

# **Adapted Physical Exercise (APEX) Manual**

## **For Adults with Intellectual and Developmental Disabilities**

## Who We Are:

We are the Adapted Physical Exercise (APEX) Research group in the Department of Kinesiology at the University of Windsor. We are partnered with Community Living Essex County, and funded through the support of the Ontario Trillium Foundation (OTF). Together, we have developed an ***APEX Manual for Adults with Intellectual and Developmental Disabilities***.

## Acknowledgements

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Also, a special thank you to all the participants, support staff, and families in the Fit Together APEX program who contributed to the creation of this manual. Without you, this project would not be possible.



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# Introduction

Physical inactivity is associated with chronic disease, obesity, depression, and all-cause mortality<sup>1-3</sup>. Adults with intellectual and developmental disabilities (IDD) often display sedentary behaviors that can be linked to poor health and physical fitness<sup>1-4,5</sup>. The good news is that physical activity and exercise can be used as a strategy to reduce the risk of those negative health consequences and improve physical, social, and mental wellbeing<sup>4-12</sup>.

## Purpose of APEX Manual

This APEX manual is an educational resource that provides accessible, evidence-based information on physical fitness, exercise prescription, and proper exercise technique.

Consisting of exercises, that include a warm up, stretching, and cool down routines, along with instructional photos and videos on gym etiquette, safety, and self-care. The instructional photos and videos will provide users with visual and auditory prompts for a universal design.

The purpose of the APEX manual is to help facilitate and sustain physical fitness of adults with IDD, and ultimately improve their quality of life through accessible knowledge and inclusive physical activity.

Family members, support staff, and service sector agencies can also use this manual as a resource to promote physical fitness in the lives of the people they support.

# Legend

	<b>Body Weight Exercises</b>		<b>Calculations (Equations)</b>		<b>Cardio-respiratory</b>
	<b>Change of Clothes</b>		<b>Checking In</b>		<b>Cleaning Equipment</b>
	<b>Encourage</b>		<b>Exercise Ball</b>		<b>Free Weight</b>
	<b>Flexibility</b>		<b>Goal Setting</b>		<b>Gym Bag</b>
	<b>Hello &amp; Goodbye</b>		<b>Hygiene Products</b>		<b>Lock &amp; Locker Room</b>
	<b>Membership Card</b>		<b>Modeling</b>		<b>Nutrition</b>
	<b>Outdoor Shoes</b>		<b>Planning &amp; Schedule</b>		<b>Questions</b>
	<b>Resistance Band</b>		<b>Responsibility</b>		<b>Running Shoes</b>
	<b>Safety</b>		<b>Skipping Rope</b>		<b>Strength Training</b>
	<b>Tips / Information</b>		<b>Things to Consider</b>		<b>Time</b>
	<b>Towel</b>		<b>Transportation</b>		<b>Waiting</b>
	<b>Warmup</b>		<b>Water</b>		<b>Weight Machine</b>

# About Exercise

## What is Exercise?

- **Exercise is a planned, repetitive, and structured movement intended to maintain or improve physical fitness or performance.**<sup>12</sup>

## What is Physical Activity?

- **Any bodily movement that uses muscles and requires energy expenditure.**<sup>11-12</sup>

## Types of Exercise Training

- **There are different types of exercise training, such as cardiovascular, strength, flexibility, and balance.**<sup>12-13</sup>
- **Your exercise program is organized using repetitions (the number of times you perform a single exercise), sets (the number of times you perform a combination of repetitions), and loads (specific resistance used during an exercise). As the workout becomes too easy, it is important to make the same exercises more challenging by adding sets, repetitions, and loads, or by choosing different exercises.**<sup>13,19-20</sup>
- **To strengthen your muscles, you must stress them to fatigue. You can monitor your heart rate (HR) to give you an idea of how hard you are working.**<sup>12-14,18</sup>

# The Benefits

## What are the Benefits?

- **Staying physically active on a regular basis, whether through exercise, sports or other activities is very important for improving and maintaining your overall health and well-being.**<sup>1-12</sup>
- **Research shows that keeping active can reduce the risk of developing chronic diseases such as cardiovascular disease, diabetes, obesity, cancer and metabolic syndrome.**<sup>1-12</sup>
- **Regular exercise can improve your mental health, by reducing anxiety and depression as well as increasing confidence, self- esteem, self-image, and serotonin levels.**<sup>5-11</sup>
- **Aerobic and strength training can improve your bone density and muscle mass which will help prevent injury, fractures, muscle loss, and osteoporosis associated with aging.**<sup>4-5,12</sup>

## How Should Exercise Feel?

- **When you exercise, your breathing and heart rate should increase over time, and you should sweat.**<sup>12-14,18</sup>
- **After exercise, it is normal for your muscles to feel sore. If there is a severe pain, ask a health care professional for advice.**<sup>12-16, 29</sup>

# Is this Exercise too Easy for Me?

- You should be exercising at a moderate to vigorous intensity. This means you should have difficulty carrying on a conversation with the person beside you.<sup>12-16,18</sup>
- If the exercises are becoming too easy, you can progress to a more difficult exercise, or add more weights, sets or repetitions.<sup>12-13,15,18</sup>
- It is important to challenge yourself to stress your muscles. This will help you gain the greatest health benefits.<sup>12-13</sup>
- If you notice your form/technique is suffering or you cannot complete an exercise properly, then you should reduce the difficulty by using less weights, or repetitions.<sup>12-16</sup>

## Things to Keep in Mind When I Exercise

- Make sure to breathe evenly when exercising. Inhaling and exhaling helps oxygen flow into the body, so do not hold your breath.<sup>14,18</sup>
- It is important to stay hydrated. Drink water!<sup>14,62,64</sup>
- It is important to be safe when exercising. Remember to wear appropriate clothing. Put equipment away after use, and know the proper exercise technique, to avoid injury.<sup>29</sup>

# General Exercise Guidelines

- **Adults and seniors should accumulate an average of 150 minutes of physical activity per week in 10-minute bouts or more. Activities should be aerobic and include bone strengthening exercises at least 2 days per week.** <sup>12,15</sup>

## Disclaimer

- **Before exercising, ask your doctor if it is okay to do so. Some exercises may be better suited for you, while others, have the potential to cause injury, harm, or adverse health effects.** <sup>12-16,29</sup>
- **If you are experiencing severe discomfort, chest pain, dizziness, and/or abnormal shortness of breath stop exercising immediately.** <sup>14-16,29</sup>

## Have Fun!

- **It is important to have fun while exercising! The more you enjoy an activity, the more likely you will continue.** <sup>17</sup>
- **There are lots of exercises, activities, and movements that you can add to your workout, or lifestyle. Make sure to choose exercises that suit your goals, interests, and abilities.** <sup>17,18,66</sup>

# The Cardio-respiratory System and Exercise

## What is The Cardio-respiratory System?

- The Cardio-respiratory system helps transport the oxygen we breathe from the air, into the lungs. From the lungs, the oxygen goes into the blood where it flows to the heart.<sup>18-19</sup>
- The heart pumps this oxygen filled blood, to different areas of the body, such as the muscles, organs, and tissues. Carbon dioxide is released back into the air as you breathe out. Every time you breathe, this system is being used.<sup>18-19</sup>

## How Does This Relate to Exercise?

- Through this system, oxygen is circulated to various muscles within the body. The more oxygen that goes into the muscles, the more energy they will have to carry out an exercise.<sup>18-20</sup>
- Regular exercise allows this system to run better. Exercise improves the lungs' ability to breathe more oxygen and the heart's ability to pump out more oxygen filled blood to the working muscles. This will give you more energy and improve your performance.<sup>18-20</sup>

## Health Benefits



- Improving your cardiorespiratory fitness can help to reduce your risk of cardiovascular disease, stroke, cancer, type 2 diabetes, and metabolic syndromes. It also helps improve your mental health.<sup>4-18</sup>
- Cardiovascular training is one of the most common ways to improve your Cardio-respiratory fitness.<sup>18-19</sup>
- A warmup is a great way to get your body warm, heart pumping, and increase your breathing to enhance blood flow to your muscles.<sup>18-19</sup>

# Warm Up<sup>21-27</sup>



**A warm up is any activity or movement that increases your breathing, and heart rate. You may begin to notice sweat on your skin.<sup>18-21,</sup>**

**Before exercising, it is important to warm up your body. This will allow blood to flow into your organs, muscles, and tissues, for better movement, circulation, and breathing.<sup>20-21,28</sup>**

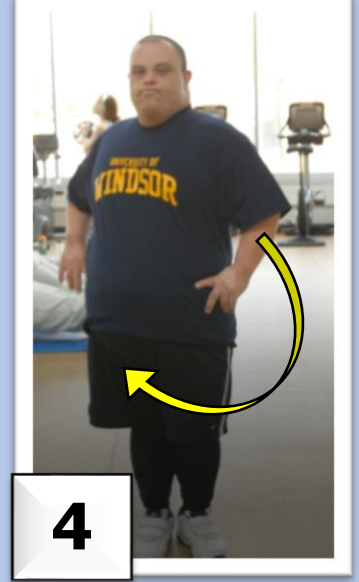
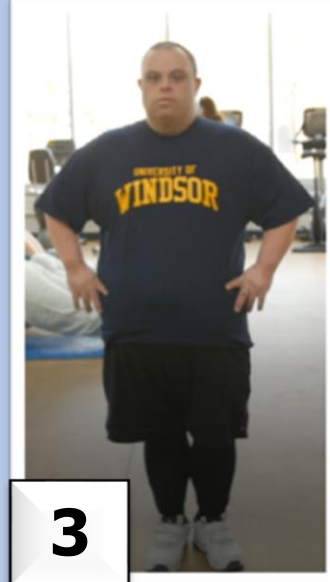
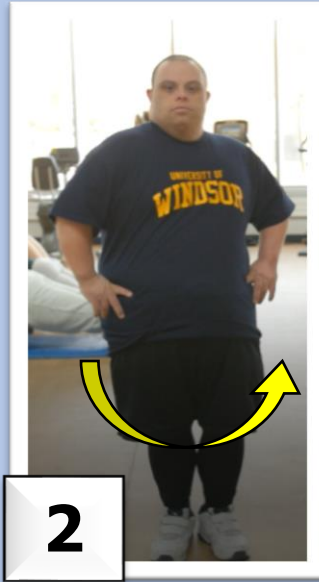
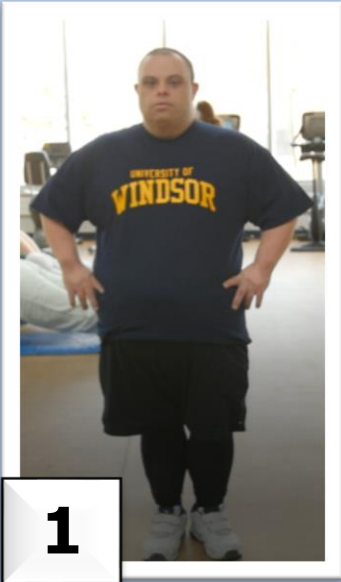
**A warm up should be light to moderate intensity. This means you should still be able to talk to the person beside you. You should experience your breath increasing at a steady, comfortable rate.<sup>21-22</sup>**

**A warmup should be 5 to 30 minutes and can include many different activities.<sup>21-22,28</sup>**

**Once you have completed your warmup,  
you are ready to exercise!**



# Trunk Rotation



## How to Perform:

1. **Stand straight, feet firm on the ground.**
  - With your hands on your hips.
2. **Slowly turn to the right.**
  - Hold this position for 5 to 10 seconds.
3. **Slowly turn your body back to the center.**
4. **Slowly turn to the Left.**
  - Hold this position for 5 to 10 seconds.
  - Repeat this movement for desired sets and repetitions.



## Tips:

- Look straight ahead while turning your body.
- Twist from your hips, not your back, shoulders, or arms.
- You should feel a slight stretch in your side.

# Arm Circles



## How to Perform:

### 1. Forwards

- Stand straight, with your feet shoulder width apart.
- Spread your arms straight out on either side of you.
- Slowly create circles with your arms, swinging them forwards.
- Continue this motion for 10 to 15 repetitions, and then rest.

### 2. Backwards

- Slowly create circles with your arms, swinging them backwards this time.
- Continue this motion for 10 to 15 repetitions, and then rest.



## Tips:

- Breathe and look straight ahead, keeping an upright posture.
- Only your arms should be moving from your shoulders.

# Running on the Spot

## Jogging



### How to Perform:

- 1. Find a space that is open, where you can move around easily and safely.**
- 2. Begin to jog or run, staying within that same area.**
  - Continue without stopping for 2 to 5 minutes.
  - Or, you can take short breaks if needed.



### Tips:

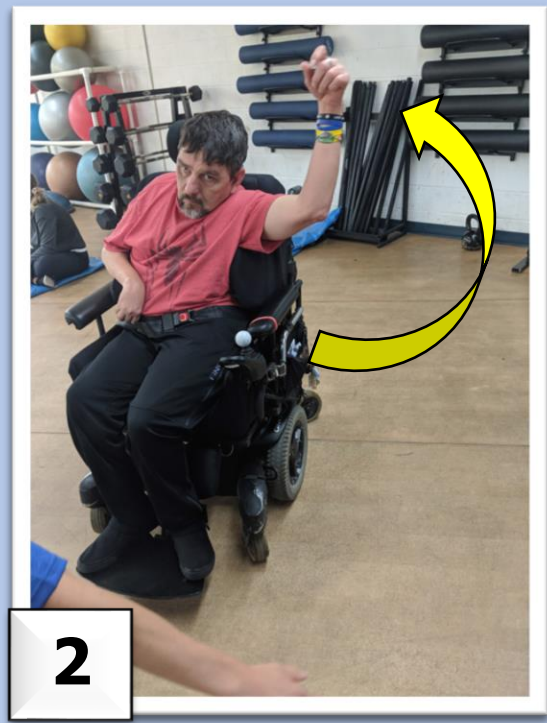
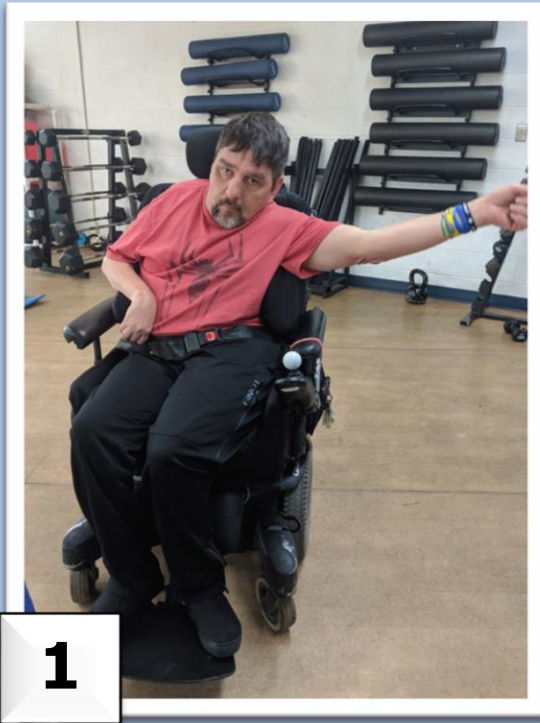
- Keep your arms moving to match your legs.
- Remember to breathe, and look straight ahead, keeping an upright posture.



### Consider:

- If using this exercise as a warmup, the intensity should be light to moderate.
- This exercise is good for coordination and overall cardiovascular fitness.

# Single Arm Raise



## How to Perform:

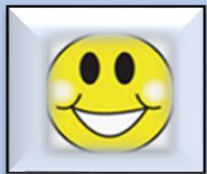
- 1. Place your arm straight out to the side.**
  - Slowly lift your arm up towards your head.
  - Hold this position for 3 to 5 seconds.
- 2. Slowly bring your arm down towards your side.**
  - Repeat this movement for the desired sets and repetitions.



## Tips:

- Keep your body straight and upright, as you lift your arm up.
- Activate your core and breathe evenly.

# High Knees



## How to Perform:

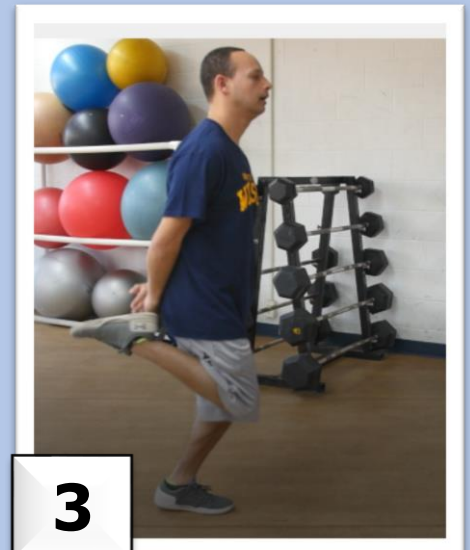
- 1. Stand upright, looking straight ahead.**
  - Bring the right knee towards your chest.
- 2. Place right foot on the ground.**
  - Bring the left knee up towards your chest.
- 3. Continue this movement at a steady jogging pace for 2 to 5 minutes.**



## Tips:

- You can use your hands as a guide for how high to raise the knee.
- Alternate your arms to match your leg movements.
- Remember to breathe.
- If this exercise is used for a warmup, the intensity should be light to moderate.

# Bum Kicks



## How to Perform:

- 1. Place both hands behind your back. Stand with both feet on the ground, shoulder width apart.**
  - One hand should be over the other.
- 2. Using one foot at a time, try to lightly kick your hands.**
- 3. Continue this movement, switching feet for 2 to 5 minutes.**



## Tips:

- Keep your body upright, resist bending forwards while trying to kick.
- Look straight ahead (try focusing on an object in front of you).
- Remember to breathe.
- If using this exercise as a warmup, the intensity should be light to moderate.

# Cardiovascular Training

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# Cardiovascular Training

## What is Cardiovascular Training?

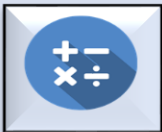
- Cardiovascular training includes exercises that work the heart, lungs and blood vessels, allowing blood to flow to the muscles more efficiently.<sup>14,18-20</sup>
- These exercises should use large, major muscle groups, increasing your breathing and heart rate. These can include body weight exercises such as walking jogging, swimming, running and cycling.<sup>12,14 18-20</sup>

## Guidelines

Cardiovascular exercise training should be performed for 30 minutes at a moderate to vigorous intensity.<sup>12, 18-20</sup>

The average resting heart rate for an adult is between 60-100 beats per minute (bpm). Heart rate will increase as the intensity of your workout rises.<sup>14, 18-21</sup>

Your maximum heart rate is (220- your age). Moderate intensity means your target heart rate should be around 70% of your maximum heart rate.<sup>18</sup>



You can calculate with this simple equation:<sup>18</sup>

$$\text{Target HR (bpm)} = (220 - \text{age}) \times 0.7$$



Cardiovascular exercises can be performed using:<sup>12, 18</sup>



1) Your body weight,



2) Equipment such as a skipping rope, bike or roller blades.

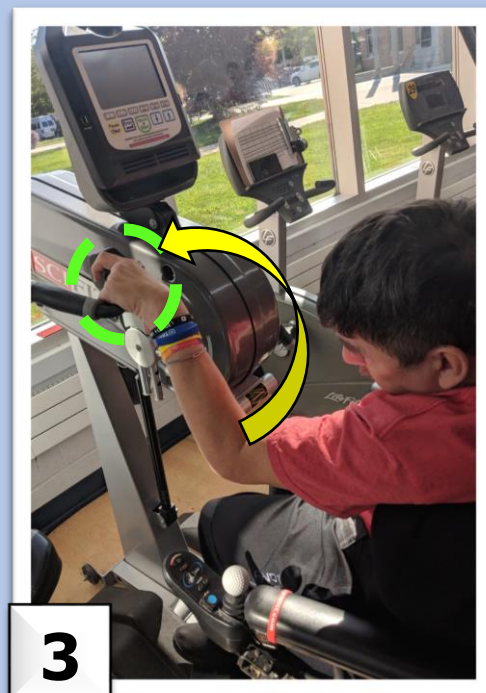
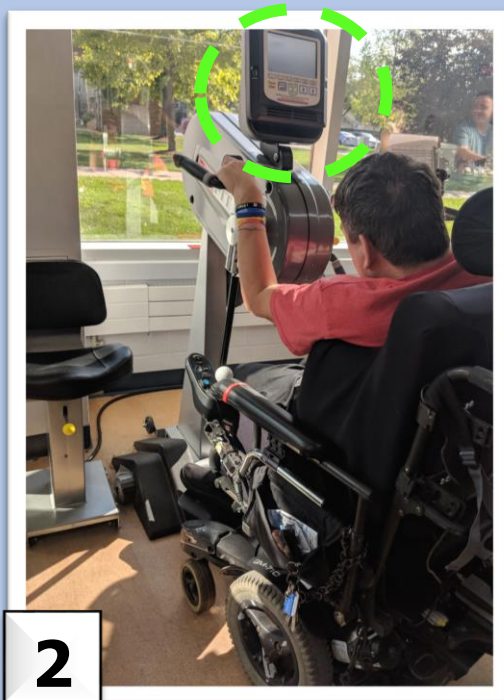
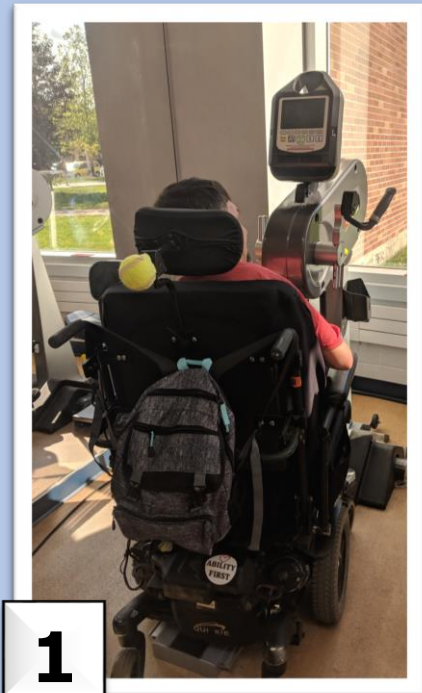


3) Machines such as a stationary bike, treadmill or elliptical.

- Over time, you can progress your workout by increasing the time to more than 30 minutes, and the intensity, speed or pace. This will challenge your endurance, and overall physical fitness.<sup>12-14</sup>
- To manage effort, you can; 1) take your heart rate or 2) monitor your ability to have a conversation with the person beside you.<sup>19-20</sup>
- Many of the cardiovascular machines have settings where you can monitor your heart rate and calories burned.

# Arm Cycle

## Cardiovascular Machine



### How to Perform:

#### 1. Adjust seat height.

- The seat can be removed to accommodate a wheelchair, walker or other devices.

#### 2. Pick the appropriate workout setting on the screen.

- Ask for help if you are unsure what settings to pick.

#### 3. Grasp the handles and pedal forwards with your hand (s) in a continuous movement.

- Keep pedaling until you complete the desired time.

