and layout
  - ▶ What tools do you need? What tools do you have that you don't use?
  - ▶ Is your space organized in a manner that helps you cook at home
- ▶ Take time on your weekend to batch cook and prep for week

## How did it go?

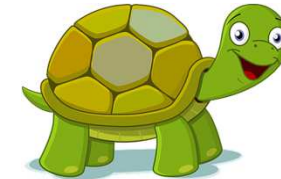
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## Get a Move On - What are the Benefits?

- ▶ Improved blood glucose control with lasting effect 2-72 hrs post exercise
- ▶ Lower blood pressure
- ▶ Improve good (HDL) cholesterol
- ▶ Improve circulation - everywhere in the body including sexual function
- ▶ Contribute to health brain
- ▶ Enhance immune system
- ▶ Improve mood, treat depression
- ▶ Improve stress and sleep
- ▶ Improve bone, joint, muscle health
- ▶ Feel good physically and mentally

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## Safety First



- ▶ Slow and Steady wins the race
  - ▶ Avoid over-exercising, especially when beginning a new routine
  - ▶ Injury prevention is key for long-term success
  - ▶ You are not your former age/body
- ▶ Hypoglycemia warning - exercise can lower blood sugar!
  - ▶ If you are on medications that also lower BG, this could result in a "low".

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## Recommendations

- ▶ 1) Change your mindset from “should” to “choose” or “can” or “get to”
  - ▶ Speak in positive language to yourself and others about exercise
- ▶ 2) Some is better than none
  - ▶ Avoid the idea that you have to do a lot for it to count
    - ▶ Every amount of movement helps with BG and weight control
- ▶ 3) Individualize your routine to your likes, needs, and schedule



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## CDC Guidelines: Goal to work toward

- ▶ Avoid Inactivity!
- ▶ 150 minutes of moderate-intensity aerobic activity each week
  - ▶ OR 75 minutes of vigorous-intensity aerobic activity each week
- ▶ Resistance exercises (strengthening) at least twice weekly
- ▶ Above and beyond these minimum goals will likely have greater benefits
- ▶ 3 Modes of Exercise: aerobic, strength, stretching



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## Aerobic

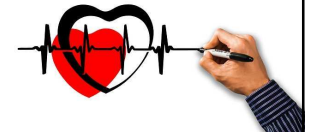
- ▶ Cardio or cardiovascular or cardio-respiratory exercise
  - ▶ Getting your heart rate up and increasing your breathing
- ▶ Examples: walking, biking, swimming, dancing, cross-country skiing, rowing
- ▶ Develop a routine and start where you are:
  - ▶ Getting your shoes on and out the door
  - ▶ 5 mins or 20 mins - what matters is doing something
- ▶ 150 min/week:
  - ▶ 30 min 5 days/wk or 20 min 7 days/wk
- ▶ Ideally do not skip more than 2 days in a row
- ▶ Try increasing length or intensity over time (HIIT)



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## Activity: Heart Rate Zones

- ▶  $220 - \text{age} = \text{estimated maximum age-related heart rate}$ 
  - ▶ Example:  $220 - 40 = 180$  bpm (beats per minute)
- ▶ 50-70% of maximum is considered moderate intensity
  - ▶ Example:  $180 \times .5 = 90$  and  $180 \times .7 = 126$  so 90-126 bpm
- ▶ 70-85% of maximum is considered vigorous intensity
  - ▶ Example:  $180 \times .85 = 153$  so 126-153 bpm
- ▶ Talk - Sing Test :
  - ▶ Moderate intensity is when you can hold a conversation, but not sing
  - ▶ Vigorous intensity is when you cannot hold a continuous conversation without pauses for breath



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## Strengthening Exercises

- ▶ Can significantly lower risk of T2DM (30%) & CVD (17%) over 10 yr follow-up
  - ▶ 35,000 women compared those who did no strength training
- ▶ Also known as "Resistance" exercise, as you are resisting your own body weight or an added weight/resistance
  - ▶ Examples: sit-ups, squats, pushups, plank, lunges, bands, water, etc.
- ▶ Muscles take up sugar from blood stream and help maintain metabolism

### ***"Use It or Lose It" principle with muscle mass and bone density and balance***

"Studies show that just 20 minutes of strength training 1 day a week for 10 consecutive weeks significantly improves strength levels in sedentary individuals."



