



Progressing Your Strength and Resistance Training



Rehabilitation

RESISTANCE + STRENGTH TRAINING SAFETY CONSIDERATIONS

IMPORTANT SAFETY INFORMATION:

- Always speak with your clinical exercise physiologist before starting strength training or if you have safety concerns.
- You may be asked to **avoid** strength training if you have:
 - Muscle or bone issues
 - Hernia
 - Unrepaired aortic aneurysm
 - Uncontrolled high blood pressure
 - Or any other safety concern identified to you
- Please **STOP** strength training exercises if you experience:
 - Angina symptoms such as pain, pressure or burning in your chest, neck, jaw, throat, upper back, shoulder blades or arms;
 - Nausea, dizziness, lightheadedness, extreme shortness of breath;
 - Muscle or joint pain;
 - If your rating of perceived exertion (RPE) is **greater than moderate/somewhat hard** **OR** if your heart rate **exceeds the lower limit** of your target heart rate zone.



IMPORTANT TRAINING GUIDELINES

WARM-UP	Always warm-up for 5 to 10 minutes (e.g. walking) before strength training or do resistance training after an aerobic exercise session.	
BREATHE	Do not hold your breath. Breathe out during the more difficult part of the exercise and breathe in during the easy part of the exercise.	
JOINTS	Do not “lock” joints during any of the exercises. Keep slightly bent.	
POSTURE	Good posture is key!	TIP: Keep your back straight, shoulders pulled back, chest up and engage your core (i.e. tighten/pull in).



Caution: Choose exercises that do not position your head below your heart (e.g. downward dog is an example of positioning head below heart) or exercise that have you hold one position (e.g. wall sit or plank).

IMPORTANT TRAINING GUIDELINES

Frequency	→	How often	→	<ul style="list-style-type: none">• 2 – 3 times per week• Give yourself at least 1-day break in between)
Intensity	→	How hard	→	<ul style="list-style-type: none">• Choose a weight that allows you to do 1-2 sets of 10-15 repetitions of each exercise.• Perform these exercises below your target heart rate or moderate/somewhat hard intensity. Do not exceed a ratings of perceived exertion (RPE) of 16.
Time	→	How long	→	<ul style="list-style-type: none">• Exercises can take 20 to 30 minutes total.• Perform repetitions with a controlled motion and speed.• Ensure at least 2-minutes of rest between each exercise.
Type	→	What are you doing	→	<ul style="list-style-type: none">• There are different types of strength and resistance training.• The exercises in this guide focus on functional movements using bodyweight, free weights, or household items for weight.

PROGRESSION:

- Start at a light intensity using the talk test as a guide, performing 1 set of each exercise (e.g., 10-15 repetitions).
- When 1 set of 15 repetitions becomes easy to perform, add a second set **without** increasing weight.
- When 2 sets of 15 repetitions becomes easy to perform, you may increase weight **after** speaking with an exercise physiologist.

IMPORTANT TRAINING GUIDELINES

Cues for core engagement:

Core engagement is important in all strength and resistance training movements. Core engagement allows for stability through the spine and reduces the risk of back injury. It is important to remember that core engagement **does not mean holding your breath.**

Cue	Description
Belly button to spine	<ul style="list-style-type: none">• Tighten through the core by imaging a string attached to your belly button is being pulled towards the lower back.• Imagine clenching for protection if someone is going to punch your stomach.
Engage the pelvic floor	<ul style="list-style-type: none">• Imagine what muscles you would tighten to 'hold on' from passing urine.
Tall posture	<ul style="list-style-type: none">• Keep your chin neutral, eyes forward, chest wide, ribs down, lengthen spine keeping hip bones even with a slight bend in knees.• Create a straight light through shoulders, hips and knees.

TRACKING YOUR PROGRESS

This guide describes the first three exercises using body weight only. When you feel that you can progress the exercise, speak with an exercise physiologist about adding weight. You can be at different levels for each exercise.

Please complete the exercises in the table below and follow the instructions for each exercise.