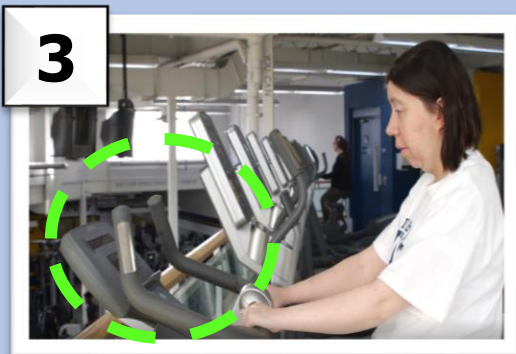
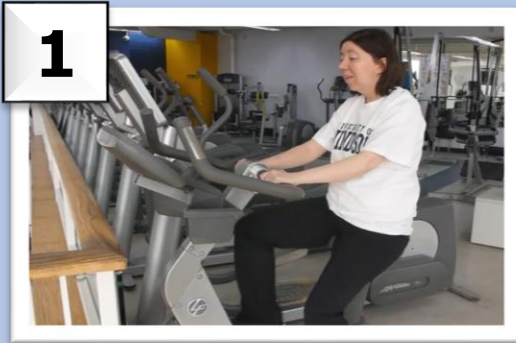


### Consider:

- Look straight ahead and remember to breathe.
- If you are using one arm, make sure you are not compensating by leaning to the side.
- Take breaks when needed.

# Stationary Bike

## Cardiovascular Machine



### How to perform:

- 1. Adjust seat to the appropriate height.**
  - Should be at the height of your hip.
- 2. Your feet should reach the foot pedals with a slight bend in your knee.**
  - Place each foot inside each foot pedal sling.
- 3. Select your desired workout and resistance on the computer screen.**
  - Different machines will have different settings.
- 4. Grasp the handle bars with both hands, and pedal forwards continuously.**

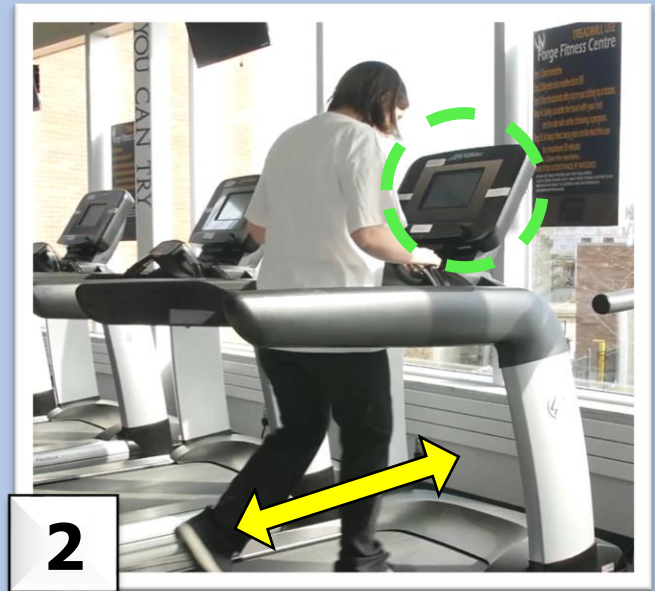
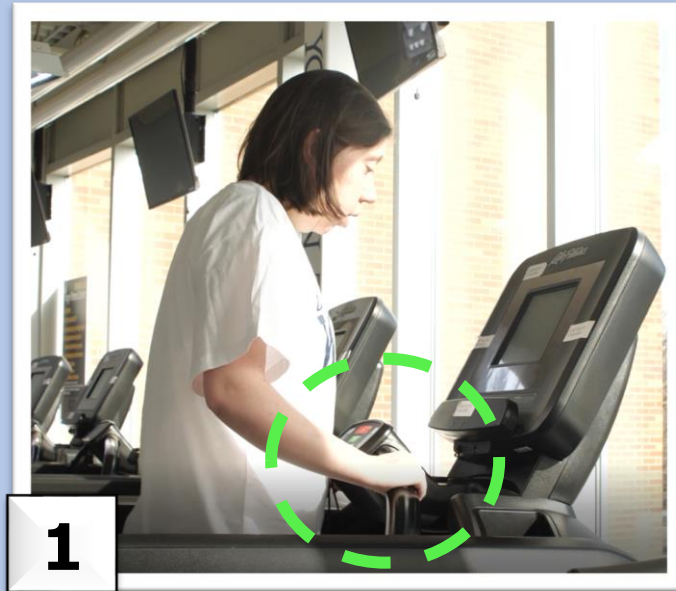


### Consider:

- This exercise provides low impact on your joints.
- There are different programs you can choose on the machine, allowing you to create your own workout.

# Treadmill

## Cardiovascular Machine



### How to Perform:

#### 1. Step onto the treadmill.

- Grip handlebars with both hands, only if you are walking.

#### 2. Select your desired workout, speed, and pace on the screen.

- Different machines will have different settings.

#### 3. Begin to walk, jog or run depending on what is desired.



### Tips:

- Stand up straight, do not lean on handrails.
- Remember to breathe.

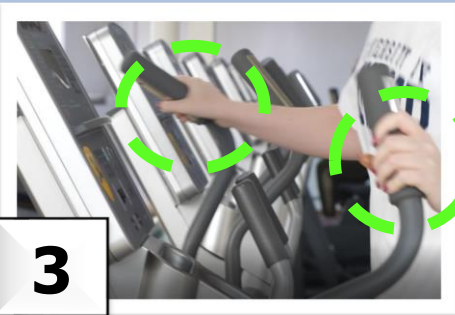


### Safety:

- Keep a steady pace, slowly increase, or slow down the pace as you go along.
- Use a safety clip, if available.
- Ensure that you **press stop** or pause before stepping off the treadmill.

# Elliptical

## Cardiovascular machine



### How to Perform:

1. **Step onto the elliptical.**
2. **Place one foot on each foot pad.**
3. **Select a desired workout, and resistance on the computer screen.**
  - Different machines will have different settings.
4. **Grasp the handle bars with both hands, and begin to step forward, one foot at a time.**
  - Propel your arms and legs in a forward, continuous motion.

### Tips:

- Stand with an upright posture and look straight ahead.
- Remember to breathe.

### Safety:

- Foot pedals may move when you step on them, so grasp the handlebars for balance
- Pay attention to the screen, keep stepping to keep the machine on.



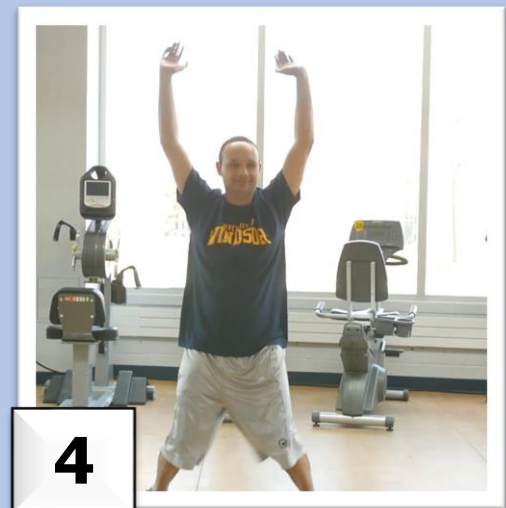
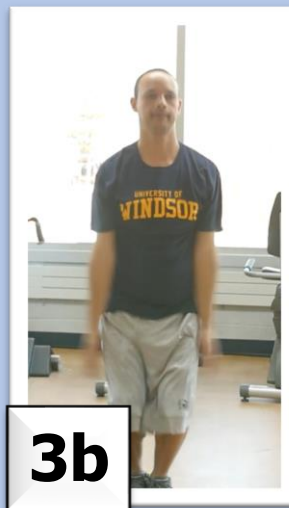
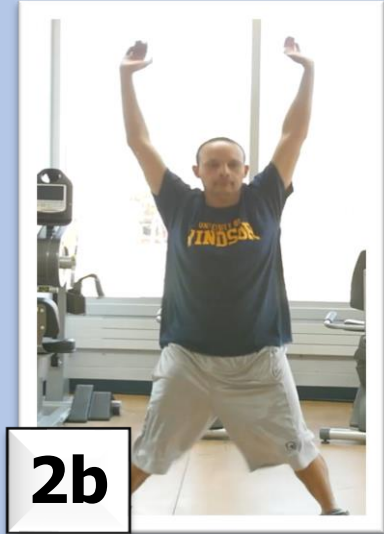
# Burpees



## How to Perform:

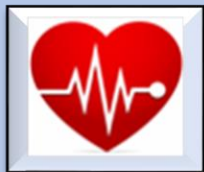
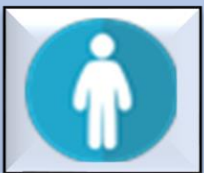
- 1. Stand with both of your feet on the floor, shoulder width apart.**
  - Raise your arms straight above your head and jump up in the air.
- 2. After the jump, bring your arms down, towards the floor.**
  - Place your hands on the floor, in front of you.
- 3. Placing your weight into your hands, kick your legs backward.**
  - You should end up on your hands and feet.
  - If you want a challenge, lower yourself to the ground (like a push up).
- 4. Then bring your feet inward toward your chest.**
  - Allow this movement to help you stand upright again.
  - Repeat this movement for desired repetitions, sets and time.

# Jumping Jacks



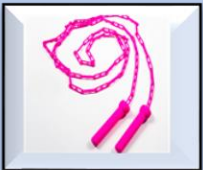
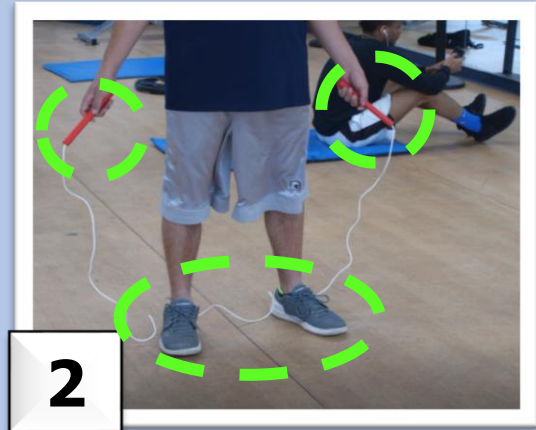
## How to Perform:

1. Stand still with your feet on the floor.
2. a) Jump upwards, bringing arms and legs out to the side at the same time.  
b) Touch your hands above your head if you can.
3. a) Bring your arms back to down to your side.  
b) Your feet should also move inward, touching together.
4. Repeat movement for desired repetitions, sets and time.



# Skipping

## Skipping Rope



### How to Perform:

- 1. Grab a skipping rope holding one handle in each hand.**
- 2. Step in front of the rope so that it is resting behind your feet.**
- 3. Place your arms by your side, at waist height.**
- 4. In one quick motion, swing the rope over your head.**
  - As it reaches the ground, jump over the rope with both feet.
  - Repeat this continuous movement for as many repetitions as you can for about 2 to 5 minutes.



# Building Strength

## How do I Become Stronger?

- Anyone can become stronger by building up the muscles in their body through strength training exercises<sup>28</sup>. Having stronger muscles strengthens your bones, reduces your risk of injury and improves your overall health.<sup>29</sup>
- To strengthen your muscles, you must work them harder than usual, increasing their size. This can be done by using specific loads and resistances during exercise.<sup>29-32,38</sup>



**Body Weight:** When performing a body weight exercise your muscles fight against gravity, which makes them stronger (e.g. doing a push-up).



**Machine:** Machines at the gym have weights built into them, allowing you to choose which resistance or weight is right for you.



**Free Weight:** Can include dumbbells, barbells, ankle weights or any other additional weight that can be held or attached to your body during exercises.



**Resistance Band:** Are rubber/nylon like bands that provides resistance during exercise. Different color bands have different thicknesses. The thicker the band, the harder it is to pull (more resistance).

## Major Muscle Groups<sup>28-30</sup>

### Upper Body

- Shoulders
- The Chest
- The Arms

### Mid Body

- The Back
- The Core

### Lower Body

- The Hips
- The Thighs
- The Calves

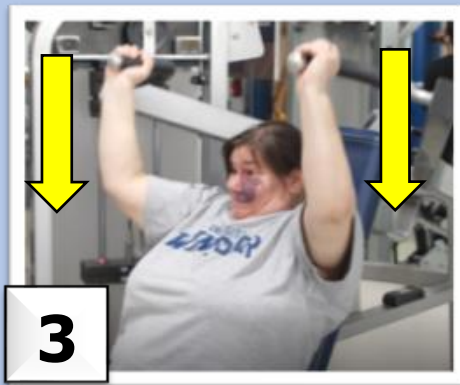
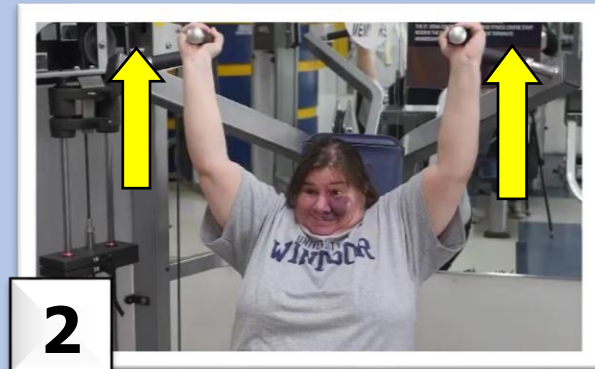
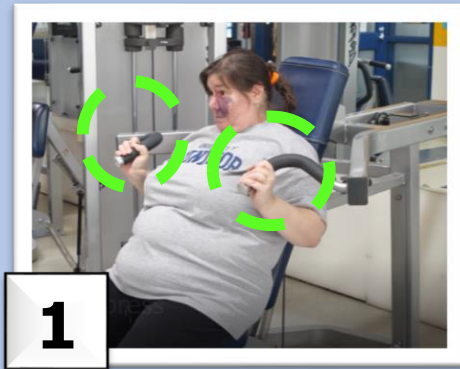
- You should be doing muscle strengthening activities, using the major muscle groups, 2 days/week.<sup>15,28-29</sup>
- 8-12 repetitions at 40-80% of your one rep maximum (1RM).<sup>29-30</sup>
- 2-4 sets and about 1-3 minutes rest in between sets.<sup>29-30</sup>
- Emphasis should always be on proper technique to avoid injury.<sup>30</sup>

# Upper Body Strength<sup>40-47</sup>



# Shoulder Press

## With Machine



### How to Perform:

- 1. Adjust the machine seat height, select weight and grasp handles.**
  - Keep your feet firmly on the ground.
- 2. Press weight upwards in a slow, controlled movement.**
  - Stop, pause briefly at the top.
- 3. Slowly lower weight back to start position.**
- 4. Repeat this movement for desired repetitions and sets.**

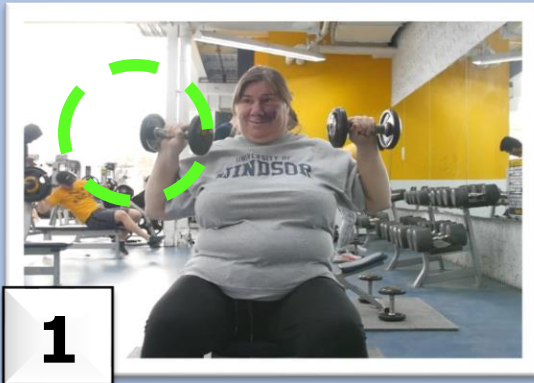


### Tips:

- Elbows should be slightly bent at the top of movement.
- Activate your core to maintain an upright body position.
- Look straight ahead, keeping your neck relaxed, do not strain it as your push upward.

# Shoulder Press

## With Free Weight (Dumbbell and Barbell)



### How to Perform:

- 1. Find a comfortable and stable chair or bench and sit down with your feet on the ground.**
  - Keep desired weight (dumbbell or barbell) at shoulder level.
- 2. Gripping weight firmly, push upwards, keeping your elbows slightly bent at the top.**
  - Stop, pause briefly before slowly lowering weight to starting position.
  - Repeat this movement for desired repetitions and sets.

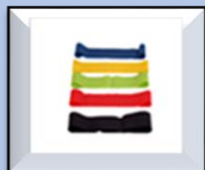
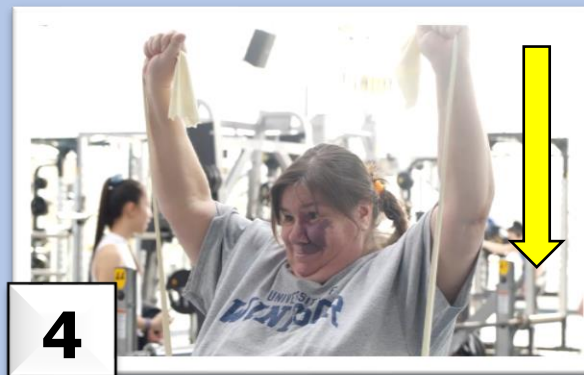
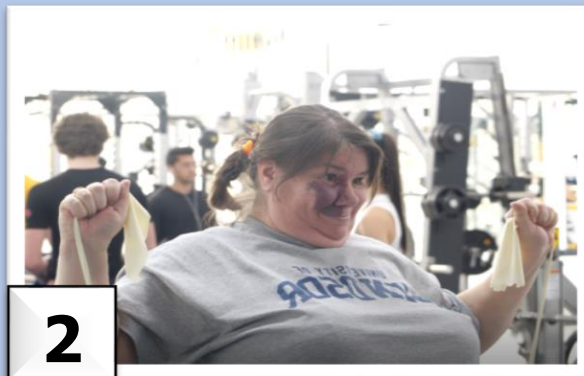
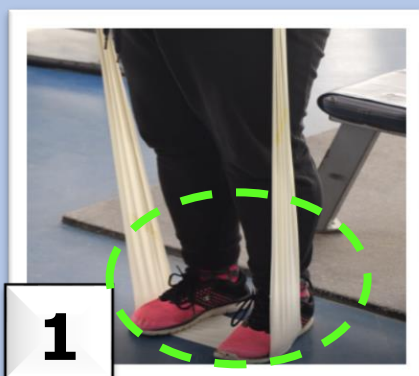


### Tips:

- Elbows should be slightly bent.
- Look straight ahead, keep your body upright by activating your core.
- Do not sway or move your trunk.

# Shoulder Press

## With Resistance Band



### How to perform:

- 1. Step onto the resistance band with both feet.**
- 2. Grasp both ends in each hand.**
- 3. Push hands upward and pause briefly, keeping elbows slightly bent.**
- 4. Slowly return to starting position.**
  - Repeat movement for desired repetitions and sets.

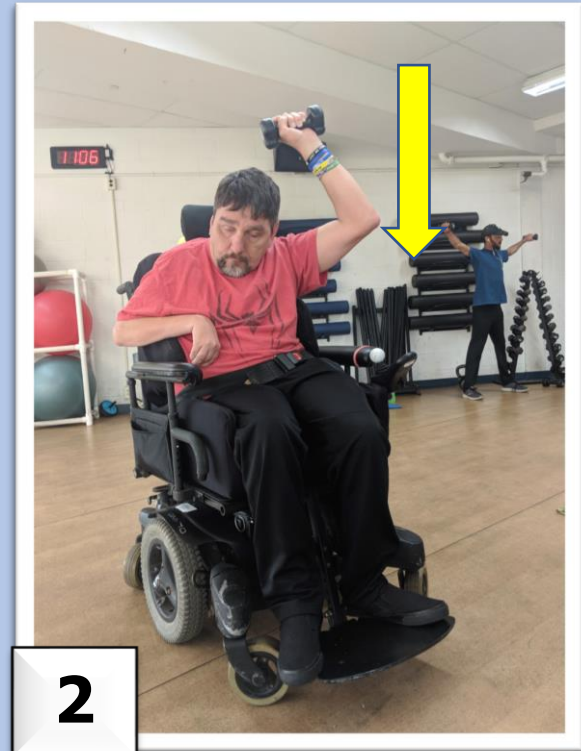


### Tips:

- Look straight ahead, your feet should be shoulder width apart, feet on the ground.
- Squeeze your stomach muscles to maintain an upright posture.
- Slightly bend your elbows when you are pushing upward (do not lock your elbows).

# Single Arm Shoulder Press

## With Dumbbell



### How to Perform:

- 1. Grip the weight (dumbbell) firmly, with one hand.**
- 2. Push the dumbbell upward, keeping your elbows slightly bent.**
  - Stop, pause briefly.
- 3. Slowly return weight to start position.**
  - Repeat this movement for desired repetitions and sets.

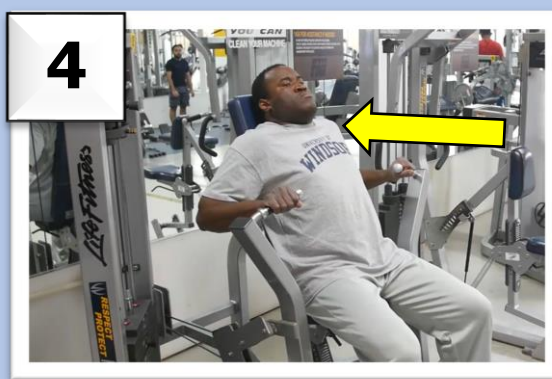
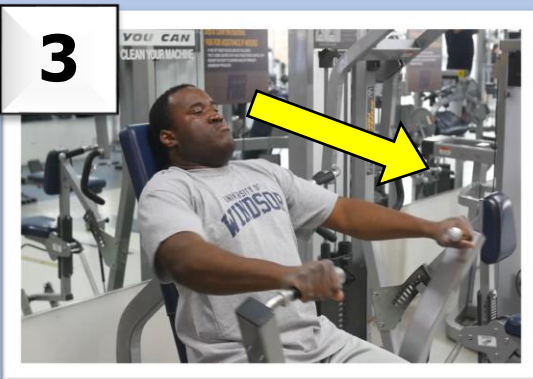
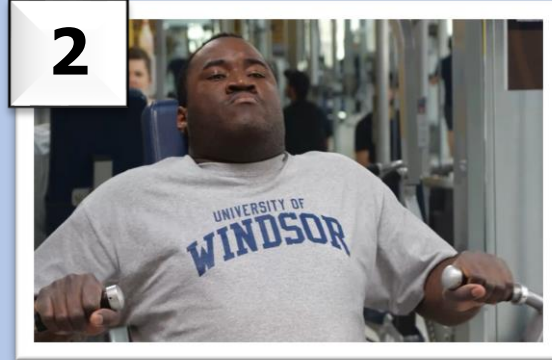
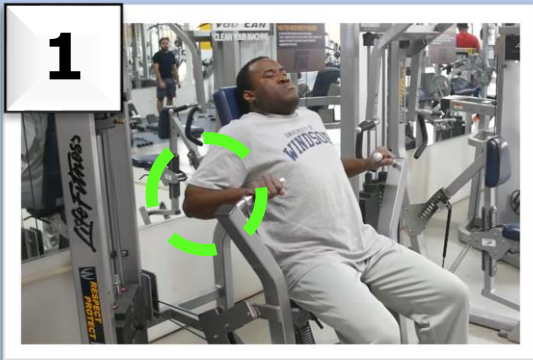


### Tips:

- Elbows should be slightly bent.
- Look straight ahead, keep your body upright by squeezing your stomach muscles.
- Your shoulder should be the only limb moving in this exercise.

# Chest Press

## With Machine



### How to Perform:

1. **Adjust the seat height, select weight and grasp handles.**
2. **Place your back against the backing of machine, feet firmly on the ground.**
3. **Slowly push forward until your arms are slightly bent.**
4. **Slowly bend your elbows back to the starting position.**
  - Repeat this movement for desired repetitions and sets.