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## Strength Strategies

- ▶ Go at your own pace
- ▶ Repetitions of 10-15 times = 1 set
- ▶ Aim to perform 8-10 exercises targeting different body parts each session
- ▶ 2-3 full body sessions per week OR
- ▶ Target different muscle groups if training each day: Upper, Lower, Core
- ▶ Engage the services of a trainer if uncertain or with managing injuries
- ▶ To progress:
  - ▶ Add an additional day
  - ▶ Increase sets (each set is 10-15 repetitions)
  - ▶ Increase weights

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## Flexibility and Balance Exercises

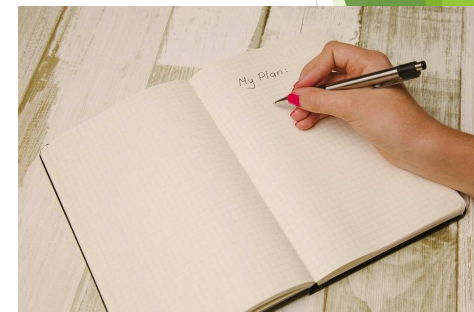
- ▶ Examples: yoga, tai chi, general stretching
- ▶ Prevention of injuries and improve or maintain range of motion
- ▶ Stretch after your muscles are warm
  - ▶ Post aerobic or strength exercise
- ▶ Stretch to slight discomfort, but not pain
  - ▶ Hold for 10-30 seconds (or longer)
  - ▶ Repeat 2-4 repetitions
- ▶ Aim to stretch after your other exercises
  - ▶ At least twice weekly



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## Think FITT

- ▶ This is another version of creating a SMART goal specific to exercise.
- ▶ Frequency - how often
- ▶ Intensity - how vigorous
- ▶ Time - how long
- ▶ Type - what kind



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- ▶ Make Exercise Fun! - if you hate it you won't stick with it
  - ▶ Think back to your childhood > what did you enjoy?
- ▶ Identify Your Barriers and problem-solve them
- ▶ Start Small and set Low Expectations for outward changes
- ▶ Focus on the Habit (on developing your routine)
- ▶ Put two things together: TV and elliptical; walking and catch-up with a friend; treadmill and podcast; music and movement
- ▶ Get curious and try new activities - you might be surprised
- ▶ Have an accountability partner
- ▶ Fitness trackers/gadgets

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- ▶ Avoid Inactivity!
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- ▶ Resistance exercises (strengthening) at least twice weekly
- ▶ Above and beyond these minimum goals will likely have greater benefits
- ▶ 3 Modes of Exercise: aerobic, strength, stretching

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## A collage of eight images illustrating various types of innovation. The images include: a vintage television set; a modern smartphone being held by a hand; a steam iron; a modern office interior with large windows and contemporary furniture; a person sitting in a chair using a tablet computer; a laptop on a wooden desk next to a glass of water; a robotic vacuum cleaner; and a modern car parked on a street.

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## Exercise Used to Be Built-In

