

# Resistance Training Program

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## How to do Resistance Training:

- Warm up for 5 minutes before resistance training e.g., walk or cycle slowly
  - Avoid stretching before resistance training
- Do all exercises in the order prescribed
- Breathe normally. Do not hold your breath
- Lift the weight to a count of 2 and lower the weight to a count of 3
- Keep your rating of perceived exertion (RPE) between 11 and 16

Rating of Perceived Exertion (RPE)	
6	
7	Very Very Light
8	
9	Very Light
10	
11	Fairly Light
12	
13	Somewhat Hard
14	
15	Hard
16	
17	Very Hard
18	
19	Very Very Hard
20	

### Safety Alert!

**Stop** and talk to your Diabetes Team if you have any symptoms such as pain or shortness of breath

- Take at least a 30 to 60 second rest between exercises
- Cool down for 5 minutes after resistance training e.g., walk or cycle slowly
  - Your cool down can also include stretching exercises
- Do resistance training at least 2 times a week with at least one day of rest in between workouts
- Track your progress on your exercise diary. Your Diabetes Team will review your exercise diary and help you progress your resistance training program

## How Much Weight Should You Lift?

To find out if you are using the correct weight or exercise band, answer these questions:

- 1) After doing the last repetition, do you feel that you can do 5 to 10 more repetitions?

If you answer yes, the weight or exercise band is **too light or easy**

- 2) Are you struggling to do the last repetition?

If you answer yes: the weight or exercise band is **too heavy or hard**

- 3) After the last repetition, do you feel as if you could do 2 to 3 more repetitions and no more?

If you answer yes, this is a **good starting weight or exercise band to use**

### What is a repetition?

A repetition is one complete motion of an exercise

e.g., 1 bicep curl

### What is a set?

A set is a group of repetitions done without stopping

e.g., 1 set of 10 bicep curls



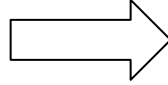
A dumbbell



An exercise band

## How to Progress Your Resistance Training Program

When you are ready, slowly increase the number of repetitions you do from 10 to 15



Once you can do 15 repetitions with ease:

- Increase the weight you lift by 2 to 5 pounds

**OR**

- Change your exercise band for one that has more resistance

Use the chart below to help you select the next correct weight or band colour

**Safety Tips**

- Report any symptoms to your Diabetes Team
- Not all exercises progress at the same rate
- Not all muscle groups will be ready to progress at the same time
- Not all muscles use the same weight

## Tool to Help You Increase the Weight You Lift or Band You Use

When progressing your dumbbells, follow this order												
Lightest											Heaviest	
1 lb	2 lbs	3 lbs	5 lbs	8 lbs	10 lbs	12 lbs	15 lbs	20 lbs	25 lbs	30 lbs	35 lbs	40 lbs

When progressing your exercise bands, follow this order				
Lightest				Heaviest
Yellow	Red	Green	Blue	Black

## Getting Up Off the Floor

Many people feel light-headed or dizzy if they get up off of the floor too quickly. This can lead to a fall or injury. The following is a demonstration of how to get up off of the floor safely. Take your time.



**Step 1:** Bend your knees and place your feet flat on the floor



**Step 2:** Roll onto your right side, knees bent, right arm supporting your head and your left hand on the floor



**Step 3:** Place both hands on the floor and push your upper body off of the floor



**Step 4:** Come up onto your hands and knees as shown



**Step 5:** Bend your right leg and place your right foot flat on the floor. Place both hands on your right leg for support and push yourself up to a standing position



**Step 6:** Slowly stand up

## Getting Up Off the Floor (using a chair for support)

Many people feel light-headed or dizzy if they get up off of the floor too quickly. This can lead to a fall or injury. The following is a demonstration of how to get up off of the floor safely using a chair for support. Take your time getting up off the floor.