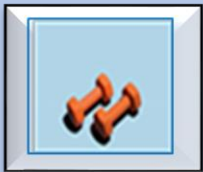
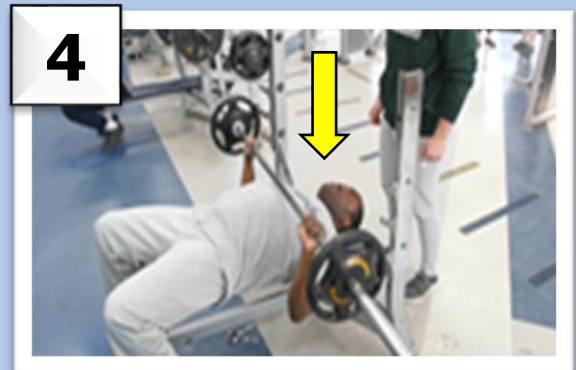
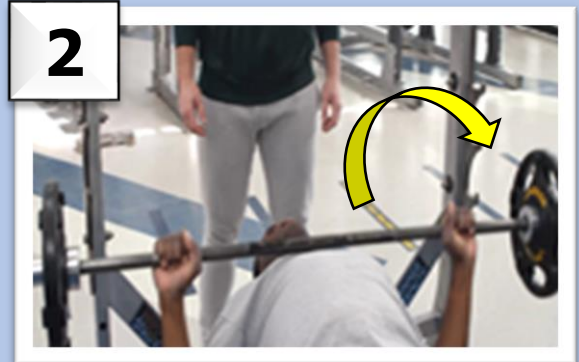


### Tips:

- Your elbows should be bent all the way back to your chest before start moving back to the start position.
- Do not lock your elbows as you push forwards.
- Look straight ahead, your keep neck and back relaxed as you push.
- Squeeze your stomach muscles to maintain and upright.

# Chest Press

## Free Weight (Barbell)



### How to Perform:

- 1. Select appropriate weight (you can use just the bar)**
  - Lie down on your back, on the bench, keep feet firmly on the ground.
- 2. Slowly, remove the barbell from its position on the rack and lower towards your chest.**
- 3. Slowly push the barbell upwards until your arms are only slightly bent.**
- 4. Pause before slowly lowering the bar back to start position.**
  - Repeat movement for the desired sets and repetitions.

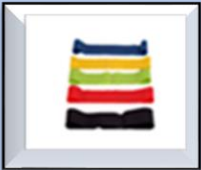
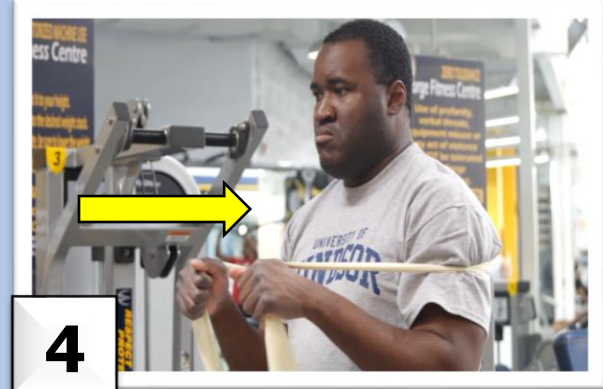
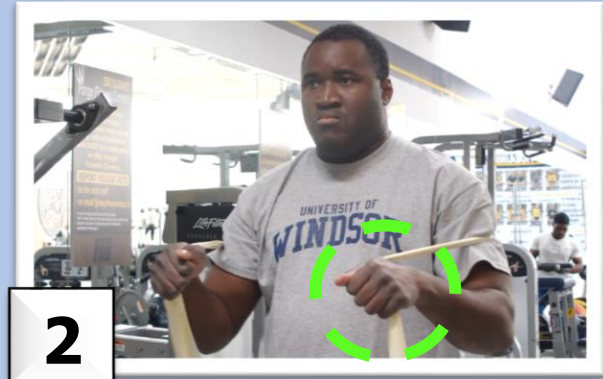
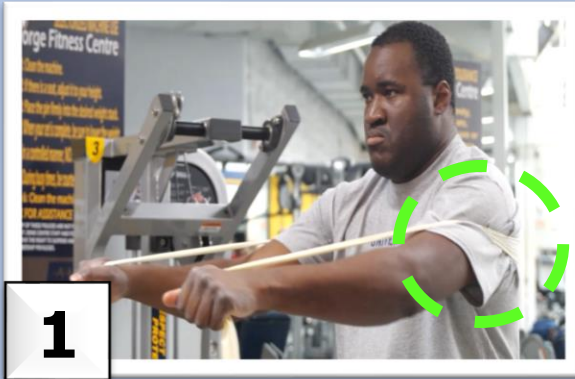


### Safety:

- Keep your feet firmly on the ground.
- Keep your back straight (do not arch your back as you lift).
- Slowly lower the bar to chest level (use a spotter).

# Chest Press

## With Resistance Band



### How to Perform:

1. **Stand straight, keeping your feet on the ground.**
  - Wrap resistance band around the middle of your back.
2. **Keep elbows bent and grip each end of the resistance band.**
  - Your grip should be toward the middle, for a stronger pull.
3. **Slowly push outward until elbows are slightly bent.**
4. **Pause briefly before returning to the starting position.**
  - Repeat this movement for desired repetitions and sets.



### Consider:

- Different thickness of resistance bands will determine the difficulty.
- Position resistance band so that it rests in the middle of the back.
- Resistance band should be challenging to push, but not unmoveable.

# Push Up

## Body Weight



### How to Perform:

1. Get down on your hands and knees.
2. Place your legs straight out behind you.
3. Slowly bend your elbows and lower your body to almost touch the mat.
4. Push yourself slowly back up.
  - Repeat for desired repetitions and sets.



### Technique:

- Keep your body straight, do not let your back bend.
- Do not let your hips drop, or bum rise upward.
- Keep neck relaxed, look at a spot on the floor.



### Consider

- Use a yoga mat underneath to ease pressure off your hands and knees.

# Adapted Push Up

## Body Weight



### How to Perform:

1. **Get down on your hands and knees.**
2. **Shuffle your hands forwards so they are in line with your shoulder. Leave your knees bent.**
3. **Slowly lower your body so it almost touches the mat.**
4. **Push yourself slowly back up and straighten your elbows so you are back to starting position.**
  - Repeat movement for desired repetitions and sets keeping your knees on the mat.



### Tips:

- Keep your neck relaxed, look at a spot on the floor.
- Keep your back straight. Squeezing your stomach muscles will help this.
- Your feet should not be touching the mat, just your knees.

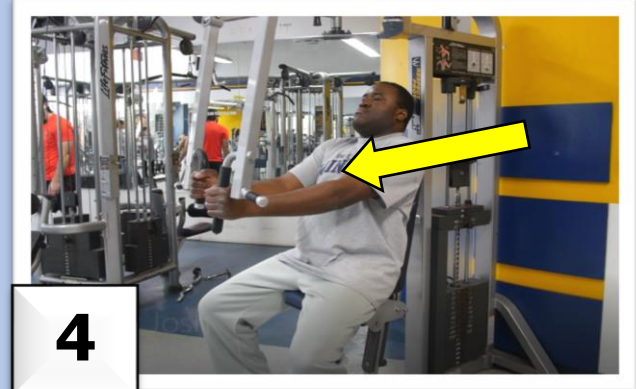
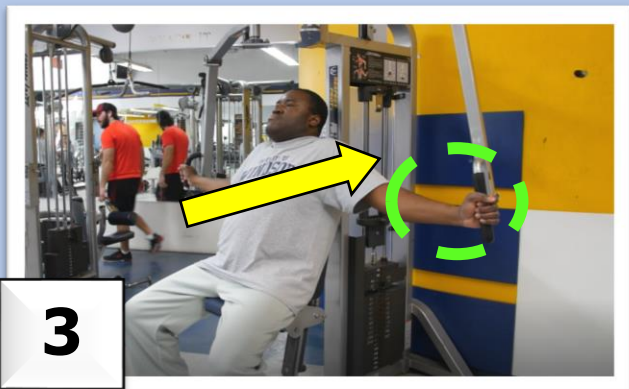
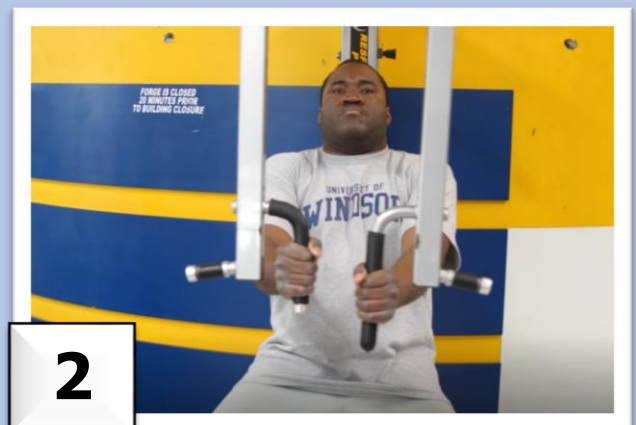
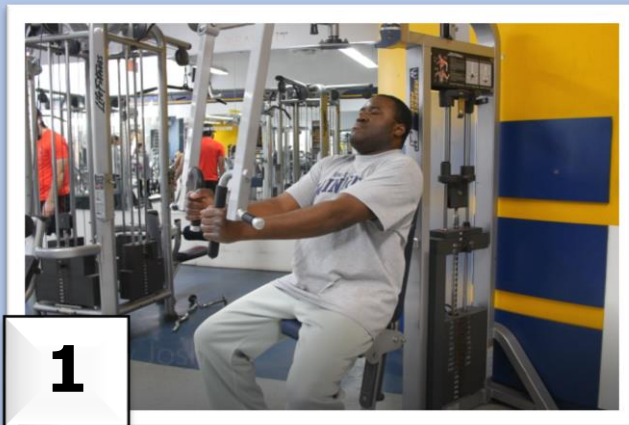


### Consider:

- Use a yoga mat underneath to ease the pressure off your hands and knees.

# Pectoral Fly

## With Machine



### How to Perform:

1. **Adjust the seat height, select weight and grasp handles.**
  - Make sure your feet are firmly on the ground.
2. **Slowly pull the handles away from your body.**
3. **Hold the handles out wide keeping a slight bend in your elbows.**
4. **Pause briefly before bringing your hands together.**
  - Repeat this movement for desired repetitions and sets.

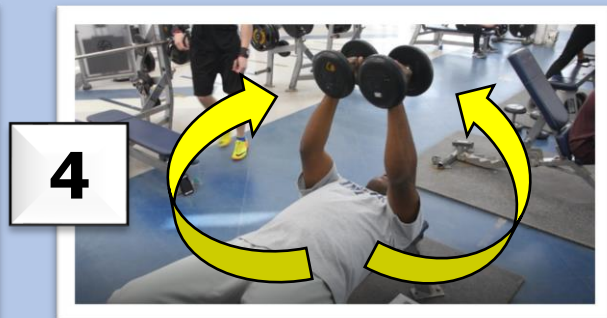
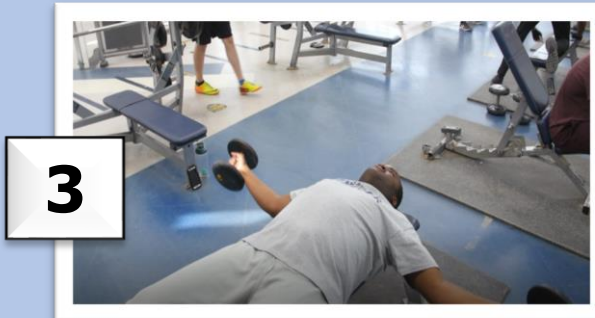
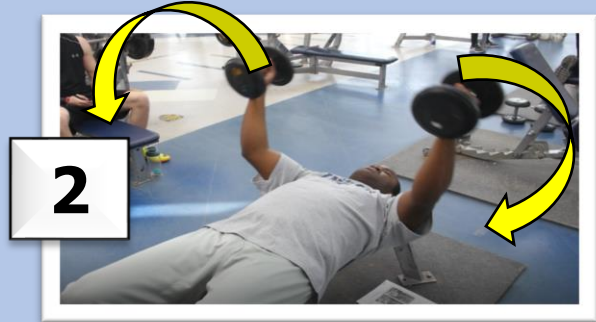
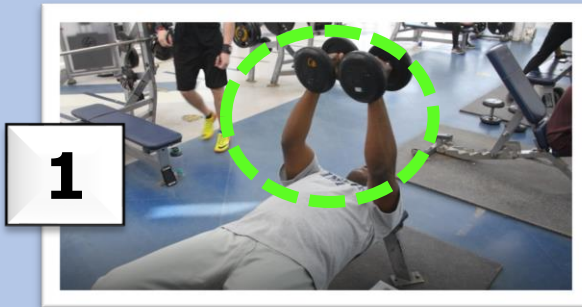


### Tips:

- Remember to breathe and look straight ahead.
- Keep your back straight and rested against back of chair/seat.

# Pectoral Fly

## With Free Weights



### How to Perform:

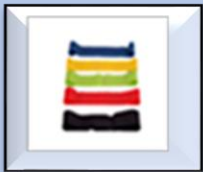
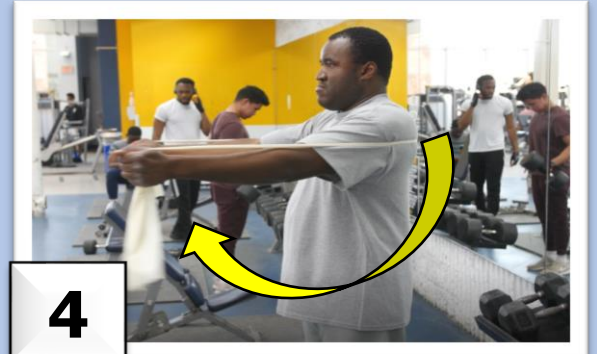
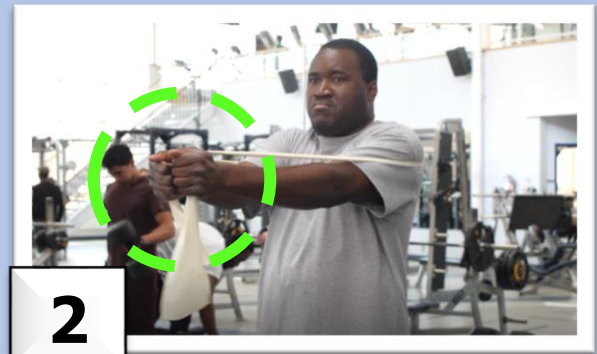
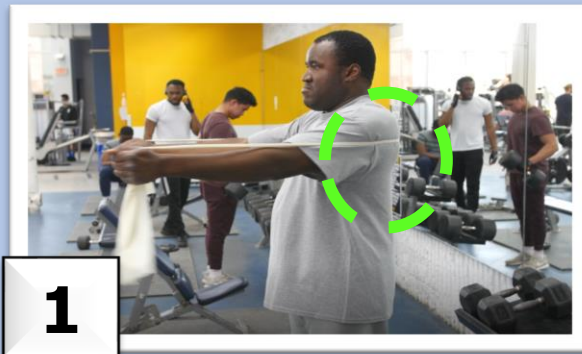
- 1. Place weights on the ground beside the bench or have someone hold them.**
  - Lie down on your back on the bench with your feet on the ground.
  - Grab both weights from the ground or have someone give them to you.
  - Hold one weight in each hand, arms out in front, keeping elbows slightly bent.
- 2. Slowly separate each arm, bringing them all the way out to the side.**
- 3. Pause briefly at the top before bringing your arms back together.**
  - Repeat this movement for desired repetitions and sets.

### Tips:

- Keep your neck relaxed as you are exercising. Remember to breathe.
- Squeeze your stomach muscles to keep your back straight.
- Do not arch your back on the bench.

# Pectoral Fly

## With Resistance Band



### How to perform:

1. **Place the resistance band behind your back, resting in the middle of the shoulder blades.**
2. **Hold each end with one hand, arms out in front of you.**
  - Using your hands, pull so that there is a tension on the resistance band.
3. **Spread both arms all the way out to each side, keeping elbows slightly bent.**
4. **Pause briefly before moving your arms back to center again.**
  - Repeat movement for desired repetitions and sets.

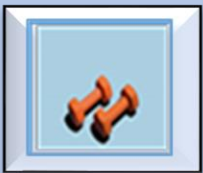
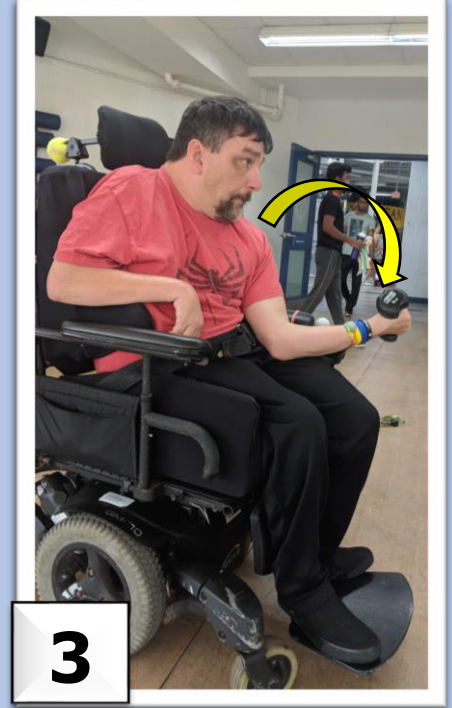
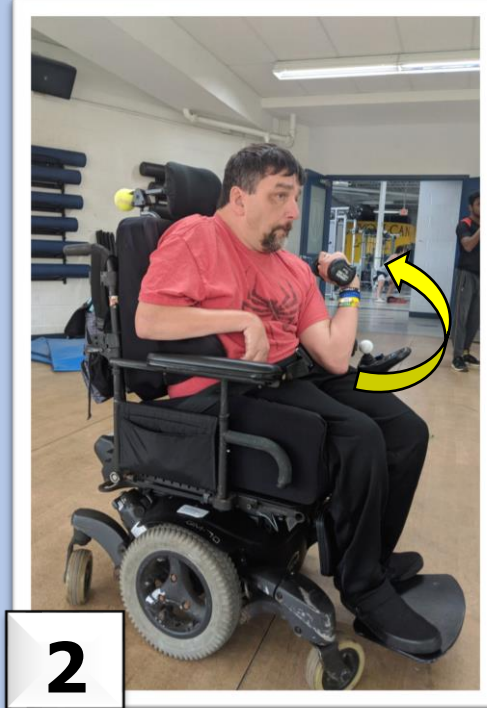
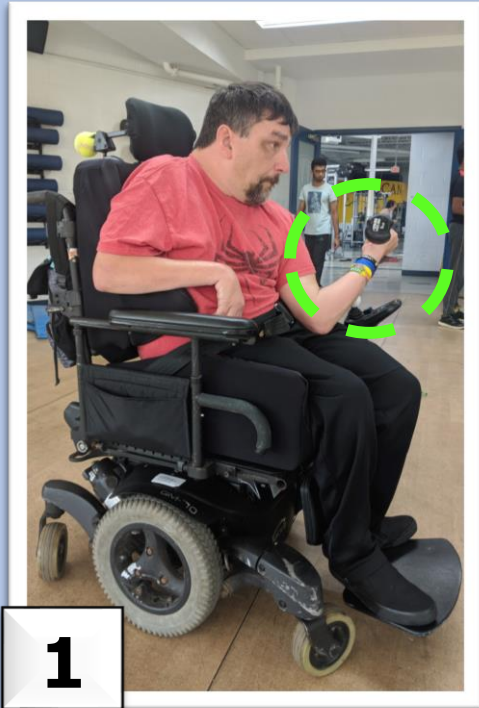


### Tips:

- Squeeze your stomach muscles to help keep a straight, upright posture as you move.
- Look straight ahead, and do not lock your elbows.

# Single Arm Bicep Curl

## With Free Weights



### How to Perform:

1. **Grab hold of the dumbbell with one hand.**
2. **Slowly bend your elbow and bring the weight towards your chest.**
  - Pause briefly.
3. **Slowly bring the weight back down (straighten your arm).**
  - Repeat this movement for desired repetitions and sets.

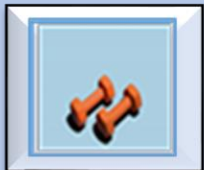
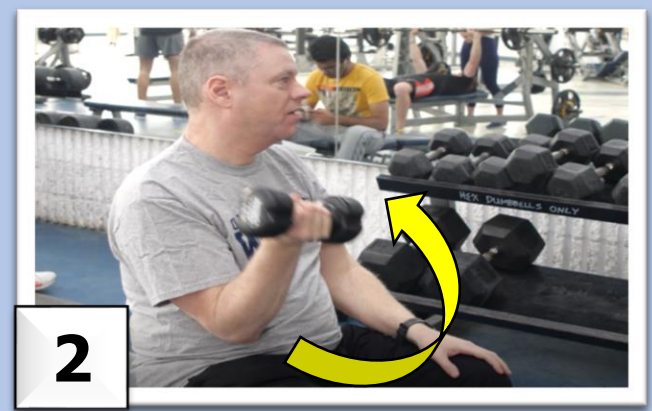
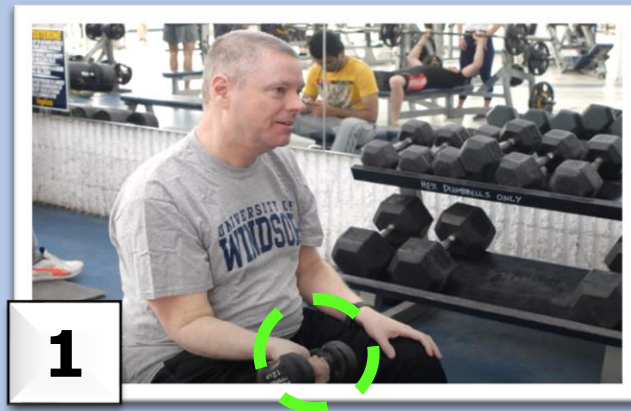
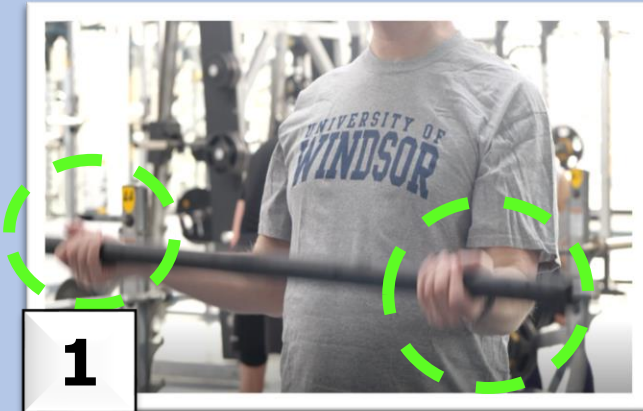


### Technique:

- Keep this movement slow and controlled.
- Your body should stay still, only lower arm(s) should be moving up and down.