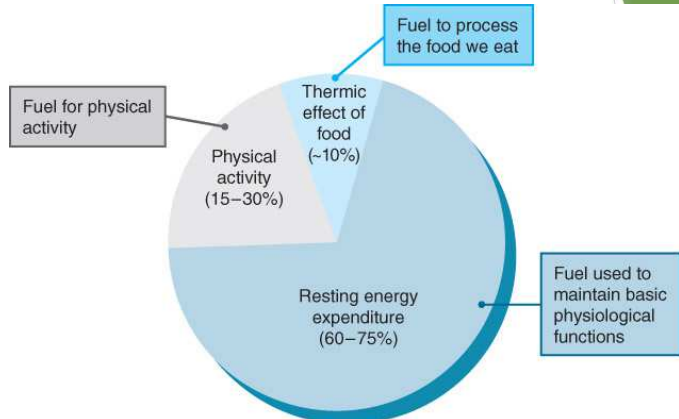


The collage consists of seven photographs arranged in a grid-like fashion. The top-left photo shows a man in a green shirt and jeans pulling a large, dark, heavy bag or sack in an outdoor setting. The top-middle photo is a close-up of hands working with soil and small plants, likely in a garden or field. The top-right photo shows two construction workers in hard hats and safety gear working on the wooden framework of a building. The middle-left photo shows a man in a green shirt and jeans pulling a large, dark, heavy bag or sack in an outdoor setting. The middle-right photo shows a group of people working in a deep, narrow trench or excavation site. The bottom-left photo shows a man in a green shirt and jeans pulling a large, dark, heavy bag or sack in an outdoor setting. The bottom-middle photo shows a man in a yellow shirt and jeans pushing a lawnmower in a grassy field. The bottom-right photo shows a man in a green shirt and jeans pulling a large, dark, heavy bag or sack in an outdoor setting.

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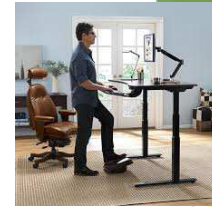
## Most Variable and Controllable Factor is PA



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## NEAT - Energy Expenditure

- ▶ Non-Exercise Activity Thermogenesis
  - ▶ Basically creating heat (burning calories) from activities that are not technically “exercise”
  - ▶ Levine study: lean participants burned an extra 350 calories on average daily through NEAT: equivalent of about 2 hours moving instead of sitting
- ▶ Standing instead of sitting
- ▶ Stairs
- ▶ Picking a salad from the garden
- ▶ Fidgeting
- ▶ Walking around turning on/off lights/devices
- ▶ Walking to pick up the mail
- ▶ House chores; pet care
- ▶ Playing an instrument



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## Beyond Body Weight

- ▶ Associations between Sitting and Health Risks/Poorer Outcomes:
  - ▶ Increased waist sizes
  - ▶ Higher blood pressure
  - ▶ Type 2 Diabetes risk
  - ▶ Heart disease risk
  - ▶ Cancer risk
- ▶ Changes in hormones and enzymes
- ▶ Less muscle utilization and uptake of sugar short-term
- ▶ Muscle loss over the long-term



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## Movement Awareness

- ▶ Utilize a step counter, smart phone, or smart watch to assess typical steps in a day
- ▶ See Activity/Inactivity Record on page 281 - identify sedentary chunks
- ▶ Take movement breaks
  - ▶ 3 minutes movement every 30 minutes to improve BG control

**Activity/Inactivity Record**

Record your activities throughout the day. Make note of when you stand, walk, or otherwise engage in activity. Keep records for a few days, including both weekdays and weekends. Identify each block of time in which you are inactive, defined as less than 3 minutes of activity in a 30-minute period.

Day: Monday Date: February 20

Time	Activity	Minutes Active or Standing/Total Minutes
6:00-6:30 AM	Woke up, drank coffee, read email	5/15
6:30-6:45 AM	Prepared and ate breakfast, paid lunch	4/25
6:45-7:45 AM	Jogging and strength training	60/60
7:45-8:15 AM	Shower and dress for work	25/35
8:15-9:00 AM	Drive to work, arrive to desk	12/40
9:00 AM to 2:00 PM	Work at desk, bathroom break	3/80
2:00-2:30 PM	Lunch break	6/30
2:30-3:00 PM	Work at desk, bathroom break	3/30
3:00-3:30 PM	Walking break	10/30
3:30-4:30 PM	Work at desk, bathroom break	3/40
4:30-4:45 PM	Walk to the car, drive home, arrive home	3/45
4:45-5:00 PM	Grab laundry, change clothes, prepare dinner	60/60
5:00-5:30 PM	Eat dinner	2/30
5:30-6:30 PM	Household and family chores	35/45
6:30-10:30 PM	Watch TV and read	0/120
10:30-10:45 PM	Get ready for bed	5/5
10:45 PM	Go to bed	-

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## Movement Ideas

### At Work

- ▶ Take calls standing
- ▶ Walking meetings
- ▶ Extra lap when running an errand or using the restroom
- ▶ Take breaks and make them active time
- ▶ Walk after lunch
- ▶ Stairs instead of elevator
- ▶ Wall push-ups
- ▶ Put movement on to-do list
- ▶ Park farther away
- ▶ Get a standing transition desk