**Step 1:** Bend your knees and place your feet flat on the floor



**Step 2:** Roll onto your right side, knees bent, right arm supporting your head and your left hand on the floor



**Step 3:** Place both hands on the floor and push your upper body off of the floor



**Step 4:** Come up onto your hands and knees as shown



**Step 5:** Place both hands on the seat of a sturdy chair



**Step 6:** Bend your right leg and place your right foot flat on the floor. Push yourself up to a standing position



**Step 7:** Slowly stand up

# Resistance Training Exercises

## 1) Semi-Upright Dumbbell Rows (back muscles)



**Equipment:** Dumbbell, chair

**Step 1:** Stand facing the back of a chair. Hold your dumbbell in your right hand. Step forward with your left leg. Keep the right leg straight behind you

**Step 2:** Keeping your back straight, bend forward and place the palm of your left hand on the back of the chair. Draw your belly button in toward your spine. Keep your back straight

**Step 3: Start** with your right arm straight and the dumbbell directly beneath your right shoulder. Keep your right palm facing in. Pull the dumbbell straight up, keeping it in line with your right shoulder. As you lift the dumbbell squeeze your shoulder blades together

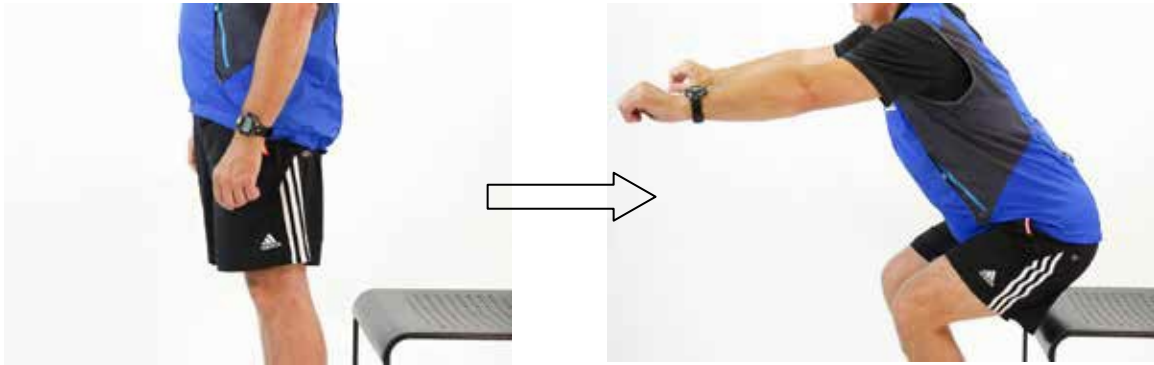
**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left arm

**My Diabetes Team Prescribed:** \_\_\_\_\_set(s) of \_\_\_\_\_repetitions using\_\_\_\_\_pounds

**Health club alternatives:** Seated rowing with cable, seated row machine

**2) Half-Squat** (thigh muscles)

For an alternative see exercise **2A**



**Equipment:** Chair, as you get stronger add dumbbells for added resistance (see next page)

**Step 1:** Stand with feet shoulder width apart, arms at your side and draw your belly button in toward your spine. Keep your feet flat on the floor and toes slightly pointed out

**Step 2: Start** by pushing your buttocks back and flexing your hips to slowly lower your body to a half-squat position. Make sure you can see your toes when you lower yourself down. At the same time, raise your arms straight out in front of you

**Note:** This movement should feel like you are sitting back into a chair

**Step 3:** Return to an upright position and bring your arms back down to your sides. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

**Health club alternative:** Leg press, hack squat machine, smith machine squat

**2) Half-Squat with Dumbbells** (thigh muscles)

This is a progression to the Half-Squat without Dumbbells



**Equipment:** Dumbbells, chair

**Step 1:** Stand with feet shoulder width apart, arms at your side and draw your belly button in toward your spine. Hold 1 dumbbell in each hand with your palms facing toward your sides. Keep your feet flat on the floor and toes slightly pointed out

**Step 2: Start** by, pushing your buttocks back and flexing your hips to slowly lower your body to a half-squat position. Make sure you can see your toes when you lower yourself down. Keep your arms straight at your sides