# Bicep Curl

## With Free Weights



### How to Perform:

- 1. Grasp the free weight (dumbbell with one hands or barbell with both hands).**
  - Pull the weight towards your chest, elbows bent.
- 2. Pause briefly before slowly lowering the weight back down to the start position.**
  - Repeat this movement for desired repetitions and sets.

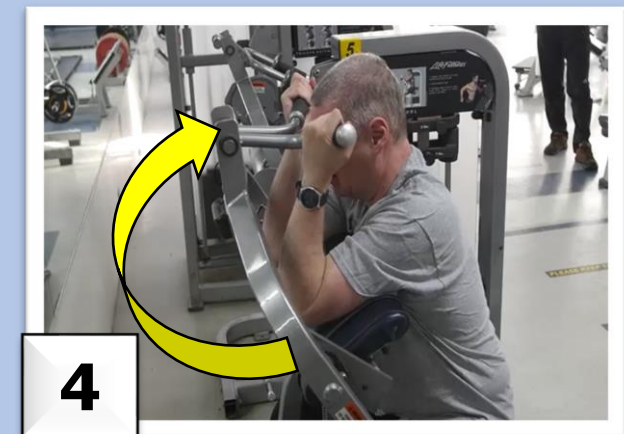
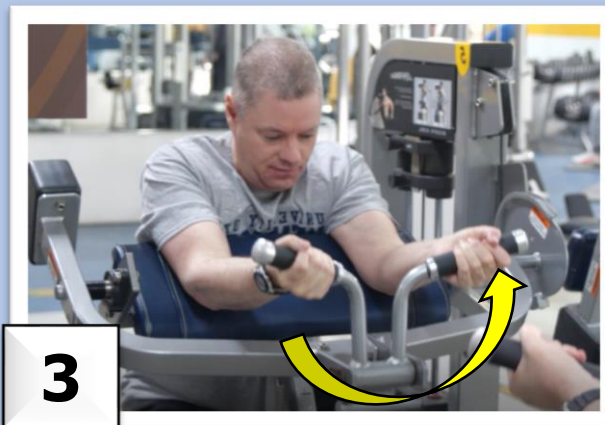
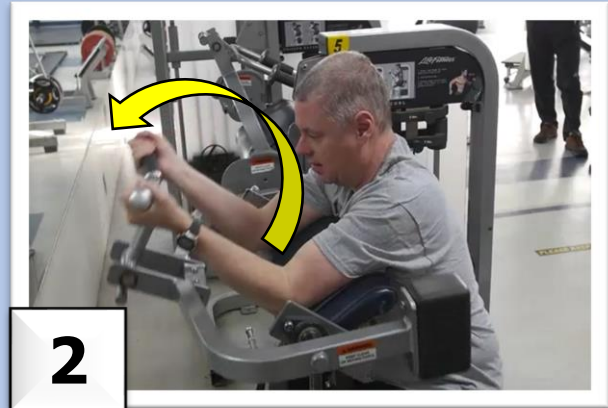
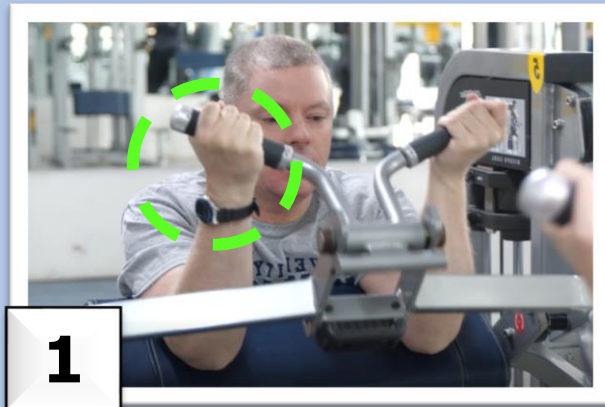


### Technique:

- Keep this movement slow and controlled.
- Your body should stay still, only your lower arm(s) are moving up and down.

# Bicep Curl

## With Machine



### How to perform:

1. **Select weight, seat height and grasp handles.**
2. **Pull upwards towards your chest/chin.**
3. **Pause briefly, before bringing handles back down.**
  - Repeat movement for desired repetitions and sets.

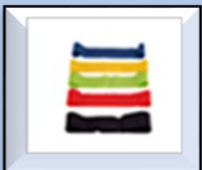
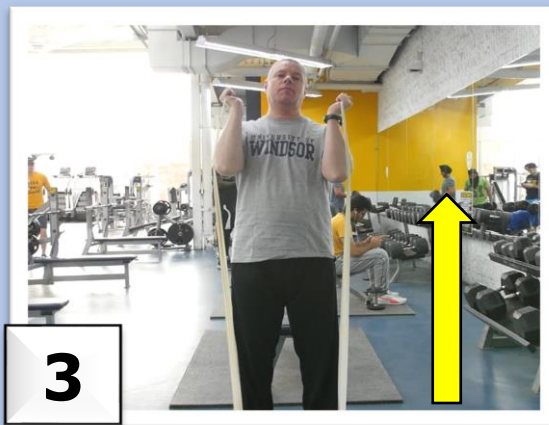
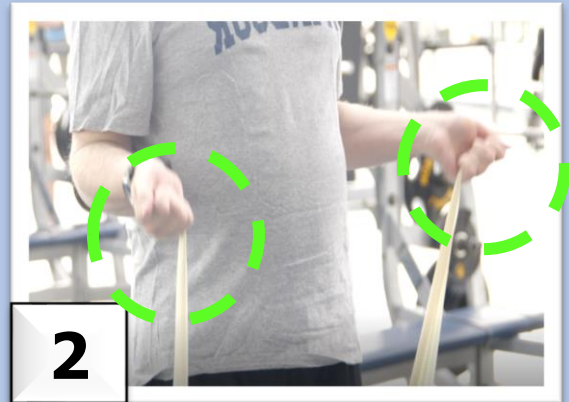


### Tips:

- Stay seated firmly on the seat while you pull the handles upward.
- Keep your elbows on the pads as you pull upward.

# Bicep Curl

## With Resistance Band



### How to Perform:

1. **Step on top of resistance band with both feet.**
2. **Grasp hold of both ends of the resistance band.**
3. **Slowly pull hands upwards towards the chest.**
4. **Pause briefly before slowly lowering back to start position.**
  - Repeat movement for desired repetitions and sets.

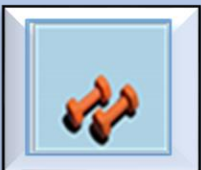
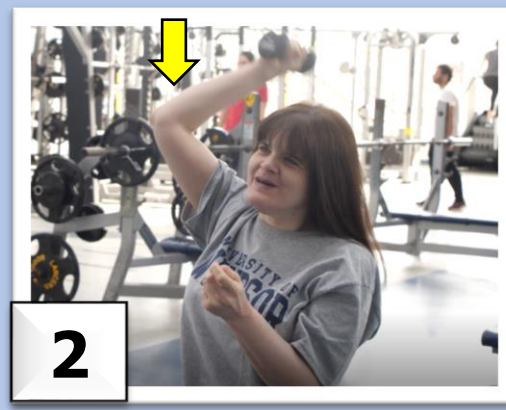
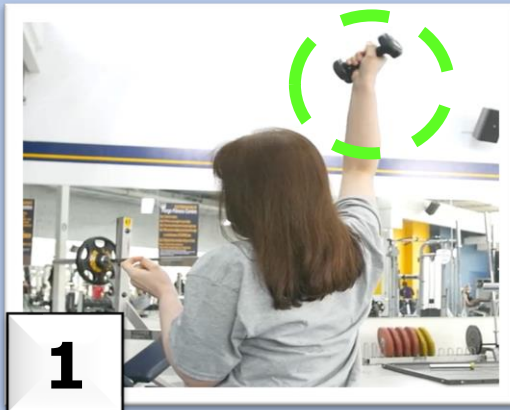


### Tips:

- Keep your feet on the ground, holding the resistance band in place so that it doesn't snap upward.
- Activate your core to keep your body straight and upright (resist bending forward or backward as you pull on the band).

# Triceps Extension

## With Free Weights



### How to Perform:

- 1. Grasp the free weight (dumbbell) in one hand.**
  - Straighten your arm up in the air, holding the dumbbell.
- 2. Slowly, lower the dumbbell behind your head.**
- 3. Touch your upper back, and shoulder with the weight.**
- 4. Pause briefly before straightening your arm back up into the air.**
  - Repeat this movement for desired repetitions and sets.

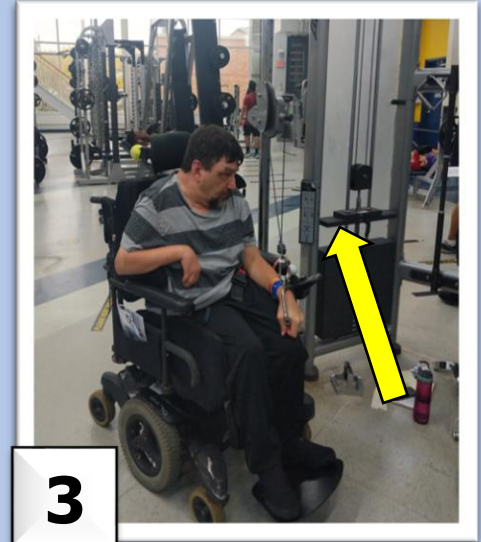
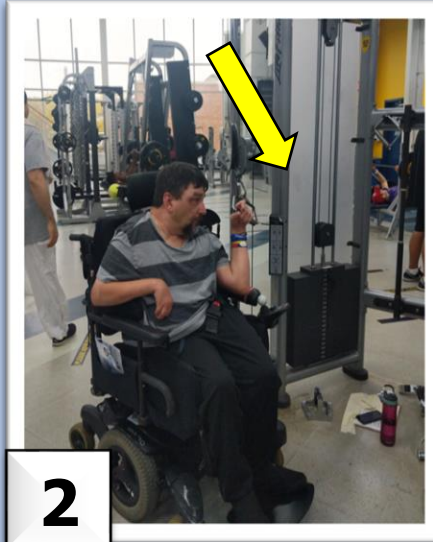
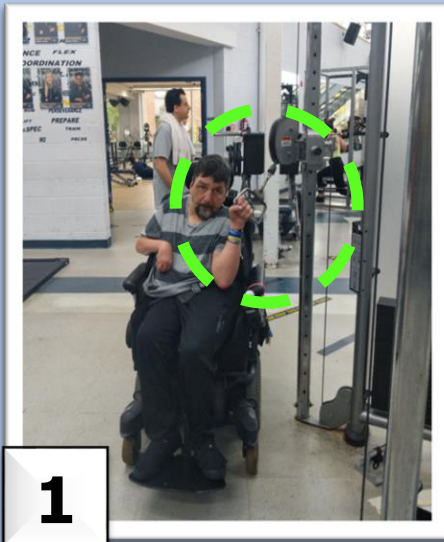


### Tips:

- Keep this movement slow and controlled to get the most out of the exercise.
- Grasp the weight at the handle (middle), not at the ends.

# Single Arm Triceps Pull Down

## Cable Machine



### How to Perform:

- 1. Set the cables and weight on the machine.**
  - Most free-standing cable machines will have a space for a wheelchair or mobility device to enter.
- 2. Grasp the handle with your hand and slowly pull the cable downward, with a slight bend in your arm.**
- 3. Pause briefly before slowly releasing your pull of the cable to return to start position.**
  - Repeat this movement for desired repetitions and sets.

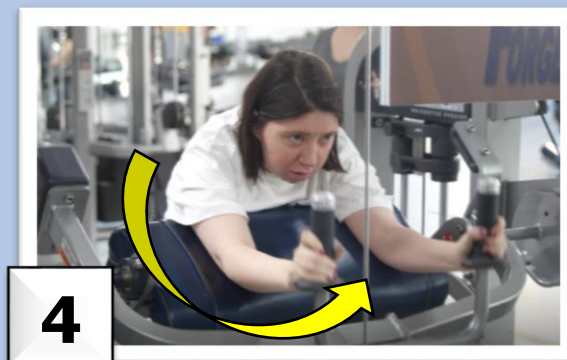
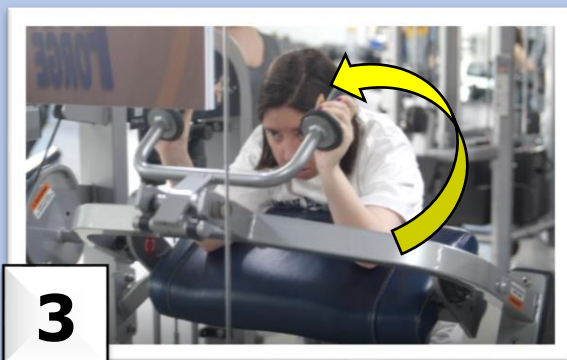
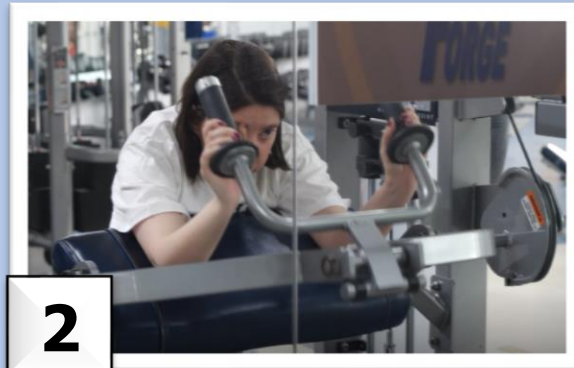
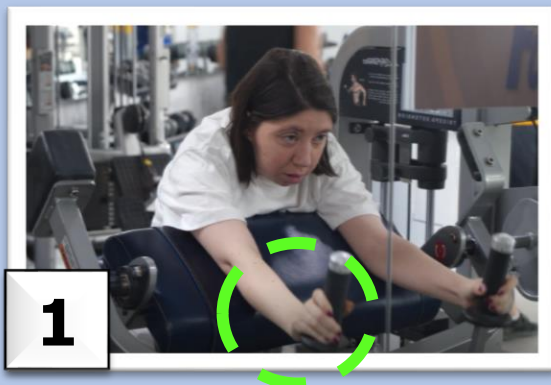


### Tips:

- Keep your neck straight.
- Do not let your body bend forward or to the side while you pull downward.

# Triceps Extension

## With Machine



### How to Perform:

1. Select weight, seat height and grasp handles.
2. Pull handles upward keeping a slight bend in your elbows.
3. Pause briefly before pushing handles downward.
4. Pull the handles back up to the start position.
  - Repeat movement for desired repetitions and sets.

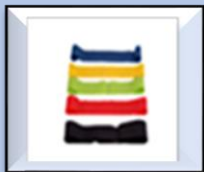
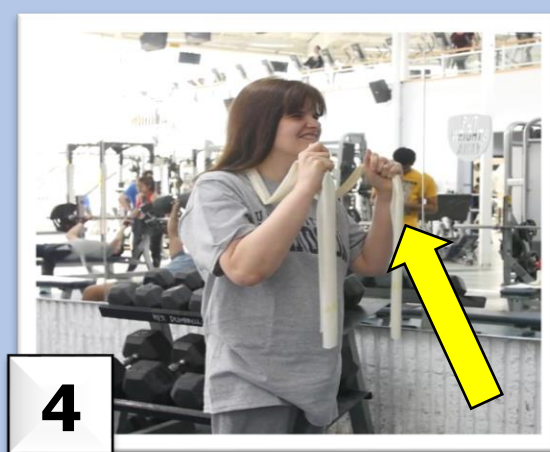
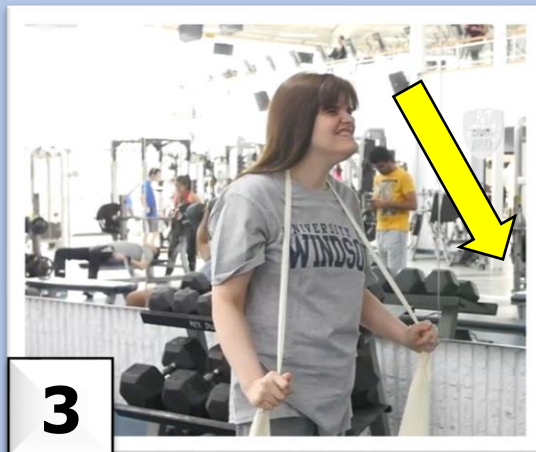
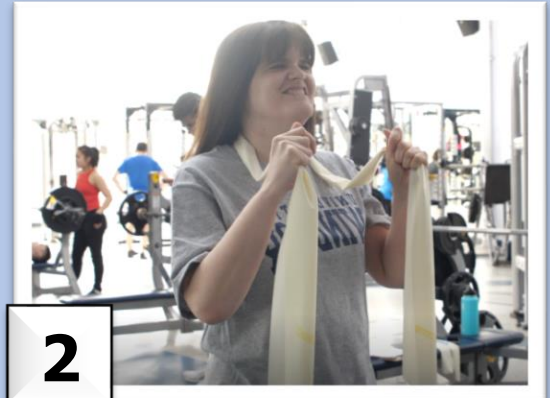
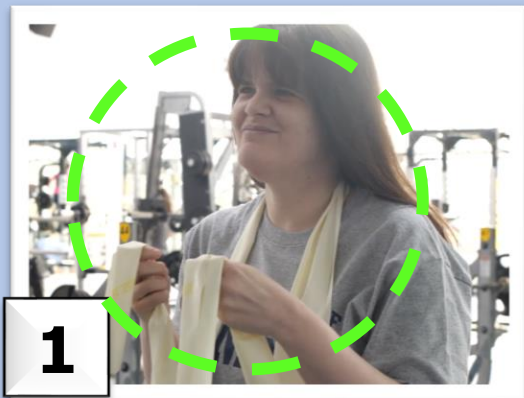


### Tips:

- Make sure that your elbows and forearms stay on padded area while you are pulling upward.
- Look straight ahead, keeping neck relaxed.
- Stay firmly seated on the seat while performing the movement.

# Triceps Extension

## With Resistance Band



### How to Perform:

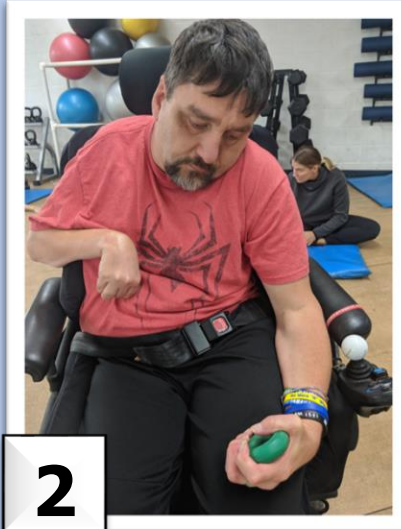
1. Place resistance band behind and around your neck.
  2. Grasp either end with both hands.
  3. Slowly pull downward, keeping elbows slightly bent.
  4. Pause briefly before releasing back to neutral.
- Repeat movement for desired repetitions and sets.



### Tips:

- Keep neck straight, do not let your body bend forward while you pull downward.

# Grip Strength



## How to Perform:

- 1. Hold the hand grip device in your hand.**
- 2. Squeeze as hard as you can.**
- 3. Hold this position for 3 to 5 seconds before releasing again.**
- 4. Repeat this movement for desired repetitions and sets.**

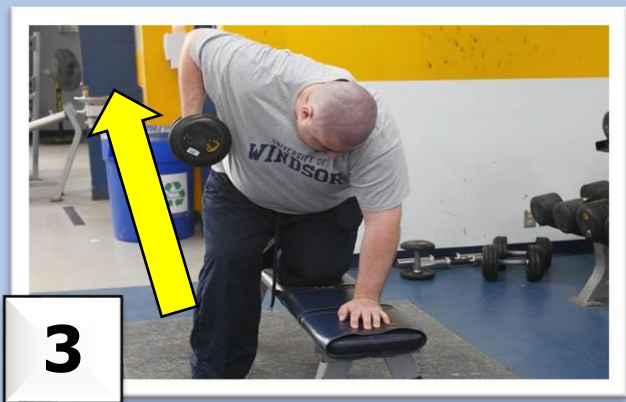
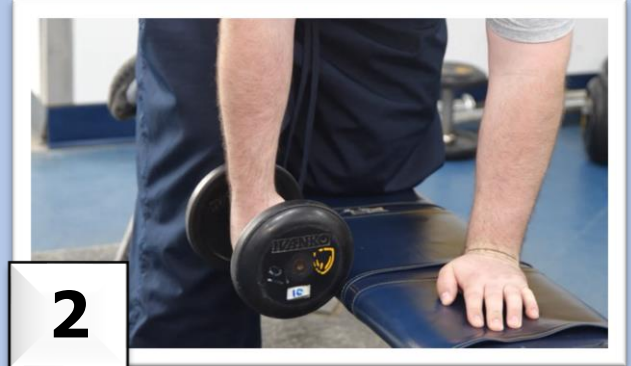
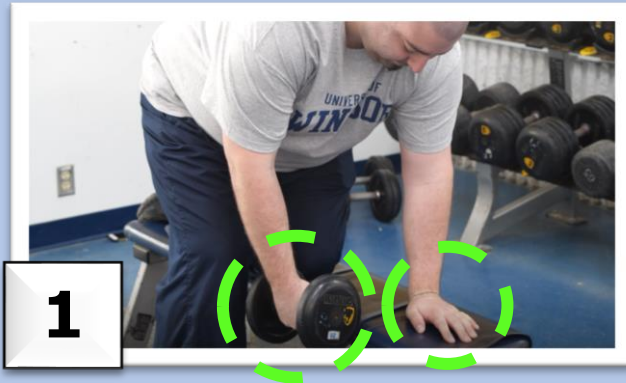


## Consider:

- Hand and finger grips can differ based on the model and design. Choose one that fits your needs and abilities.

# Standing Row

## With Free Weights



### How to perform:

1. Place one hand on the bench, the weight in the other hand.
2. Keep one foot on the ground, and one knee rested on bench.
3. With body bent slightly forward, pull weight toward the side of your chest, elbow bent upward.
4. Pause briefly before returning to start position.
  - Repeat movement for desired repetitions and sets.

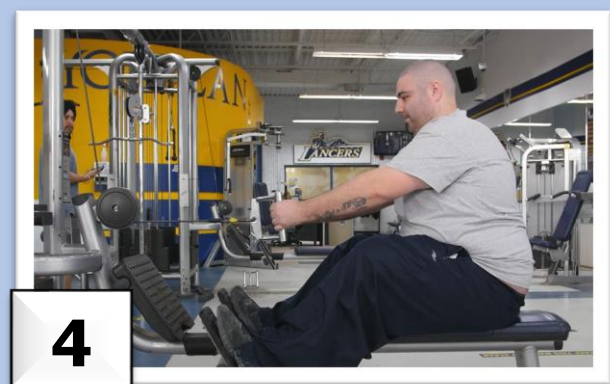
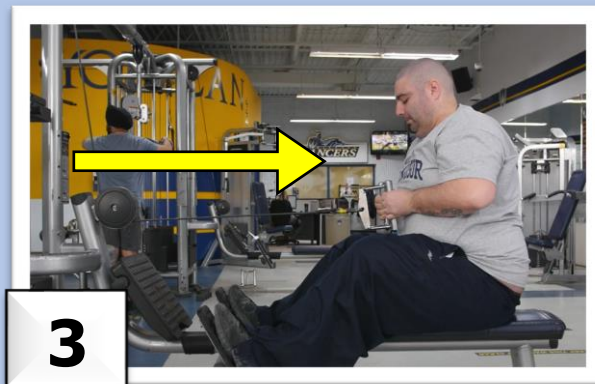
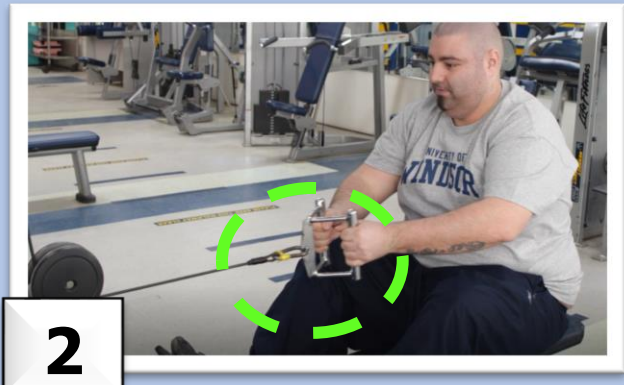


### Tips:

- Keep neck in a neutral position.
- Try to avoid scrunching shoulders upward.
- Keep movements slow and controlled.