### At Home

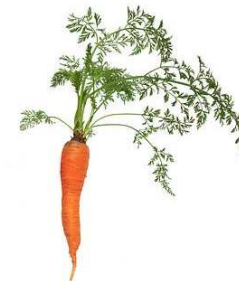
- ▶ Choose active relaxation: walking, gardening, etc
- ▶ Combine TV time with strength and stretching activities
- ▶ Clean the house during commercials or credits
- ▶ Put reading together with stationary bike or intervals of activity after each chapter
- ▶ Try audio books and take a walk or garden or clean
- ▶ Squats while teeth brushing
- ▶ Counter push-ups while making coffee



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## Getting Started

- ▶ Identify your motivators - think back to your Wellness Vision
- ▶ Check with your healthcare provider if needed
- ▶ Brain-storm and write down your FITT plan
  - ▶ Remember the 3 modes of exercise
- ▶ Prepare with supplies, footwear, clothing, etc.
- ▶ Get A Move On!



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## Homework

- ▶ Develop your FITT plan and get any needed supplies
- ▶ Calculate your Target Heart Rate Zones
- ▶ Implement your FITT plan > evaluate how it is going

### Next Class:

- ▶ Chapter 10 Sleep is Not Optional & Stress Management Strategies

Thank You and Happy Exercising!

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# Beginning an Exercise Program

## Fitness Assessment

Starting with an assessment allows you to gauge where your fitness level is prior to starting an exercise program. It also gives you some objective data to re-assess in order to **set goals** and determine if you're making progress. Write down the results of your assessment(s) (such as those below) and check back on those results every 2-3 months.

- How much time does it take to walk a certain distance? (1 mile)
- How many push-ups, sit-ups, or repetitions (of any exercise) can you do?
- How far can you walk in 6 minutes? (up and down your block)
- What is your waist circumference and/or Body Mass Index (BMI)?
- How many steps do you average per day? (record over 1 week's time)

## Time Commitment

An exercise program is a commitment. Seeing (and feeling) the benefits of exercise is going to take time. But how much should you really be doing?

Cardiovascular Exercise	<b>150 minutes</b> moderate intensity exercise <b>per week</b> <ul style="list-style-type: none"><li>• 30 minutes moderate intensity 5 days per week</li></ul> <b>or</b> <ul style="list-style-type: none"><li>• 20-30 minutes of vigorous intensity exercise 3 days per week</li></ul>
Resistance Training	Exercise each major muscle group <b>3 days per week</b> <ul style="list-style-type: none"><li>• 2-4 sets of 10-15 repetitions</li></ul>
Flexibility Training	Flexibility training (stretching) should be done <b>2-3 days per week</b> <ul style="list-style-type: none"><li>• Best when muscles are warm (after cardiovascular exercise)</li><li>• Hold each stretch for 20-30 seconds at a "slight discomfort"</li><li>• Repeat stretches to accumulate 60 seconds</li></ul>

If you are unable to meet these minimum exercise recommendations without being sore or extra fatigued, the exercise may be too intense or too much. You can still get good benefits of exercise by doing less time at lower intensities. Everyone has to start somewhere, **start where you are and work your way toward these goals.**

## What You'll Need

You don't need much to start an exercise program. All you really need is a supportive pair of shoes and some motivation. Here are a few tips for success.

- Make yourself accountable to someone- maybe that someone is you, maybe a family member or friend. Tell that person your goal, what you're doing, and when you're doing it. You'll be more likely to follow through and stick with it.
- You'll need a plan- a fancy gym or expensive equipment isn't necessary for success. But, knowing what you'll do in the short term (the next week or two) is. Are you going to try a new walking route? Most gyms will let you try it out for a session or two, but think about the machines you'll use. Questions to ask yourself are:
  - What kind of movement do you enjoy?
  - What is a realistic expectation for you and your exercise this week?
- Grace & Determination- beginning (and sticking with) exercise is a tough commitment, starting a new behavior like this often takes 90 days of regularly committing to establish a behavior. It will be hard and you'll likely miss a day. If you do, that's okay just start again tomorrow and keep with it!

## Example Schedule

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Cardio		30 Minutes Walking	30 Minutes Walking	30 Minutes Walking		30 Minutes Walking	30 Minutes Walking
Resistance		Upper Body Dumbbell	Seated Core Exercises	Balance Training		Upper Body TheraBand	Seated Core Exercises and Lower Body Weight Exercises

Try to take only one day off in a row. Taking two days in a row makes it easier to take off three in a row and getting back in the routine then becomes much harder.