**Note:** This movement should feel like you are sitting back into a chair

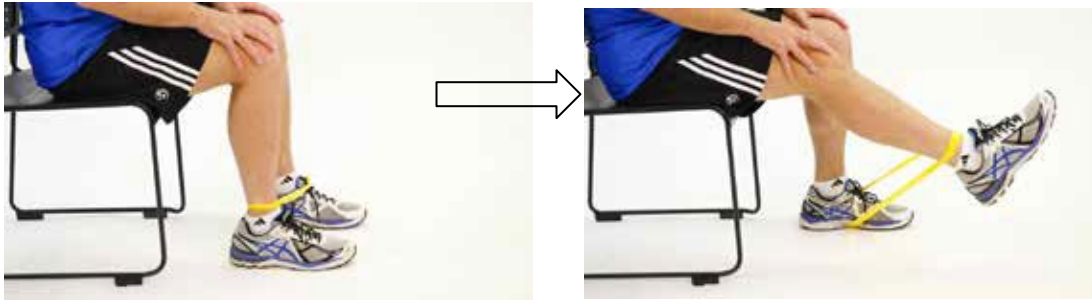
**Step 3:** Return to an upright position with your arms at your sides. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:**            \_\_\_set(s) of \_\_\_repetitions using\_\_\_pounds

**Health club alternative:** leg press, hack squat machine, smith machine squat



**2A) Seated Leg Extension** (thigh muscles)



**Equipment:** Exercise band (tie band to form a loop), chair

**Step 1:** Sit back in a chair and place one end of the loop under your left foot and the other end around your right ankle

**Step 2:** Sit with a straight back. Draw your belly button in toward your spine. Keep your hands on your thighs to keep yourself stable

**Step 3: Start** by flexing your right foot towards you and straightening your right leg. Do not completely straighten your right leg or lock your right knee. Keep your right thigh on the chair

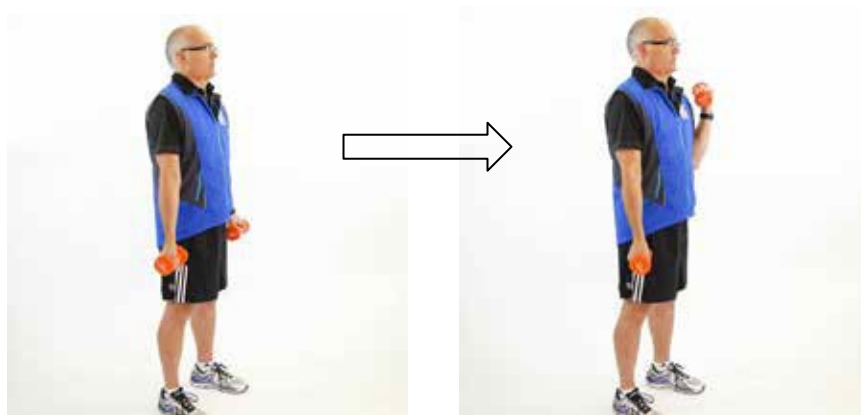
**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

**My Diabetes Team Prescribed:**

\_\_\_ set (s) of \_\_\_ repetitions using \_\_\_\_\_ (colour) band

**Health club alternative:** Leg extension machine

### 3) Bicep Curls (arm muscles)



**Equipment:** Dumbbells, a chair if you need to sit during this exercise

**Step 1:** Stand with feet shoulder width apart, knees slightly bent and draw your belly button in toward your spine. Hold a dumbbell in each hand, with your arms at your side and palms facing forward. Roll your shoulders back and down before starting