Date	Exercises	Level	Sets	Repetitions	RPE	Comments
	Hip Hinge					
	Squat					
	Lunge					
	Push					
	Pull					
	Loaded Carry					

HIP HINGE

- Start with your feet shoulder width apart and core engaged.
- Maintain proper posture with the ear, shoulder, hip and knee in line with each other, and arms resting comfortably to the side of your body.
- Perform the hip hinge pattern by engaging your core and pushing your hips behind you while bending at the waist. Breathe in during this movement.
- Stop once you feel a slight pull in the hamstrings, then pull your hips forward until proper upright posture is achieved.
- Throughout the movement, make sure the head and neck are neutral and there is no rounding of the back.



PROGRESSING TO USING WEIGHTS:

Speak to your exercise physiologist before starting this progression.

- Dumbbell or kettlebell (can start on the ground, or elevated on stack of books or a coffee table)
- Bag (grocery bag, suitcase, backpack, etc.)
- Band (stand on band in the middle and grab the band between your feet)
- Pail or bucket



SQUAT

- Stand with your feet shoulder width apart and toes pointed out 10-15 degrees (or whatever feels comfortable).
- Like the hip hinge, engage your core and start by pushing your hips back. Breathe in and begin to bend your knees and perform a squat as low as you are able while maintaining good posture.
- Begin returning to an upright standing position by breathing out and pushing your feet into the floor to come up. Do not lock your knees.



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LUNGE

- Stand with your feet together or spread apart if you need help with balance. Keep your shoulders down and both arms straight by your side.
- Step backward with one leg, placing only the toes on the ground. Start small with the step, only going as far as is comfortable. There is no need to take a large step.
- Engage your core, breathe in and begin to lower your hips straight down to the ground. Remember to keep a good posture through the whole exercise.
- Breathe out and return to starting position. Repeat for the desired repetitions and switch legs.



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PUSH

- Sit down on an incline bench and lift the weights to your shoulders. Keep your feet flat on the floor with a stable lower body.
- Engage your core, breathe out and press the dumbbells up with your elbows to the sides until the arms are extended and the dumbbells are over your chest.
- Breathe in and lower the weights to the sides of the upper chest until a slight stretch is felt in the chest or shoulders.
- When you have completed your set, either have a partner take the dumbbells from you or roll yourself up with the dumbbells to a seated position. Place the dumbbells carefully back on the floor.



PULL

- Reach up and grab the handles with your arms at 11 o'clock and 1 o'clock.
- Step back with one leg, keep both feet pointed forward, knees straight but not locked and upright posture.
- Once stable, engage your core, breathe out and row your arms straight back until the handles reach the sides of the chest. The shoulders should remain down and keep good posture.
- Breathe in and return to the starting position.
- Do not allow the shoulders to shrug up towards your ears, during the row or the return. Repeat for the desired repetitions and switch lead leg where appropriate.

If you have resistance bands with handles, place handle of one end in a doorway and close the door. You may also place an anchor in the middle of your resistance band.



LOADED CARRY

- To pick up the weight, use proper hip hinge and/or squat technique, grab one weight in each hand and complete a squat to stand up, as previously explained.
- Hold each weight with your arms hanging down at your sides.
- Look straight ahead with an upright posture, shoulders down, chest up and core engaged.
- Make sure to grip the weights tightly and maintain good posture during the exercise. This exercise should not be rushed and focus on the quality of stepping motion.
- Start by walking for 30 seconds and keep normal breathing patterns. Progress by first walking longer durations. When appropriate, increase the weight you carry.



If you don't have weights, you can also use grocery bag with items inside, or a pail/bucket with handles.

DEAD BUG

- Begin laying with your back flat on the floor and legs bent at a 90-degree angle (Picture on the left).
- Start this exercise by using only your legs first. Your arms can rest comfortably on the floor. Ensure your full back is in contact with the floor in this position.
- Engage your core, breathe out, and slowly straighten one leg towards the floor – stop when you are unable to keep your lower back in contact with the floor.
- Breathe in and return to the starting position by flexing through the hips, bring your leg back towards your body.
- Repeat with the opposite leg.
- To progress this exercise, slowly add arm extension on the opposite side as the leg, as shown in the photo.