## Exercise & Heart Rate

When you are exercising, your heart rate should increase. But how much should that increase be? There are a number of different answers to this question, but knowing what target heart rate is right for you can give shape to your goals and your workouts.

First, you need to know your resting heart rate. This is typically a number between 60-100 beats per minute (bpm) for most adults. For those who regularly participate in cardiovascular exercise a resting heart rate can be as low as 40-60 bpm. You can measure your heart rate with a device (such as a FitBit/activity tracker or HR Strap) or by simply taking your pulse. Place your index and middle finger on inside of your wrist (just below your thumb) and count your pulse for 10 seconds. Multiply by 6 or use the following chart to calculate your heart rate.

Count	Heart Rate	Count	Heart Rate
10	60	20	120
12	72	22	132
14	84	24	144
16	96	26	156
18	108	28	168

Now comes the tricky part, how high should your heart rate be when exercising? According to the American College of Sports Medicine and the American Heart Association, your target HR range for exercise should be between 50-85% of your maximum heart rate. 50-65% for those who are just beginning exercisers and 65-85% for those who are more experienced exercisers.

Maximum heart rate=  $220 - \text{Age}$

For a 60-year old person  $220 - 60 = 160$  beats per minute for a maximum heart rate

For this same 60-year old person their target exercise range should be...

Max. HR	50%	65%	85%
160 bpm	80 bpm	104 bpm	136 bpm

This person's target heart rate range is 80-136 bpm.

Let's calculate your target heart rate.

$220 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$   
Your Age      Max. HR

Max. HR	50% (Max HR x 0.5)	65% (Max HR x 0.65)	85% (Max HR x 0.85)
<u>      </u> bpm	<u>      </u> bpm	<u>      </u> bpm	<u>      </u> bpm

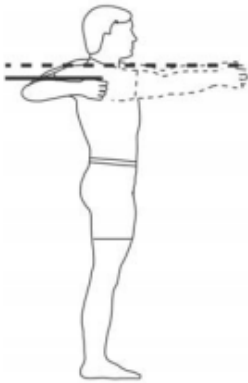
Your target heart rate range is        -        bpm

# 28 DAY SQUAT, PLANK & LUNGE PLAN



MON	TUE	WED	THU	FRI	SAT	SUN
<b>1</b> 10 squats 10 lunges plank hold (10 seconds (5 sec. rest) x 4)	<b>2</b> 10 jump squats 10 jump lunges 10 plank walks (each side)	<b>3</b> 10 squats 10 lunges plank hold (10 seconds (5 sec. rest) x 4)	<b>4</b> 10 jump squats 10 jump lunges 10 plank walks (each side)	<b>5</b> 10 squats 10 lunges plank hold (10 seconds (5 sec. rest) x 4)	<b>6</b> 10 jump squats 10 jump lunges 10 plank walks (each side)	<b>7</b> REST
<b>8</b> 15 squats 15 lunges plank hold (10 seconds (5 sec. rest) x 6)	<b>9</b> 15 jump squats 15 jump lunges 15 plank walks (each side)	<b>10</b> 15 squats 15 lunges plank hold (10 seconds (5 sec. rest) x 6)	<b>11</b> 15 jump squats 15 jump lunges 15 plank walks (each side)	<b>12</b> 15 squats 15 lunges plank hold (10 seconds (5 sec. rest) x 6)	<b>13</b> 15 jump squats 15 jump lunges 15 plank walks (each side)	<b>14</b> REST
<b>15</b> 20 squats 20 lunges plank hold (10 seconds (5 sec. rest) x 8)	<b>16</b> 20 jump squats 20 jump lunges 20 plank walks (each side)	<b>17</b> 20 squats 20 lunges plank hold (10 seconds (5 sec. rest) x 8)	<b>18</b> 20 jump squats 20 jump lunges 20 plank walks (each side)	<b>19</b> 20 squats 20 lunges plank hold (10 seconds (5 sec. rest) x 8)	<b>20</b> 20 jump squats 20 jump lunges 20 plank walks (each side)	<b>21</b> REST
<b>22</b> 25 squats 25 lunges plank hold (10 seconds (5 sec. rest) x 10)	<b>23</b> 25 jump squats 25 jump lunges 25 plank walks (each side)	<b>24</b> 25 squats 25 lunges plank hold (10 seconds (5 sec. rest) x 10)	<b>25</b> 25 jump squats 25 jump lunges 25 plank walks (each side)	<b>26</b> 25 squats 25 lunges plank hold (10 seconds (5 sec. rest) x 10)	<b>27</b> 25 jump squats 25 jump lunges 25 plank walks (each side)	<b>28</b> REST