# Seated Row

## With Machine



### How to Perform:

1. **Select your weight and grasp handles with both hands.**
2. **Slowly pull toward the chest.**
3. **Keep elbows bent and hold the handles close to the chest.**
  - Try to squeeze shoulder blades together.
4. **Pause briefly before, returning to start position.**
  - Repeat movement for desired repetitions and sets.



### Tips:

- Keep back and torso straight throughout the movement.
- Do not let go of the handle until you are finished.

# Single Arm Row

## Cable machine



### How to perform:

#### 1. Adjust cable height and select weight.

- Most free-standing cable machines will have a space for a wheelchair or mobility device to enter.

#### 2. Grasp the handle and slowly pull toward your chest.

- Pause briefly before slowly returning to the start position.
- Repeat this movement for the desired repetitions and sets.

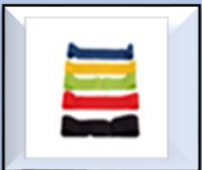
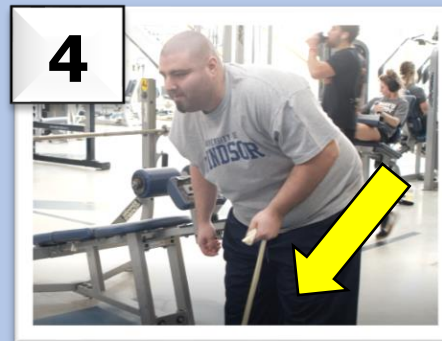
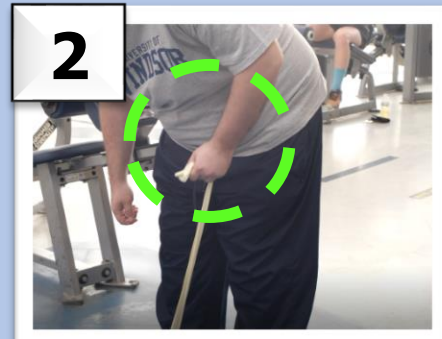


### Tips:

- Keep back and torso straight throughout the movement.
- Do not let go of the handle until you are finished.

# Standing Row

## With Resistance Band



### How to Perform:

1. Step on one end of the resistance band with the right foot.
2. Hold the resistance band with the left hand, elbow bent slightly upward.
3. Bend slightly forwards from the hips, pull resistance band toward your chest.
4. Pause briefly before releasing tension and returning to start position.
  - Repeat movement for desired repetitions.
  - Switch arms.



### Safety:

- Make sure your foot is firmly on the resistance band before you pull on it to avoid it snapping back at you.

# Core Strength

## Building Core Strength

- The core is in the middle of your body (stomach area). Training this area works our your abdominal 'stomach' muscles. <sup>29-30</sup>
- Having a strong core is very important. It helps with balance, posture, and breathing. <sup>30-31</sup>
- Having a strong core also makes exercising and performing everyday activities easier, as you are more balanced. Your core is constantly working while you are moving. <sup>29-31</sup>



## Core Strength Training & Exercise



The key is knowing how to activate or engage your core when exercising. You can do this by lightly sucking your stomach in to straighten up your body.

Core strengthening exercises can be done anywhere, using just your body weight, and does not require equipment.

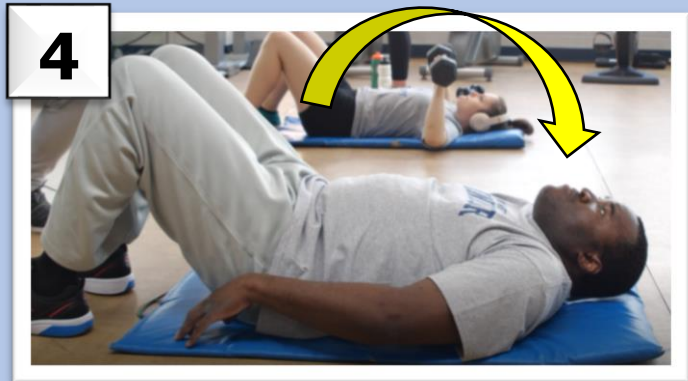
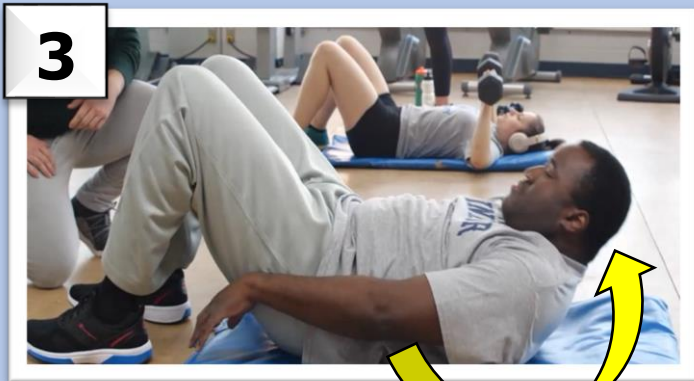
However, you can use additional equipment such as an exercise ball or weights to further challenge and progress (see exercises below).

## Guidelines

- Core training is a strengthening activity so you should aim to complete these exercises 2 days/ week. <sup>15, 31-34</sup>
- You should work out your core towards the end of your workout. Since the abdominal muscles (core) are the basis for movement, tiring out this muscle too early can lead to burn out and injury. <sup>30,38-39</sup>

# Abdominal Crunch

## Body Weight



### How to Perform:

1. Lie down on your back, arms resting at sides.
  2. Bend your knees upward, keeping your feet on the ground.
  3. Slowly bring your upper body towards your knees.
  4. Pause briefly in this above the ground position before returning to position # 2.
- Repeat this movement for the desired repetitions and sets.

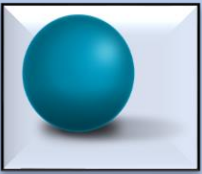
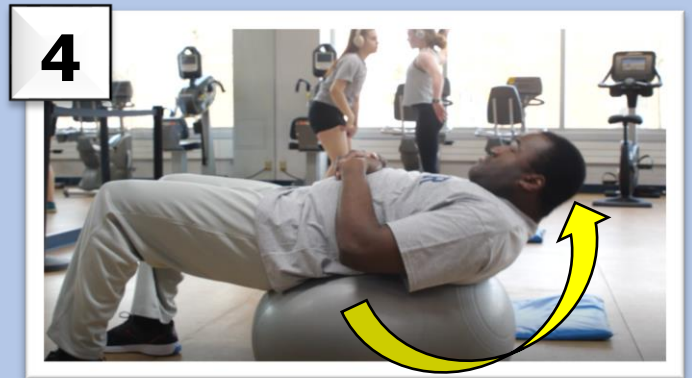
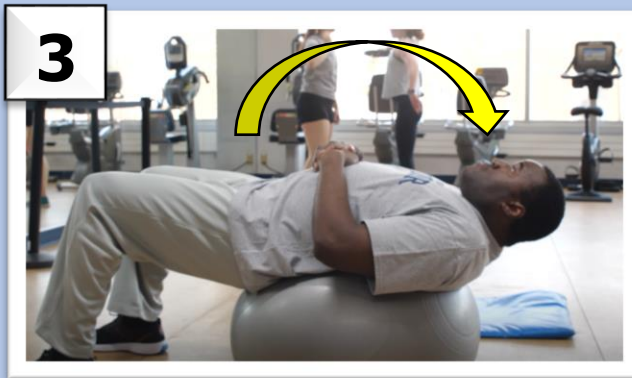


### Tips:

- Keep neck relaxed, look straight ahead.
- Do not round your shoulders as you are rising above the ground.

# Abdominal Crunch

## With Exercise Ball



### How to Perform:

1. Lie on your back, on the exercise ball, feet firm on the ground.
  2. The ball should be positioned between your lower back and shoulders.
  3. Slowly bring your upper body (torso upward).
  4. Pause briefly in this position before relaxing.
- Repeat this movement for desired repetitions and sets.

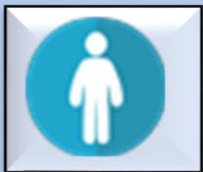
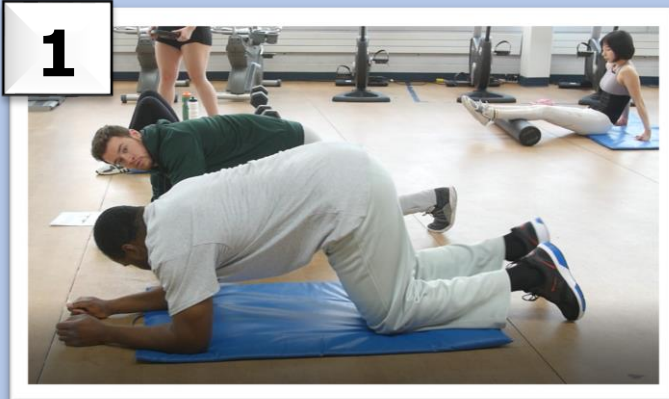


### Tips:

- Keep your neck relaxed.
- Do not round shoulders and back as you move into the crunch position.

# Front Plank

## Body Weight



### How to Perform:

1. Get down on your forearms and knees.
  2. Place your body weight onto your forearms.
  3. Straighten your legs out behind you.
  4. Hold this position for 30 seconds to 2 minutes depending on capability before relaxing.
- Repeat this movement again for desired repetitions and sets.

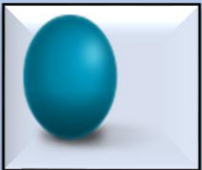
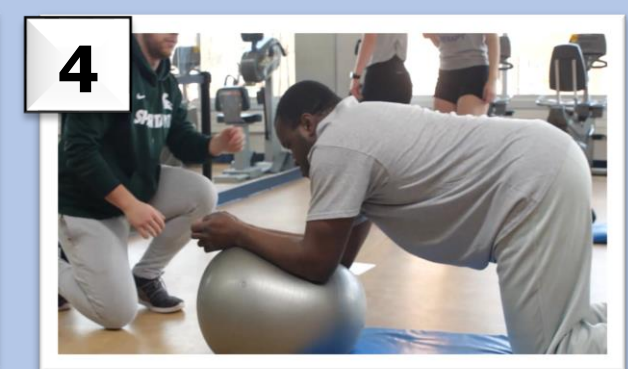
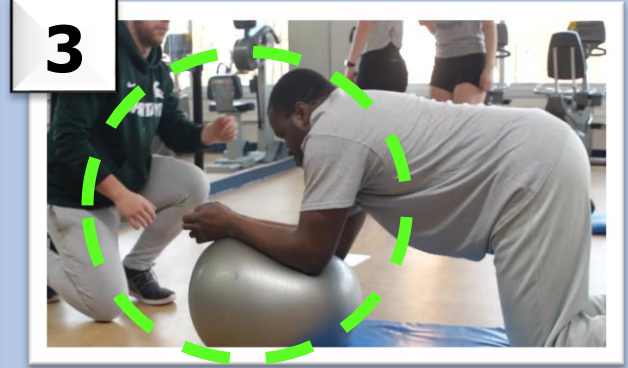
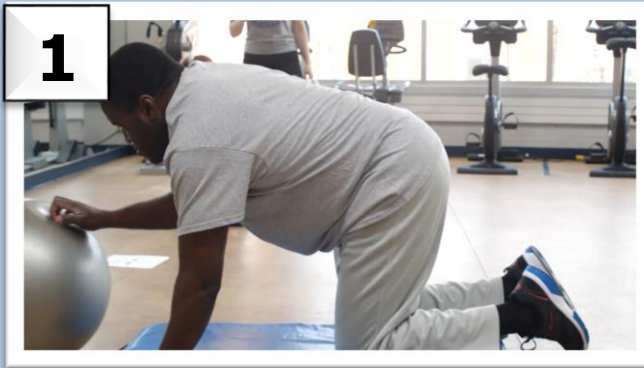


### Tips:

- Squeeze your stomach muscles to maintain a straight body.
- Do not let your hips rise, drop down, or rotate.
- Keep your neck relaxed, look at a spot on the floor.

# Front Plank

## With Exercise Ball



### How to Perform:

- 1. Get down on your hands and knees.**
- 2. Grab the exercise ball and place both of your forearms on it.**
- 3. Lean your body into your forearms and straighten your legs out behind you.**
  - Hold this position for 30 seconds to 2 minutes.
- 4. Relax and return to original position.**
  - Repeat this movement for desired repetitions and sets.

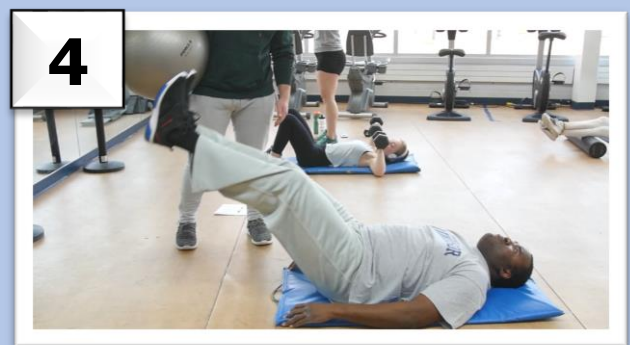
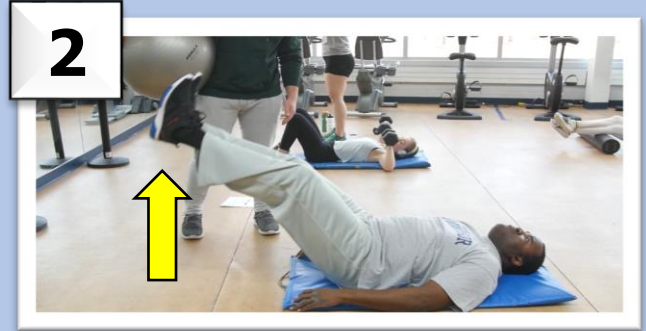
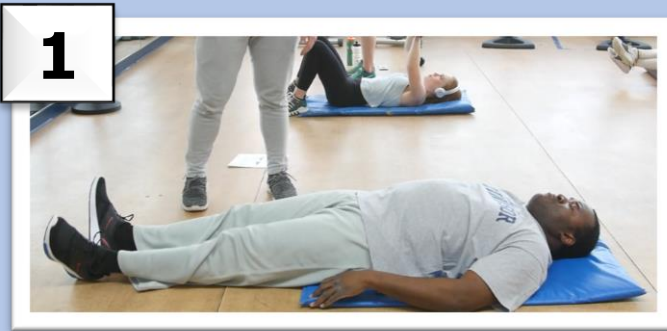


### Tips:

- Squeeze your stomach muscles inward to maintain a straight body.
- Do not let your hips rise, drop down, or rotate.
- Have a spotter or someone around in case you have trouble balancing on the ball.

# Leg Raise

## Body Weight



### How to Perform:

1. Lie down on your back, arms resting by your side.
2. Place your legs straight out in front, keeping feet together.
3. Slowly raise both of your legs, then lower them to just above the ground.
4. Pause briefly before returning to original position.
  - Repeat this movement for desired repetitions and sets.

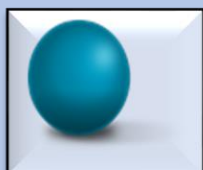
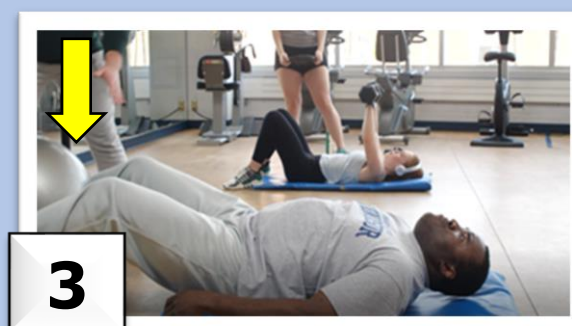
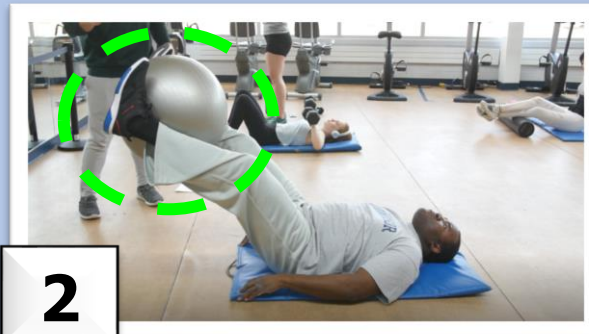
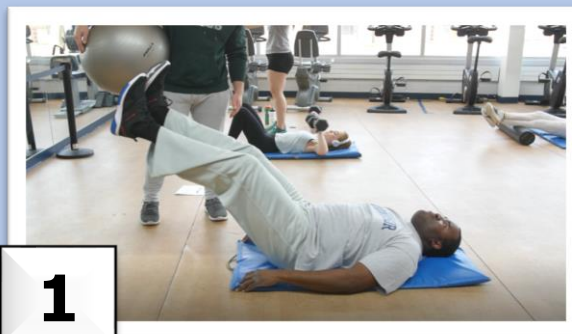


### Tips:

- Try your best to keep your legs straight as you raise them upward and back down again.
- Do not arch your back, keep it flat on the mat as you complete this exercise.
- Remember to breathe evenly, do not hold your breath.

# Leg Raise

## With Exercise Ball



### How to Perform:

1. Lie down on your back, hands resting at your sides, raise your legs in the air.
2. Place the exercise ball between your legs or have someone else do it for you.
3. Holding the ball between your legs, slowly lower your legs to just above the floor.
4. Then slowly raise the ball upward again (keeping the ball in between your legs).
  - Repeat this movement for desired repetitions and sets.



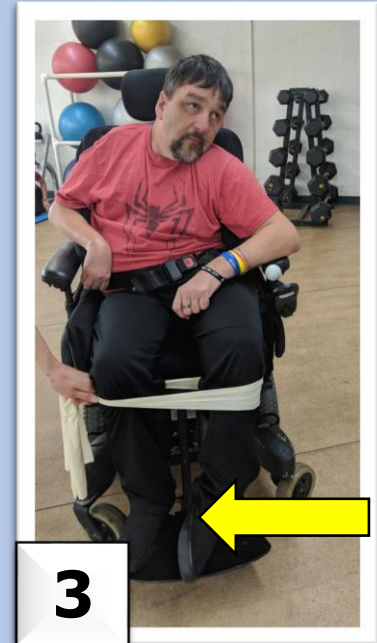
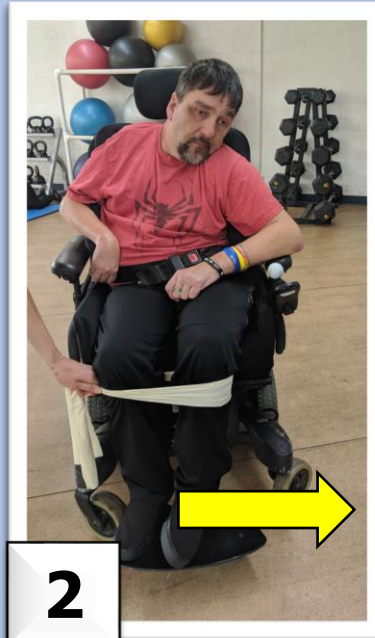
### Tips:

- Try your best to keep your legs as straight as possible, as you lift the exercise ball upward. Do not arch your back.
- Breathe evenly, do not hold your breath.
- Do not let your feet touch the ground before completing another repetition.

# Lower Body Strength<sup>48-54</sup>



# Seated Hip Abduction



## How to Perform:

- 1. Wrap a resistance band around both knees (just below).**
- 2. Slowly open your legs or one leg wider, pushing against the band.**
  - Pause briefly or longer to feel the tension.
- 3. Then slowly relax one or both legs- bringing them back to the start position.**
  - Repeat this movement for desired repetitions and sets.



## Tips:

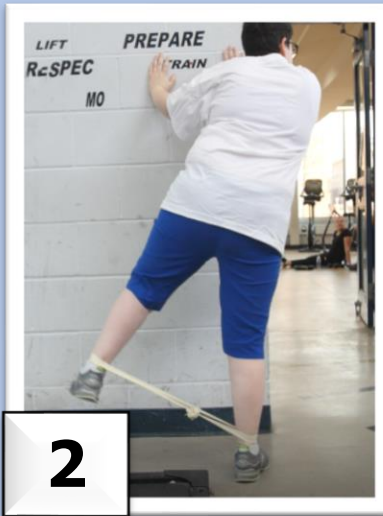
- Try to push outwards with your legs and hips, do not use your body or back to push/help you.
- You can hold for longer (tension) for a more challenging workout.

# Standing Hip Abduction

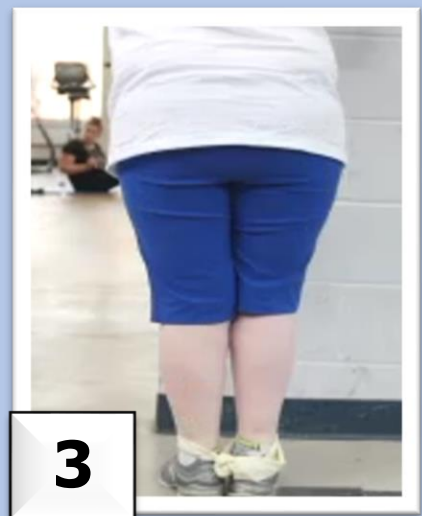
## With Resistance Band



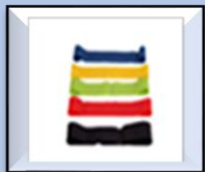
**1**



**2**



**3**



### How to Perform:

- 1. Tie resistance band together in a circle (loop) and place the loop around both ankles.**
  - Place both hands onto the wall or a stable surface.
  - Look straight ahead (eyes fixed on a spot) keeping your body straight.
- 2. Keeping one foot planted, slowly kick the other foot out to the side, against the resistance of the band.**
- 3. Hold position briefly before returning your leg back to the ground.**
  - Repeat this movement for desired repetitions sets.
  - Switch legs.