## Upper Body Resistance Training



### Chest Press

- Start with band around your upper back at about chest level with hands at armpits
- Slowly push arms out in front of you until straight.
- Slowly return back to the starting position.



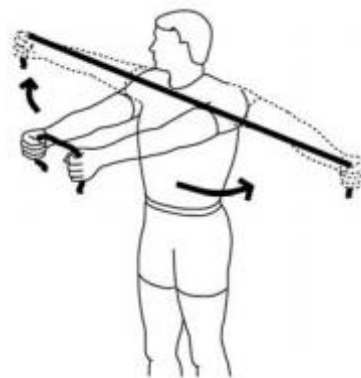
### Bent over Row

- Start with band under one or both feet, bend forward slightly at the hips.
- Bend your elbows as you pull backwards on the band until your hands are at your sides.
- Return to starting position.



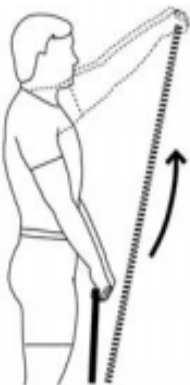
### Bicep Curl

- Start with band under one foot. Arms straight at your sides. Palms facing inward.
- Bend at your elbows pulling your hands toward you armpits. Elbows stay tucked.
- Return to starting position.



### Pull Aparts

- Start with band in hands with arms straight out in front of you, palms down.
- Slowly move hands away from each other out to your sides.
- Return to starting position.



### Shoulder Raise

- Start with band under one or both feet, arms straight or slightly bent, pointed at the ground.
- Raise arms up to about shoulder height.
- Return to starting position.

Adapted from Thera-Band User Manual:

[http://www.thera-band.com/userfiles/file/resistance\\_band-tubing\\_instruction\\_manual.pdf](http://www.thera-band.com/userfiles/file/resistance_band-tubing_instruction_manual.pdf)

# Lower Body Chair Stretching

## Stretching Guidelines

According to the American College of Sports Medicine (ACSM)...

- Each static stretch should be held for 10-30 seconds at a point of slight discomfort, repeat to accumulate 60 seconds per muscle group.
- Most effective when muscles are warm (right after cardio exercise or a warm up)



### Shoulder/Chest Stretch

1. Sit toward the edge of your chair with clasped hands behind you, like you're rocking a baby.
2. Sit up straight with arms fairly straight. Roll your shoulders back, opening up your chest
3. Imagine your shoulder blades coming together as if "pinching a pencil" Hold for about 20 seconds.



### Hamstring/Calf Stretch

1. Sit near the edge of your chair with one or both legs out in front of you, heel touching the ground.
  2. Reach forward until you feel a "slight discomfort/pull" in the back of your leg/calf.
  3. Hold Stretch for 20 seconds and switch legs.
- With this stretch, the straighter your leg is and the more your toe is pointed away from you the more you'll target your hamstring. If your toe is pulled up toward you and your knee is slightly bent, you may feel this more in your calf muscle.



### Quadriceps/Hip Flexor Stretch

1. Sit toward the side of your chair (partially on, partially off) so that you're able to bring on leg back with the ultimate goal of your knee pointing toward the ground.
2. Sit up straight. If you need more of a stretch at this point, gently lean back at the hips, if this is uncomfortable/too much stretch, lean forward to take away some pressure.
3. Hold for 20 seconds.



### Piriformis/Hip/Gluteal Stretch

1. Sit comfortably in your chair and bring one ankle up the rest on your opposite knee.
2. Sit up straight. If more stretch is desired, bend forward gently at the hips.
3. Hold stretch for 20 seconds, switch legs.