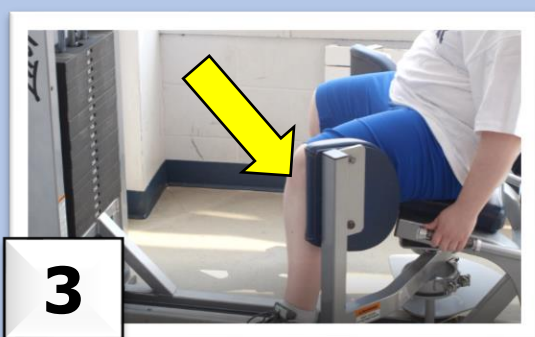
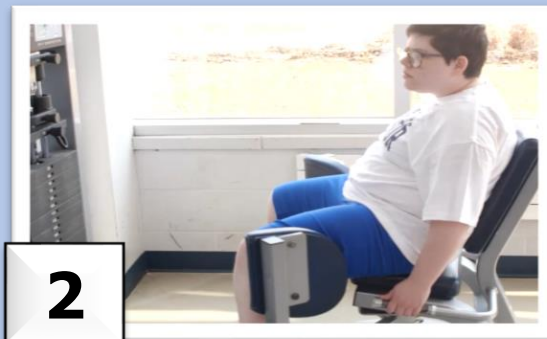


### Tips:

- Squeeze your stomach muscles to help you maintain an upright posture.
- Try not to lean to the side where you are kicking out.
- Find a spot on the wall to focus on.

# Seated Hip Abduction

## With Machine



### How to Perform:

- 1. Adjust machine to appropriate seat height and weight.**
  - Rest both knees against the pads, keeping feet planted on the foot plate.
- 2. Slowly push both knees at the same time, against the pads.**
- 3. Opening both legs wider, hold position for 1 to 2 seconds (feeling a burn in the outer hips).**
- 4. Slowly stop pushing against the knee pads and return to original position.**
  - Repeat this movement for desired repetitions and sets.

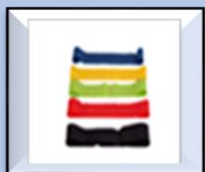
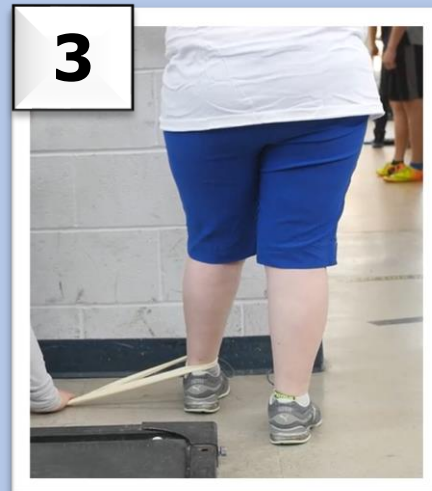


### Tips:

- Keep your hands grasping the handles at the sides of the machine.
- Do not arch your back as you push outward.

# Standing Hip Adduction

## With Resistance Band



### How to Perform:

**1. Tie resistance band in a loop and place one foot through it.**

- Tie the band to a stable object or have someone else hold the other end of it.

**2. Slowly extend the foot that is inside the resistance band loop inwards, across your body.**

- Pause briefly, feeling a stretch in the inner hip and thigh.

**3. Slowly return to original position.**

- Repeat this movement for desired repetitions and sets.



### Tips:

- Squeeze your stomach muscles to maintain an upright posture.
- Look straight ahead or pick a spot to focus on. Grab onto a wall or table object if needed for balance.
- Keep your other foot firm on the ground.

# Seated Hip Adduction

## With Machine



### How to Perform:

- 1. Adjust machine to appropriate seat height and weight.**
  - Rest both knees against the knee pads, keep both feet firmly on the foot pads.
- 2. Slowly push both knees against the pads, moving legs inward.**
  - Pause briefly before releasing back to original position.
  - Repeat this movement for desired repetitions and sets.



### Tips:

- Keep your hands grasping handles at the sides of the machine.
- Keep your back resting against the seat.
- Breathe evenly.

# Side-Lying Hip Adduction

## Body Weight



### How to Perform:

- 1. Lie down on your side.**
  - Bend your elbow and place your hand underneath your head like a pillow.
- 2. Bend the knee of the top leg, so that the foot is touching the ground in front of you.**
- 3. Slowly raise the straight leg underneath upward to touch the top leg.**
- 4. Hold position briefly before lowering leg.**
  - Repeat this movement for desired repetitions and sets.



### Tips:

- Squeeze your stomach muscles to keep a straight.
- Do not let your hips rotate as you go through the movement.
- Keep your neck relaxed, breathe evenly.

# Single Leg Hip Extension



## How to Perform:

1. Lie down on your back, knees bent, and feet on the ground (mat).
2. Slowly lift your hips upward, squeezing your stomach muscles inward.
3. While your hips are still raised, slowly lift one leg up in the air.
  - Pause briefly before relaxing.
4. **Switch legs**
  - Repeat this movement for the desired repetitions and sets.



## Tips:

- Squeeze your stomach muscles help you keep your hips up.
- Do not arch your back, let your hips sway from side to side, or let your bum drop down.
- If you are unable to hold the technique, stop, and try again.
- breathe evenly, do not hold your breath.

# Leg Press

## With Machine



### How to Perform:

- 1. Adjust machine to appropriate seat height and weight.**
  - Place your feet on foot plate, hands grasping handles, back against the chair.
- 2. Slowly push against the foot plate with both feet until legs are almost straight.**
  - Pause briefly before slowly bending your knees back to original position.
  - Repeat this movement for desired repetitions and sets.

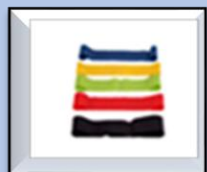
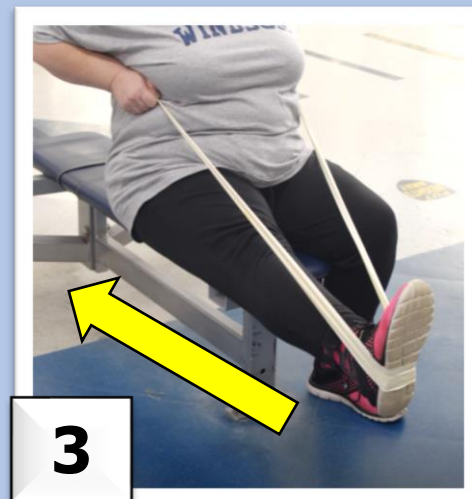
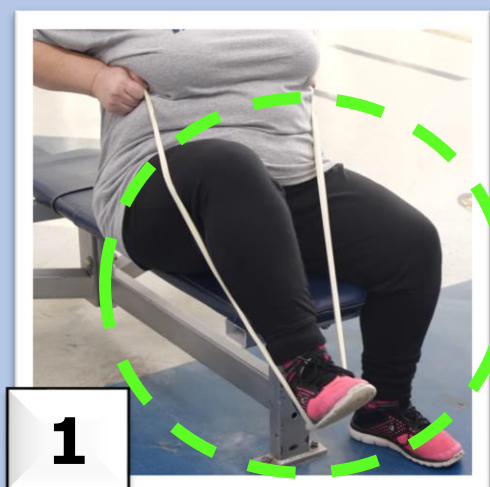


### Tips:

- Do not lock your knees when you are straightening both legs (keep a slight bend in both knees).
- Keep your back against the seat, do not arch your back or use it to help your legs push the plate.

# Leg Press

## With Resistance Band



### How to Perform:

- 1. Sit down on a bench, chair or stable surface.**
  - Place resistance band underneath the mid bottom (balls) of one foot.
  - Grasp both ends of the resistance band with each hand and pull so that there is tension.
- 2. Bend knee towards chest while knee and foot is inside the band.**
- 3. Then push foot outwards to straighten leg while tension is applied.**
  - Repeat this movement for desired repetitions and sets.



### Tips:

- Activate your core to maintain an upright, straight posture while sitting.
- Gently release the resistance band when you are done, do not let go suddenly to avoid the band snapping back at you.

# Leg Extension

## With Machine



### How to Perform:

- 1. Adjust machine to appropriate seat height and weight.**
  - Place feet underneath the foot pad, back resting against the chair.
- 2. Slowly lift the pad with your feet to feel your muscle working in the front of your thigh (above knee).**
  - Hold briefly before lowering back down to original position.
  - Repeat this movement for desired repetitions and sets.

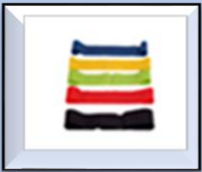


### Tips:

- Do not arch your back as you are kicking outward.
- Relax your neck and look straight ahead.
- Your hands should be resting on your legs or machine handles.

# Leg Extension

## With Resistance Band



### How to Perform:

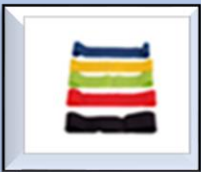
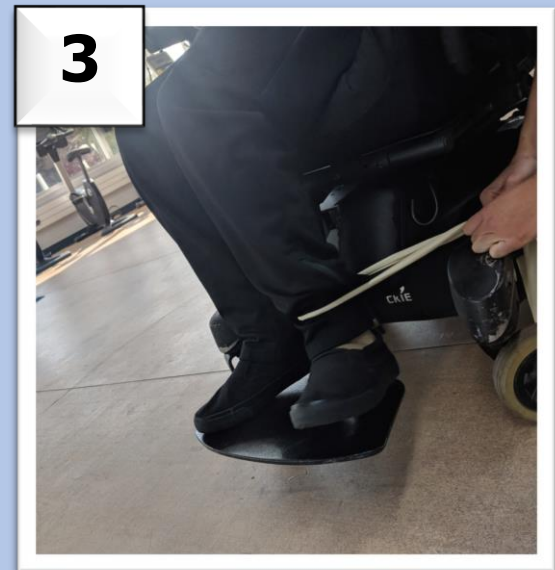
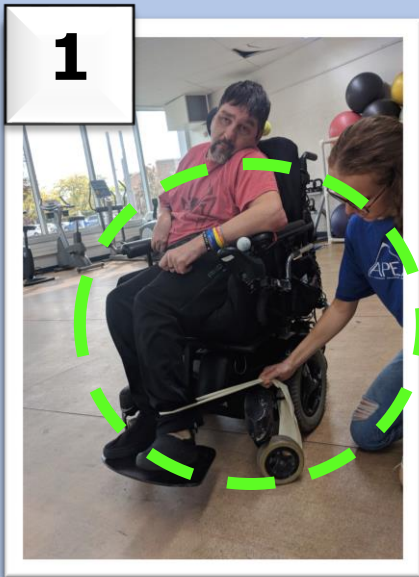
1. **Sit on a bench or a comfortable chair. Tie the resistance band in a loop and place it around your ankles.**
2. **Keep one foot firmly planted on the ground.**
  - Slowly kick your foot straight out in front of you.
  - Hold briefly and feel the resistance of the band.
3. **Place your foot back down.**
  - Repeat this movement for desired repetitions and sets.
  - Switch feet.



### Tips:

- Squeeze your stomach muscles to maintain a straight upper body (upright posture).
- Look straight ahead and rest your hands on the bench, on either side of you.
- Keep your bum on the seat as you kick forwards.

# Single Leg Extension



## How to Perform:

### 1. Wrap a resistance band just below both knees.

- Either get someone to hold the other end or tie it to a stable surface.

### 2. Keeping your feet on the ground, push one leg outward against the resistance band until you feel a pull (tension).

### 3. Slowly return your foot back to start position.

- Repeat this movement for the desired repetitions and sets.

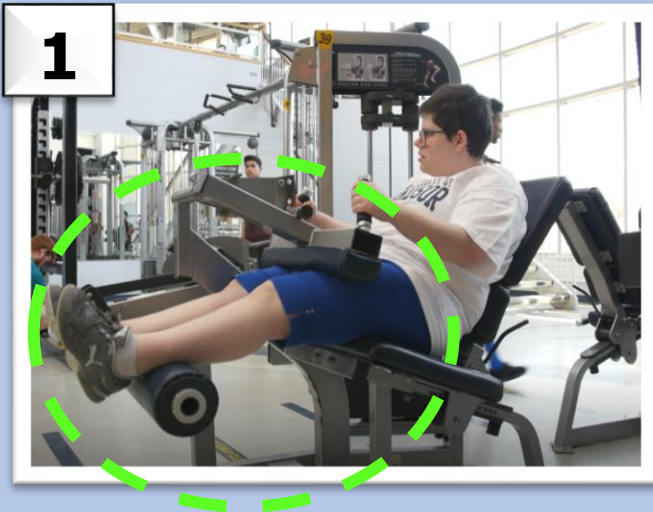


## Tips:

- To ensure you are experiencing a full resistance, when you are kicking outward, pause briefly before returning to the original position.
- Different TheraBand's will have different thickness providing more, or less resistance.
- Choose one that is right for you.

# Leg Curl

## With Machine



### How to Perform:

1. **Adjust machine to appropriate seat height and weight.**
  - Grab handles and rest both feet on the foot pads.
  - Apply some pressure and push those pads down.
2. **Pause briefly.**
3. **Then release and return to original position.**
  - You should feel your muscles working in the front of your thigh.
  - Repeat this movement for desired repetitions and sets.

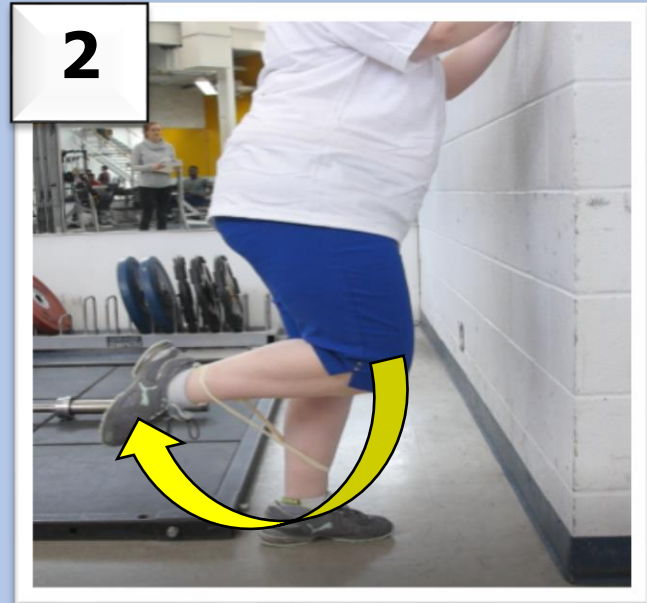


### Tips:

- Keep hands grasped on machine handles as you do the exercise.
- Keep your back against the chair, neck relaxed, look straight ahead.

# Leg Curl

## With Resistance Band



### How to Perform:

- 1. Tie resistance band together in a loop, place it around both ankles.**
  - Place both hands against a wall or stable object.
  - Look straight ahead, keep torso upright.
- 2. Slowly curl leg backward, and up behind you.**
  - Briefly pause, feel the tension of the resistance band then return to original position.
  - Repeat movement for desired repetitions and sets.
  - Switch feet.



### Tips:

- Squeeze your stomach muscles inward to help you maintain an upright posture.
- Try not to lean too much into the wall when you are kicking backward.

# Squat

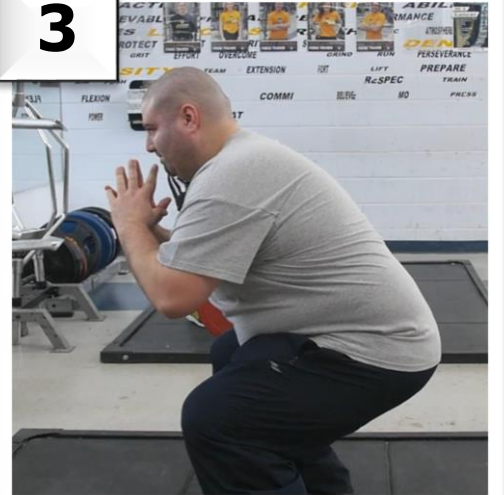
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2



3



## How to Perform:

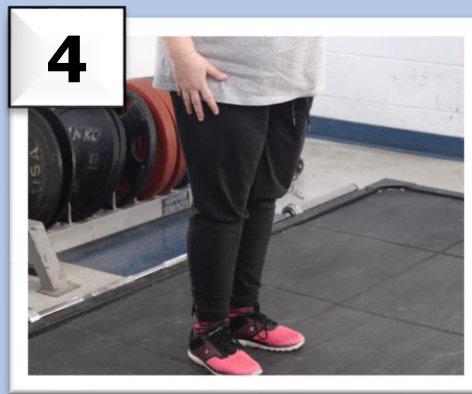
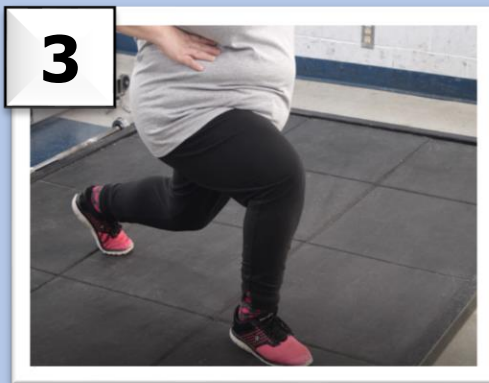
- 1. Stand with your feet firmly planted on the ground, shoulder width apart.**
  - Clasp both hands together, look straight ahead (using a mirror is helpful).
- 2. Slowly bend knees so they are right over toes (not past).**
  - Your bum should be out, as if you are going to sit down in a chair.
- 3. Hold the position before coming back up to the original position.**
  - Repeat this movement for desired repetitions and sets.



## Tips:

- Your knees should not extend in front of your toes.
- Squeeze your stomach muscles to maintain an upright posture as you bend into the squat.

# Lunge



## How to Perform:

1. **Stand straight with feet shoulder width apart, hands resting on the hips.**
2. **Step forward with one foot, knee bent right above your toe.**
3. **Drop your back knee down slightly.**
4. **Pause briefly before stepping back to original position.**
  - Repeat this movement for desired repetitions and sets.
  - Switch legs.



## Tips:

- Your knees should not extend in front of your toes.
- Your knee should be in line with the big toe (do not let your knee wobble to one side).
- You can spread your arms out wide for balance if needed.

# Calf Raise

## With Machine

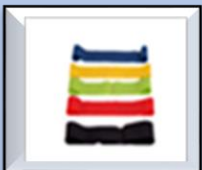
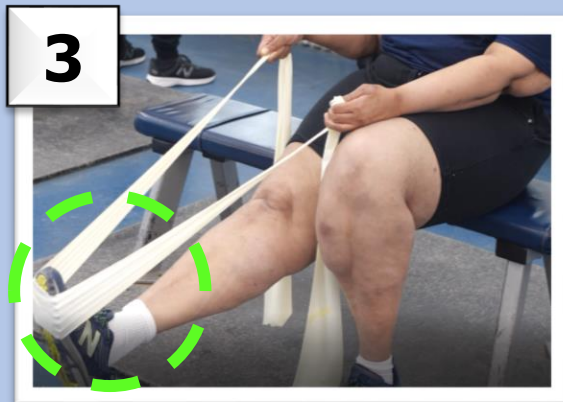


### How to Perform:

1. **Adjust the machine to appropriate weight and standing height.**
2. **The machine pads should rest comfortably on the shoulders.**
3. **Both feet should be on the edge of the standing plate.**
  - Slowly begin to rise onto the balls of your feet.
  - Pause briefly in this position (on the balls of feet).
4. **Then slowly return to your original position.**
  - Continue this movement for desired repetitions and sets.

# Calf Raise

## With Resistance Band



### How to Perform:

1. **Sit down on a bench or chair so that you are comfortable.**
  - Hold both ends of resistance band in each hand.
2. **Place the upper middle portion of the bottom of your foot (balls of feet) in the band.**
3. **Pull on both ends to create a strong tension.**
4. **Slowly point your toes downward toward the ground until you feel the calf muscle working.**
  - Pause briefly before raising your foot back up to original position.
  - Point your toes all the way up towards your chest, then rest to original position.

# Calf Raise

Body weight



## How to perform:

1. **Step onto a stair, holding the railing for support.**
  - Look straight ahead, keep your body upright.
2. **Position your feet on the edge of the step.**
3. **Slowly rise onto the balls of your feet, feeling your calf muscle working.**
  - Hold this position for 3 to 5 seconds before coming back down to original start position.
  - Repeat this movement for desired repetitions and sets.

# Cool Down



**A cool down is a set of activities, exercises, or movements that are slower and where exercise intensity continues to decrease gradually over time.<sup>55-60</sup>**

**It is meant to be done at the end of a workout routine. Breathing, heart rate, and blood pressure return to normal resting levels.<sup>55-58</sup>**

**It is important because it allows the body to relax.<sup>22</sup> A sudden stop in movement, especially after intense exercise, can potentially cause dizziness, injury, or other harm.<sup>29</sup>**

**Examples of cool down exercises could include light walking, jogging, or static stretching. This should last anywhere from 10 to 30 minutes after a workout routine. <sup>15.16, 22, 54</sup>**

**Make sure to include some of these exercises in your cool down after working out!**



# Flexibility

## What is Flexibility?

Flexibility is the range of motion through which you can move through a specific joint. Your flexibility depends on your muscle and connective tissues (eg., ligaments and tendons).<sup>22, 28</sup> Flexibility is different for everyone, and even in your own body, some muscle groups will be more flexible than others. Flexibility is important because it allows for easier movement.<sup>55-57</sup>

## Stretching

Stretching is a form of exercise where you lengthen your muscles to make them more elastic and flexible. Stretching allows you to maintain or improve your flexibility in different muscle groups.<sup>22</sup> Some people will be naturally more flexible than others, depending on their age, gender, body type, and activity level.



### Types of Stretching<sup>22</sup>

1. Static: stretches performed while holding one position.
2. Dynamic: Stretches performed while moving



## Stretching Guidelines

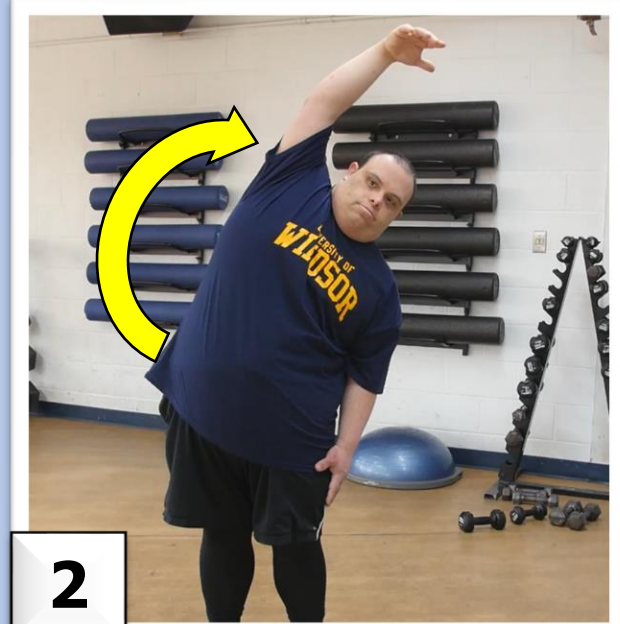
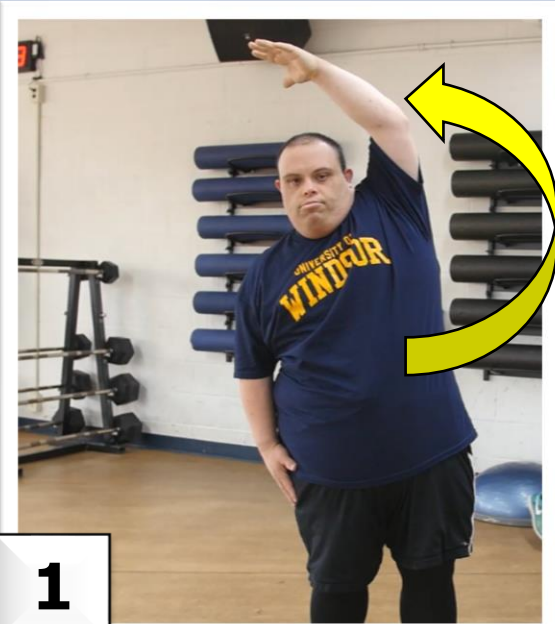
It is important for your body to already be warm before you start to stretch. Do your stretches after your workout, or make sure you warm up before you stretch.<sup>22</sup> Do not rush your stretching routine, stretch slowly and gently. You should feel a mild pull in the area you are stretching. Hold each stretch for at least 15 to 30 seconds.<sup>54-60</sup>

## Why is it Important to Stretch?

Stretching might help to prevent injuries, and muscle soreness.<sup>29</sup> It can also help to improve performance, promote body awareness, and stimulate blood flow.<sup>55-61</sup> It's also relaxing. However, you can also hurt yourself if you over do it. It is important to listen to your body and do what feels right for you!

# Side Bend

## Reach to side



### How to Perform:

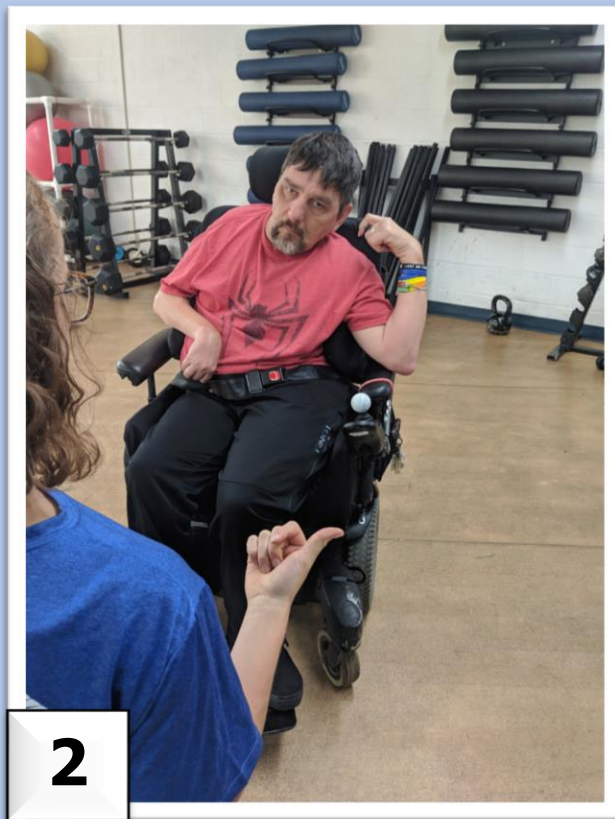
1. **Stand upright, with your feet shoulder width apart, and your arms at your sides.**
2. **Bring your right arm over your head.**
  - Reach to the other side as far as you can.
3. **You can use your left arm as a guide to reach further.**
  - Reach down your leg toward the outside of your knee.
4. **Once you feel a mild stretch in the side of your body, hold position for 15 to 30 seconds, then relax.**
  - Repeat this stretch for desired sets and repetitions.
  - Switch sides.



### Tips:

- Squeeze your stomach muscle slightly inward.
- Keep a slight curve in your torso but do not rotate your hips.
- Keep your neck relaxed and look straight ahead.

# Wrist Circles



## How to Perform:

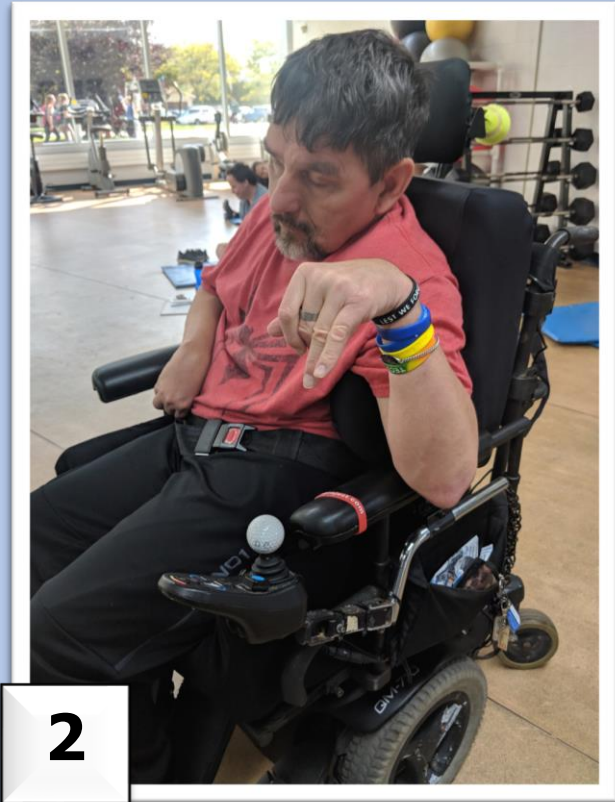
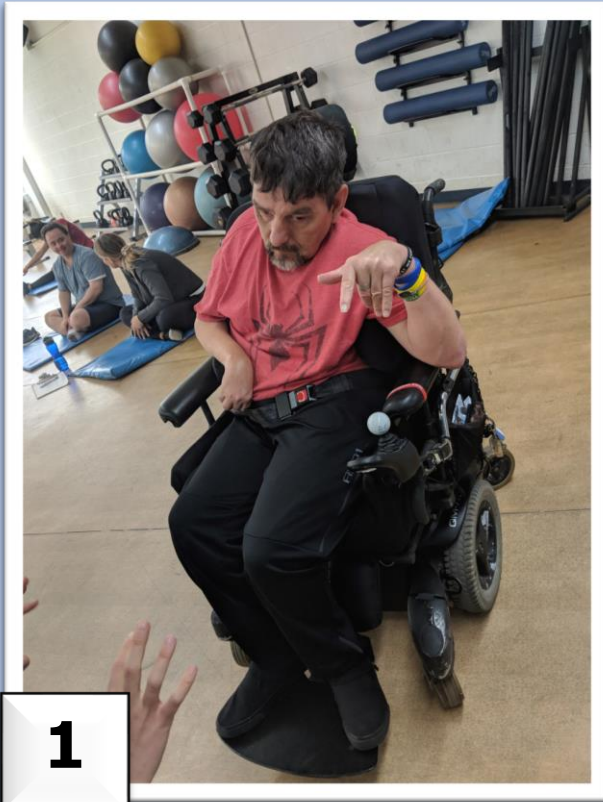
- 1. Close your hands and fingers to make a fist.**
  - The fist can be relaxed, you don't have to squeeze your fingers hard.
- 2. Slowly make circle your fist from the wrist.**
  - Make these circles for 10 to 15 seconds in one direction (eg., clockwise).
  - Switch directions.



## Tips:

- You can do this one wrist at a time, or both at the same time.

# Piano Fingers



## How to Perform:

1. **Imagine that you are about to play the piano: spread your fingers out as straight as you can.**
2. **Slowly wiggle or move your fingers in all different directions for 10 to 15 seconds.**

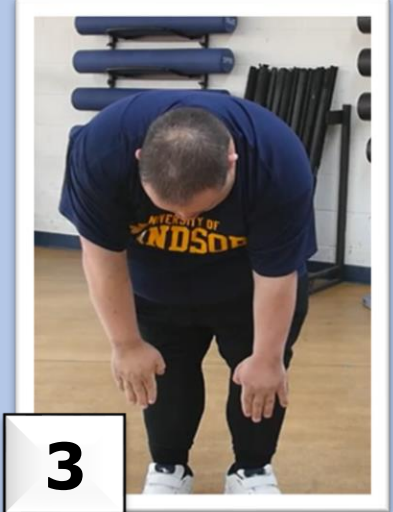


## Consider:

- You can do this one hand at a time, or both at the same time.
- Consider trying different movements with your fingers to challenge yourself.
- Try touching one finger with the next or making patterns. (e.g., draw the alphabet or your name).

# Bend and Reach

## Reach for Toes



### How to Perform:

1. **Stand upright, feet shoulder width apart.**
  - Bring both arms straight up overhead, fingers outstretched.
2. **Bend forward, keeping your arms straight out in front of you.**
3. **Try to reach all the way to your toes but stop once you feel a stretch in the back of your legs.**
  - Hold this position for 10 to 30 seconds, before coming back up to start position.
  - Repeat for desired repetitions and sets.



### Tips:

- Bend from your hips not with your back.
- Keep your neck relaxed.

# Shoulder Stretch<sup>55</sup>

## Arm Across Body



### How to Perform:

- 1. Stand upright, feet shoulder width apart. Bend the right arm slightly, bringing it across your chest.**
  - Use the left hand to gently press and guide the right arm closer to your chest, across the left side of your body.
- 2. Stop once you feel a stretch at the back of your arm and into the shoulder.**
  - Hold for 15 to 30 seconds.
  - Repeat this stretch for desired repetitions and sets.
  - Switch arms.



### Tips:

- Squeeze your stomach muscles inward to help keep an upright posture.
- Try not to bend or rotate at the waist as you stretch your arm across.

# Chest Stretch<sup>54</sup>

## Against Wall



### How to Perform:

- 1. Find a wall that is free of objects and has enough open space.**
  - Place your right palm flat against the wall with your arm straight.
- 2. Try to rotate your body away from the wall while keeping your arm and shoulder up against it.**
- 3. Stop when you feel a stretch in the chest and armpit area.**
  - Hold this position for 15 to 30 seconds.
  - Repeat this stretch for desired repetitions and sets.
  - Switch arms.

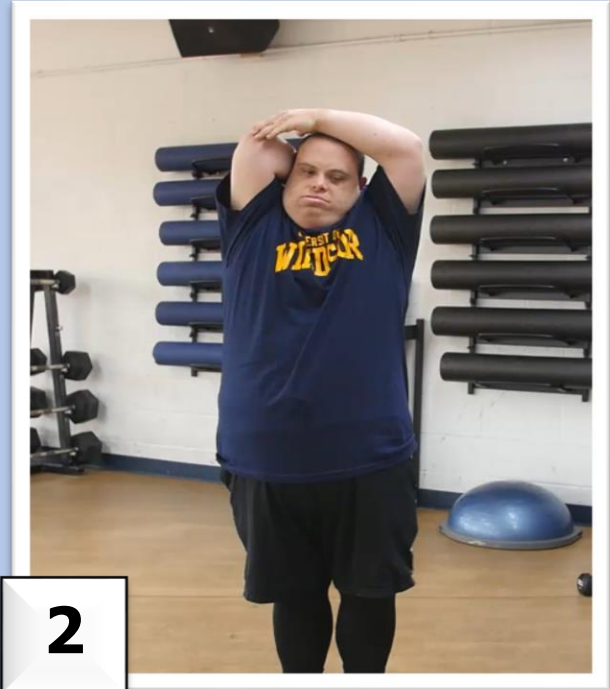


### Tips:

- Be sure to look straight ahead.
- Keep your body upright by squeezing your stomach muscles inward.

# Triceps Stretch<sup>56</sup>

## Arms Overhead



### How to Perform:

- 1. Bring your right arm upwards, right shoulder toward your right ear.**
  - Bend your right arm at the elbow, reaching behind your back as far as you can.
  - With your fingers spread wide, try to touch the middle of your back, with the palm of your hand.
- 2. Use your left hand to gently push on your right elbow, reaching further down your back until you feel a stretch on the inside of your right arm.**
  - Hold for 15 to 30 seconds.
  - Repeat this stretch for desired repetitions and sets.
  - Switch arms.

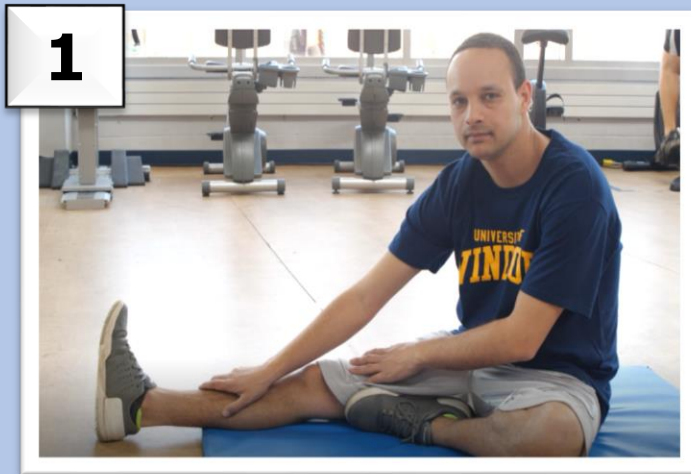


### Tips:

- Keep body upright, look straight ahead.
- Don't twist to the side as you reach further down the back.

# Seated Hamstring Stretch<sup>58</sup>

## Reach for Toes



### How to Perform:

- 1. Sit down on the ground, place the right leg straight out in front of you, toes pointed upward.**
  - Bend your left leg at the knee and pull the left foot inward so the bottom rests against your right inner thigh.
  - With both arms, reach as far forwards as you can, over the right leg.
- 2. You should feel a mild stretch at the back of your thigh, above the knee.**
  - Hold this position for 15-30 seconds.
  - Repeat this stretch for the desired repetitions and sets.
  - Switch legs.

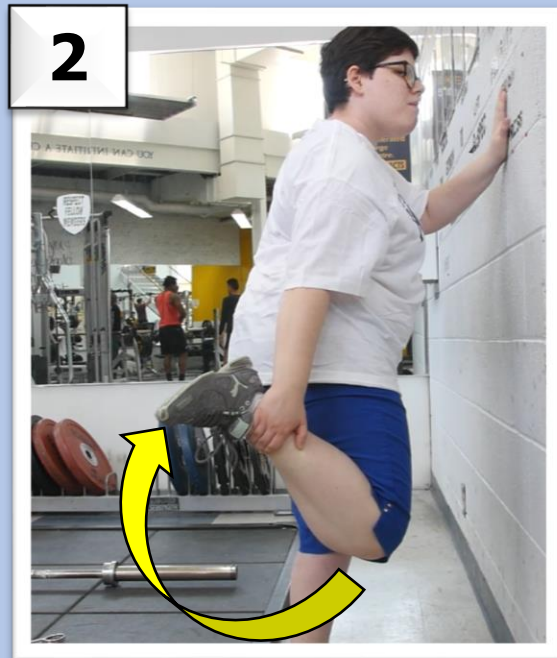
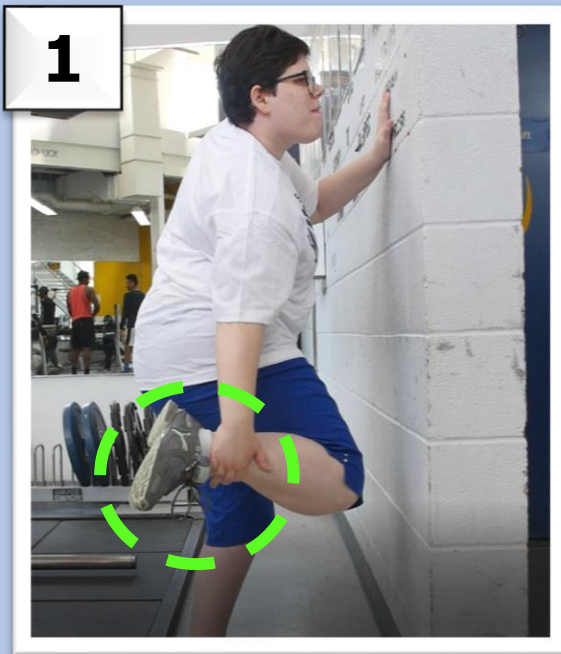


### Tips:

- Make sure you are reaching on the same side as the extended leg.
- Bend from the hips, not from your back.
- Look toward your toe.

# Quadriceps Stretch<sup>59</sup>

## Standing



### How to Perform:

- 1. Hold on to a stable surface (wall, railing) if you need to balance while standing.**
  - Bend your right knee and grab your right ankle with your right hand.
- 2. Pulling your foot up and behind you. Stop when you feel a mild stretch in the front part of your thigh, above the knee.**
  - Hold this position for 15-30 seconds, then relax.
  - Repeat this motion for desired repetitions and sets.
  - Switch legs.

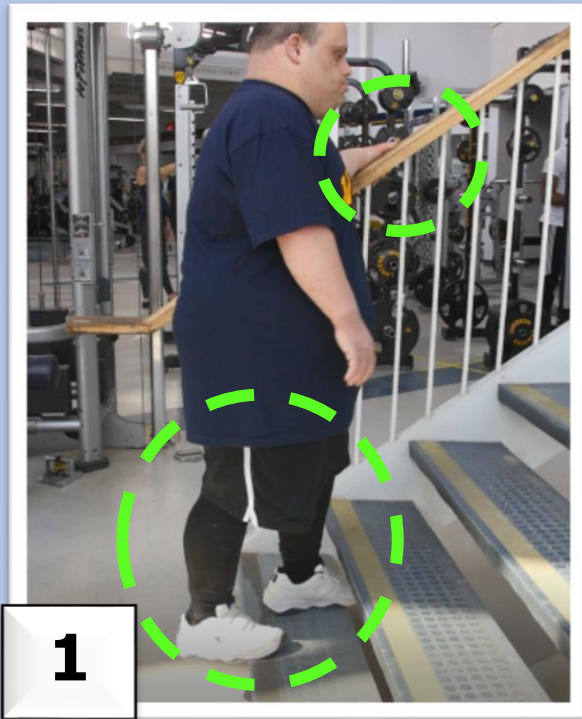


### Tips:

- Keep your body upright, by squeezing your stomach muscles inward.
- Look straight ahead, use the wall for support if needed.

# Calf Stretch<sup>60</sup>

## On Stairs



### How to Perform:

- 1. Step on the stair, holding railing for support. Shift your weight onto the left leg.**
  - Place the right foot slightly behind the left.
  - Only your toes and the balls of your feet should be at the edge.
- 2. Slowly lower your heel slowly over the edge.**
  - You should feel your calf muscle working.
  - Hold this position for 15 to 30 seconds, then relax.
  - Repeat this movement for desired repetitions and sets.
  - Switch legs.



### Tips:

- Make sure your toes point straight ahead, don't point them inward or outward.
- The heel should be below the toes.
- Look straight ahead and keep your body upright by squeezing your stomach muscles inward.

# Safety



# Safety Checklist

## Equipment

### Closed-toe Shoes



- Wear running shoes or athletic footwear when you are in the gym.



- Make sure your laces are tied, the soles have appropriate grip, and your shoes fit snugly.

## Nutrition

### Stay Hydrated!



- Make sure to drink lots of water before, during, and after your workout to avoid dehydration.



- Bring a water bottle.

### Meal Planning



- Make sure to eat a light meal (1 hour) before exercising. You can have a snack during your workout and eat afterwards to replace energy lost.

## When Exercising

### Ask Questions



- Don't be afraid to ask the gym staff questions about exercise technique, how to use a machine, or anything else related to your workout.

### Pick Up After Yourself



- Keep the floor clear-put exercise equipment away when you are finished (e.g., free weights resistance bands, etc.).

### Use Proper Exercise Technique



- Follow instructions for exercises in this manual carefully. If you are unsure, ask support staff or gym staff for help.



- Progress slowly – good technique is more important than increasing weight too soon.

# Self-Care

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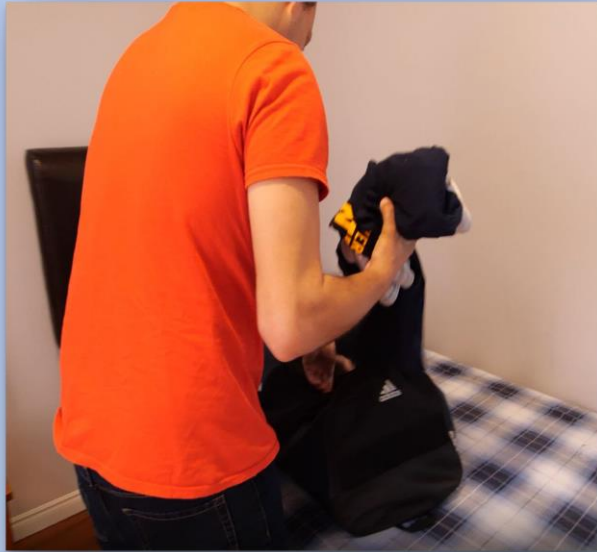
# Getting Ready at the House



**Link to Video:**

<https://www.youtube.com/watch?v=HID3dVNQMgg&list=PLDa2FoLXMeS4d9hpzs6IAGw7GzXpTOS2M&index=11>

# What Do I Wear for My Workout?



## **Sport or Athletic Clothing.**

E.g., Shirt, sweatshirt, shorts, leggings, sweatpants.



## **Closed Toe Shoes.**

E.g., Running shoes, athletic footwear.



**It is important to wear the right type of clothes when exercising, so that you will be comfortable and safe when you move around.**



**Make sure you have these clothes on before you head to the gym or pack them in your gym bag to change into, inside the changeroom at the gym.**

# What Do I Bring to The Gym?



## Pack These Items Before Heading to The Gym:



### **Water Bottle.**

- Stay hydrated!



### **Snacks to Consume.**

- During a break in your workout or afterwards.
- To maintain or replace energy lost during your workout.



### **A Change of Clothes.**

- For after your workout session.



### **Membership Card.**

- To enter the gym.



### **Towels.**

- A hand towel to wipe your sweat during the workout.
- A larger towel to use after the shower.



### **A Combination Lock.**

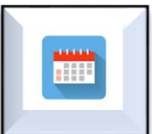
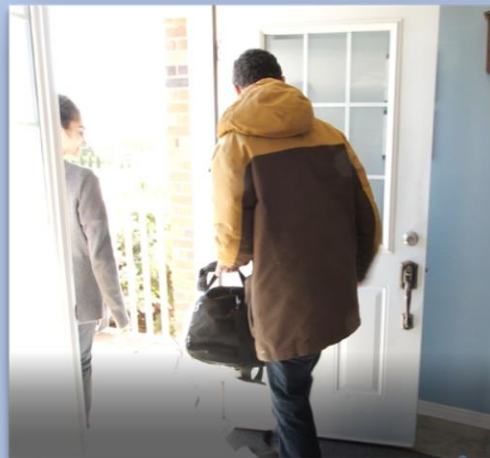
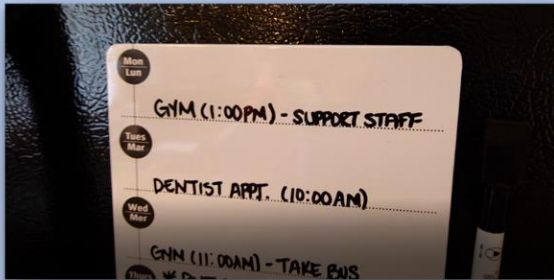
- To keep your belongings safe in the changeroom.



### **Hygiene Products.**

- Deodorant, shower gel, soap, body lotion, shampoo, conditioner.

# Preparing for My Workout



## Make it a Plan!

- Make a weekly schedule, where you can fit your exercise routine into your everyday life. Stick it on the fridge or somewhere visible for a reminder.



## Timing

- The gym will be less crowded at certain times of the day than at others.
- Exercise classes or activities may be scheduled for a certain time. Make sure you check the clock!

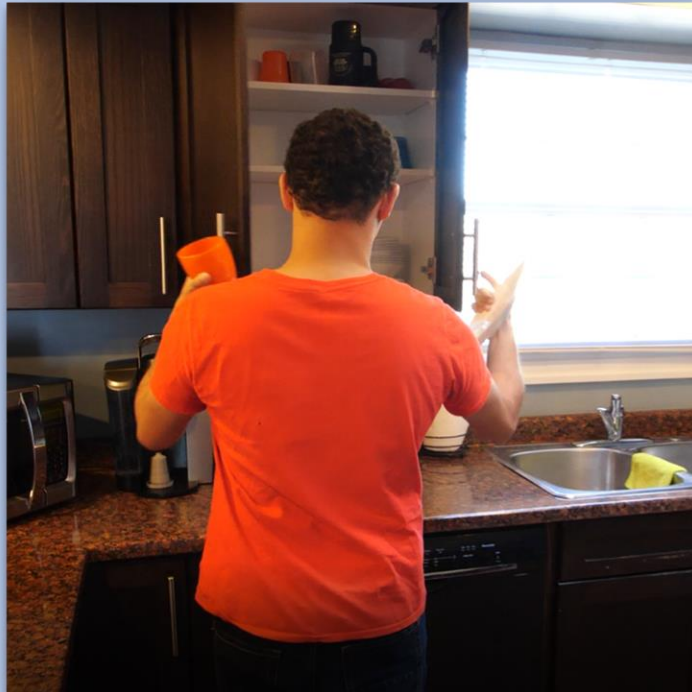


## How will I get to the gym?

- Get a ride from a parent or support staff, take the bus, walk, ride your bike, or drive yourself.

# The Importance of Nutrition

What should I be eating?



**See Video Link:**

<https://www.youtube.com/watch?v=HID3dVNQMgg&list=PLDa2FoLXMeS4d9hpzs6IAGw7GzXpTOS2M&index=11>

# Before My Workout



## Fluids (Drinks)

- You should have at least 1 pint (0.5 L) of fluid 2 hours before your workout.
- Fluid can be water or other non-alcoholic beverages such as milk and juice.
- Fluid can be consumed with a meal or between meals. [62-65](#)



## Meal (Food)

- You should eat 3 to 4 hours before your workout and have a light snack about 30 minutes before your workout. [62-65](#)
- Eat a variety of foods that are recommended for each food group in Canada's Food guide. [62-64](#)
- Eat a well-balanced meal with plenty of fruits, grains and vegetables.
- Choose foods that are low in fat, have little or no trans fat or saturated fats, and are low in cholesterol. [62-63](#)



**Make sure to put your dishes away after you use them.**

# During My Workout



## Fluids (Drinks)

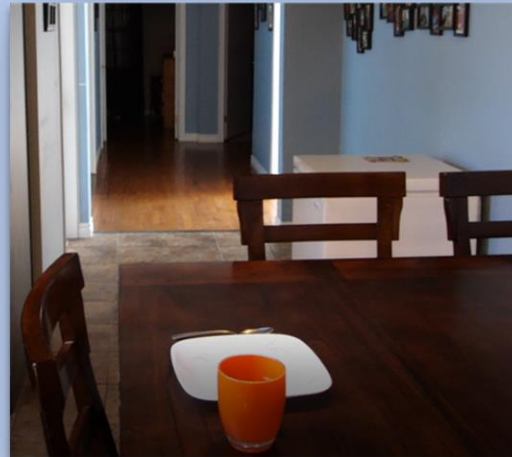
- It is important to replace the fluids you lose through sweating during exercise. [62-65](#)
- Drink before you feel thirsty and continue at regular periods throughout your workout (2.37 ml or 8 ounces every 15 minutes). [62-65](#)
- Cool water is ideal.



## Meal (Food)

- For workouts or activities lasting longer than one hour, it is advised to consume some carbohydrates in the form of a piece of fruit or a grain bar (energy bar). [62-65](#)

# After My Workout



## Fluids (Drink)

- At least 1 pint (0.5 L) of fluid per 0.45 kg of body weight lost during exercise. <sup>62-65</sup>



## Meal (Food)

- Eat meals with a combination of carbs, proteins and fats. <sup>62-65</sup>
- Keep a diet log to track your eating habits.

# Gym Etiquette

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# Arriving at The Gym



## Scan Membership Card

- Most gyms will need you to scan your membership card or sign in to enter. Don't forget to bring your card to the gym with you!



## Say Hello!

- Say hello to the staff working at the front desk.



## Head Towards the Locker rooms

- Head towards the changerooms to put your outdoor clothes away and change for your workout.

### See Video Link:

<https://www.youtube.com/watch?v=KEITeuW0R6o&list=PLDa2FoLXMeS4d9hpzs6lAGw7GzXpTOS2M&index=13&t=0s>

# Locker Rooms



## The Locker Room

- Most gym locker rooms also have a washroom and a shower section.
- There will be other people in the changeroom with you, but you can use bathroom stalls for more privacy.



## Putting Outdoor Clothes Away

- Put your outdoor clothes into your locker before taking out your gym clothes to change into.
- Remember to lock your locker to keep your belongings safe.

# Getting Changed



## **Change into Gym Clothes**

- An athletic shirt, running shoes, athletic shorts, leggings, or sweatpants.



## **Take Out Items Needed for Your Workout**

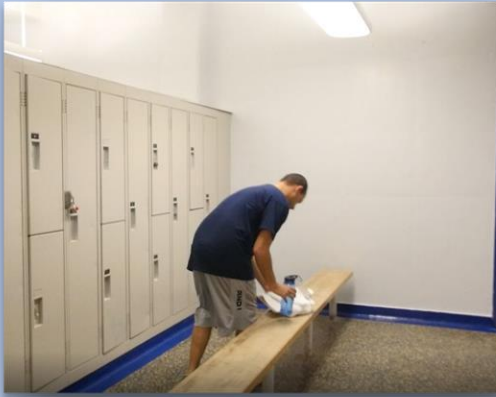
- Water bottle, hand towel, exercise program, and combination lock.



## **Lock Up Your Bag, and Outdoor Clothes**

- It is important to use the lock you have, to lock up your clothes, gym bag and personal belongings.
- This will ensure your stuff stays safe and does not get stolen or lost.

# Entering the Gym



## Grabbing Things, You Will Need for Your Workout

E.g. a water bottle, exercise plan, towel and possibly a snack.



## Head into The Gym

- Say hello to gym staff as you walk in to the gym area.
- This way, staff will recognize you, and are able to help you, if you need anything.

# Asking for Help



## Don't Be Shy!

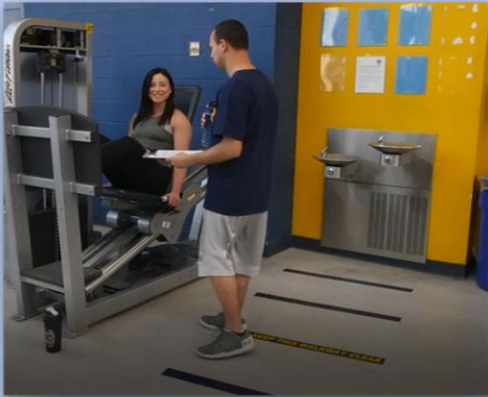
- Don't be afraid to ask any question(s) if you are unsure of something.
- Gym staff are there to help. It is better to ask than potentially hurt yourself. [66-70](#)
- Remember that no question is too silly to ask!



## Say Hello

- First say hello and introduce yourself.
- Explain what you would like help with.

# Waiting Your Turn



## Sharing the Gym with Others.<sup>71-72</sup>

- Someone else may be using the water fountain, machine or equipment you want to use at that moment.
- Sometimes you may need to wait in line to use the water fountain.
- Kindly wait your turn ask them if you can use it after them.
- Switch to another machine while you wait for the person to be finished.

# Cleaning Equipment



## Clean Exercise Machines and Equipment After You Use Them.<sup>70-71</sup>

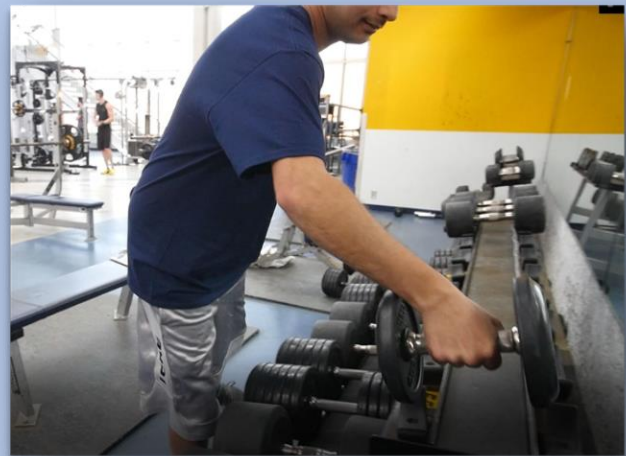
- Grab a paper towel or cloth and spray it with the cleaner.
- Slowly wipe down the parts of the machine you were touching.



## Why Do We Have to Clean?<sup>70</sup>

- We all carry germs and we leave some behind after we have used an exercise machine or piece of equipment, especially with sweating during exercise.
- It's important to clean the equipment to prevent sickness and disease.
- This is considerate for the person using the machine or equipment after you.

# Putting Equipment Back



## Put Equipment Back Where You Found It

- It is not safe to leave equipment lying around, as someone could trip and hurt themselves. <sup>70-71</sup>
- Other gym members may be looking for equipment, so it is important to put it back where you found it. <sup>70-71</sup>



# Leaving the Gym



**Change back into your outdoor clothes**



**Put all your belongings in your gym bag**



**Check the locker**

➤ Check the locker to make sure you did not forget anything.

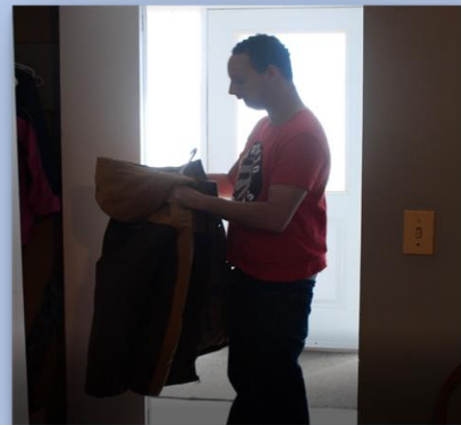


**Don't forget to say bye as you leave!**

# Coming Home from The Gym



# Taking Off Outdoor Clothes



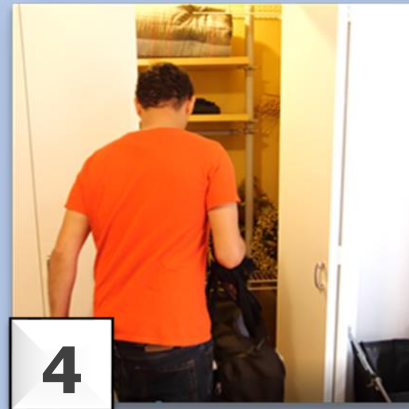
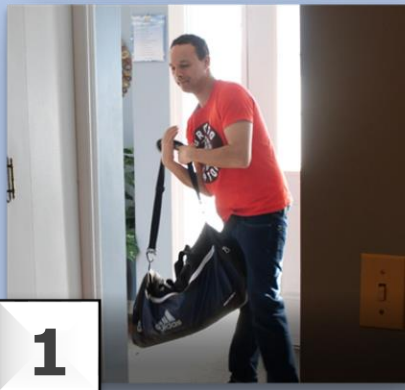
## Take Off Your Outdoor Clothes

- When coming inside the house from the gym, take off your outdoor clothes. Depending on the weather this could be your jacket, shoes/boots, hat, gloves, or scarf.



- Place your shoes/boots neatly together and hang your coat up in the closet.

# Putting Your Belongings Away



## Laundry

1. Bring your gym bag into the laundry room.
2. Take dirty clothes out of your gym bag.
3. Place them in the laundry hamper or laundry machine.
4. Put your gym bag away.



## Make a Plan for Next Time

- Plan your next workout.
- Place your running shoes at the door as a reminder.



# Finding a Personal Fitness Trainer



**A personal trainer is someone who works with you individually, to help improve your physical fitness, movement skills and reach your goals.** <sup>65-68</sup>

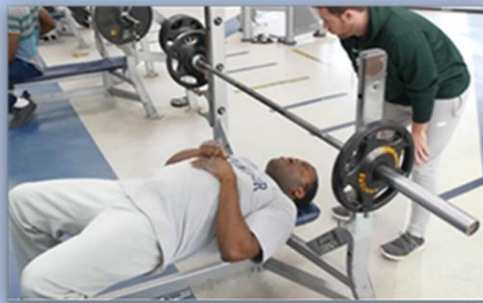
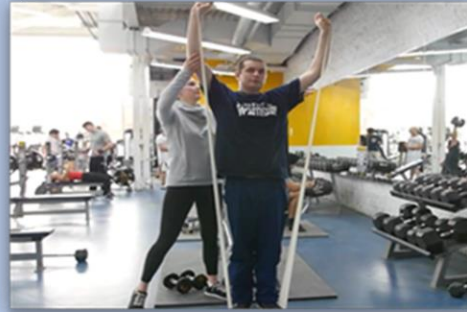
- Before you get a personal trainer, it is important to assess your goals, needs, and capabilities.

**Q: What do I want to improve?**

**Q: What would I like to get out of my exercise routine?**

- You should select a personal trainer who is knowledgeable and able to work with you to reach your goals within the scope of your ability. <sup>66-70</sup>
- Different gyms and fitness centers may offer a variety of service and costs. <sup>66-70</sup>
- It is about finding what will be best for you.

# How Can I Support?



## Responsibility



- Make sure the person you support has appropriate clothing to workout.
- Determine how much you should be involved (Partner exercising, instructing, or observing).

## Timing



- Find the best time to fit exercise in the daily life of the person(s) you support.
- Go to the gym at a less busy time if it is preferred. <sup>65-71</sup>

## Modelling



- If you exercise, or exercise with the person you support, you will be modelling positive behaviour. <sup>66-70</sup>
- They may be more likely to participate.

## Encouragement



- Having a positive attitude towards exercising, working out, and encouraging the person you support can make a huge difference. <sup>66-70</sup>

# Motivating Yourself to Exercise



## Make it Fun!

- Choose exercises and activities that you enjoy!<sup>17,66-70</sup>
- The more fun you have while you exercise, the more likely you will want to continue to be active.<sup>66-70</sup>



## Create Goals for Yourself

- Create short term and long-term goals.
- Your goals should be specific, realistic, attainable, and have a time frame associated with them.<sup>66-70</sup>



## Track your Progress

- Use the activity logs and progress track sheet that have been provided in the appendix.



## Check in

- Keep a journal of how you feel towards exercising.
- Think about what could be improved so you continue to exercise.

# Frequently Asked Questions (FAQs)

## 1. How Often Should I Exercise?

- According to Canada's physical activity guidelines, Adults and Seniors should be engaging in at least 150 minutes of physical activity per week.<sup>15,16</sup>
- This should be performed in 10-minute bouts or more, at a moderate to vigorous intensity.<sup>15,16</sup>
- Activities should be aerobic in nature with a combination of bone and muscle strengthening activities at least 2 days per week.<sup>15,16</sup>
- These are guidelines and will differ for each person, however, the more physical activity participation the better!

## 2. Is there such thing as too much exercise?

- Yes, although it is best to engage in as much physical activity and exercise as possible, it is important to take breaks for recovery.<sup>19</sup>
- Over-training or over-exercising can lead to harm such as pain, injury, fatigue, and reduce performance etc.<sup>29, 39</sup>

## 3. Why Are My Muscles Sore After a Workout?

- To build strength, you must work your muscles, this means they may be sore for a few days following your workout.<sup>19-20, 28</sup>
- This is normal, and a sign that you are strengthening your muscles.
- With appropriate rest, you should be able to continue your workout schedule.<sup>19,38-39</sup>
- If the soreness turns into pain, you should seek medical attention.

## **5. Is it safe for me to exercise with medical conditions?**

- It is a good idea to consult with your medical doctor before you engage in physical activity.<sup>29,70</sup>
- Some activities may be better suited for you over others.
- Generally, most physical activity has been shown to reduce risk of developing chronic diseases, as well as improve overall health.<sup>12,17-18</sup>

## **6. Warning signs I should look for when exercising?**

- You should stop exercising if you are feeling pain, discomfort, dizziness, light-headedness, or pain (especially chest pain).<sup>29</sup>

## **7. How or what can I use to measure my progress over time?**

- You can use various logs and tracking sheets to set and monitor your goals, while keeping track of your progress over time. (see appendix)
- Goals can be both long term and short term. These goals should be realistic, measurable, and have a time frame for completion.<sup>65-67</sup>
- Recording various activities, exercises and workouts you complete along the way, will allow you to refer to what you previously had done.
- This way, you can see where you can improve, add more reps, sets or how much you have left to do before completing your goal.
- Reflection journals or logs can help you check in with how you are feeling during exercise, or as you work towards you goals.

## **8. What if I am not enjoying my exercise routine?**

- It's okay if you are bored of your exercise routine or not interested in an activity. There is a wide variety of physical activities out there to choose from. Some as simple as gardening or walking. It is just about getting yourself moving!

# Resources

## Health Guidelines

### 1. Canadian Physical Activity Guidelines

Adults Ages 18-64

Older Adults Ages 65+

[http://csep.ca/CMFiles/Guidelines/CSEP\\_PAGuidelines\\_0-65plus\\_en.pdf](http://csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_0-65plus_en.pdf)

### 2. Canada's Nutrition Guidelines

<https://food-guide.canada.ca/en/guidelines/>

## Contact us

### Adapted Physical Exercise Program (APEX)

#### Fit Together

(519)-564-7021

[apex@uwindsor.ca](mailto:apex@uwindsor.ca)

[fit.together@communitylivingessex.org](mailto:fit.together@communitylivingessex.org)

<http://www.uwindsor.ca/kinesiology/772/apex-programming>

### Community Living Essex County

#### Essex Centre

372 Talbot St N,

Essex, ON N8M 2W4

(519) 776-6483

<https://communitylivingessex.org/>



### Link to Exercise Videos:

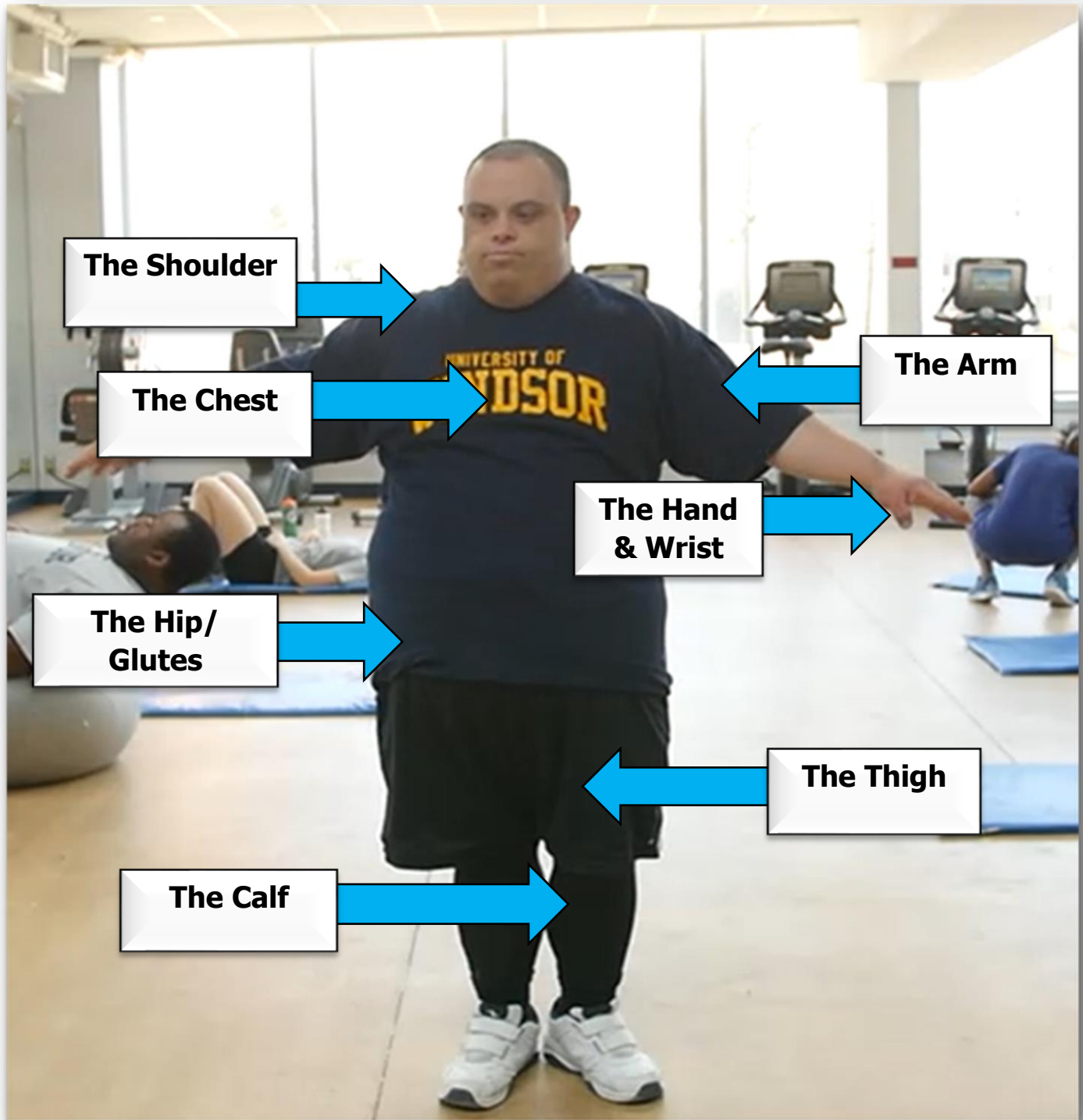
<https://www.youtube.com/playlist?list=PLDa2FoLXMeS4d9hpzs6IAGw7GzXpTOS2M>

# Appendices

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# The Different Parts of My Body That I Can Work Out





# Progress Track Sheet

## My Fitness Goals



**Month**  
**Date:** \_\_\_\_\_

**My Goal :**

**Goal  
Achieved**

**Week 1**  
**Date:** \_\_\_\_\_

**Week 2**  
**Date:** \_\_\_\_\_

**Week 3**  
**Date:** \_\_\_\_\_

**Week 4**  
**Date:** \_\_\_\_\_

**Week 5**  
**Date:** \_\_\_\_\_

# Daily Journal/ Reflections

[illegible]

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