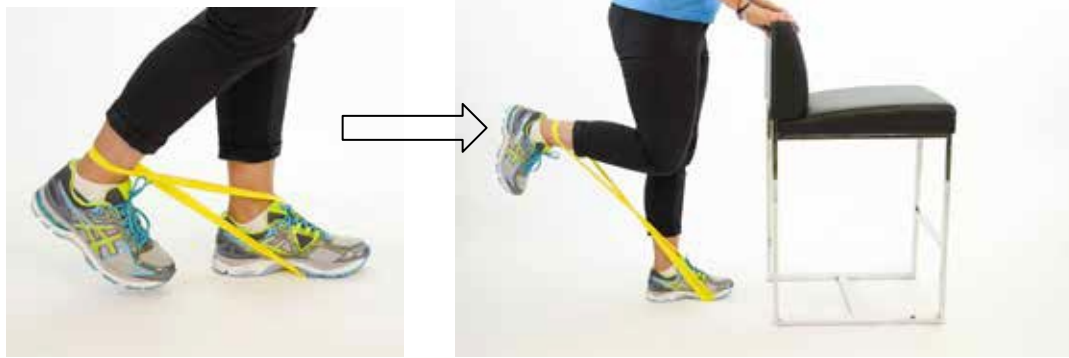
**Step 2: Start** by curling your right arm up to your right shoulder, keeping your elbow close to your body

**Step 3:** Slowly lower to the starting position. Repeat with your left arm and continue switching between your two arms. Start with about 10 repetitions on each arm and build up slowly to 15

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions using\_\_\_pounds

**Health club alternative:** Seated bicep curl machine or bicep cable curl

#### 4) Leg Curl (leg muscles)



**Equipment:** Exercise band (tie band to form a loop), chair (for balance)

**Step 1:** Begin by placing the band on the floor. Place your hand on a chair to help keep your balance. Place the exercise band around the arch of your left foot so that you are standing on the exercise band. Now place the exercise band around your right ankle

**Step 2:** Hold on to the chair to help keep your balance. Stand tall and draw your belly button in towards your spine

**Step 3: Start** by lifting the heel of your right leg towards your buttocks. Keep your knees together and do not let them move forward

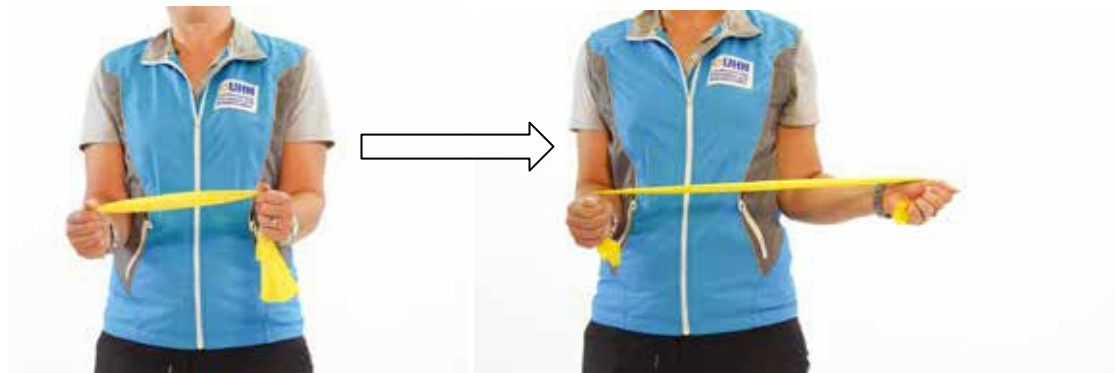
**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

**My Diabetes Team Prescribed:**

**\_\_ set (s) of \_\_ repetitions using \_\_\_\_\_ (colour) band**

**Health club alternative:** Seated or lying leg curl machine

**5) External Rotation** (shoulder muscles)



**Equipment:** Exercise band, a chair if you need to sit during this exercise

**Step 1:** Stand up straight, knees slightly bent and draw your belly button in towards your spine

**Step 2:** Hold your elbows close to your sides. Bend your lower arms to form a 90 degree angle. It should look like you are forming the capital letter “L” with your arm. Hold one end of the exercise band in each hand

**Step 3: Start** with your right hand and pull the exercise band away from your left hand. Slowly rotate your right forearm outward two or three inches. During this exercise, only your lower arm is moving

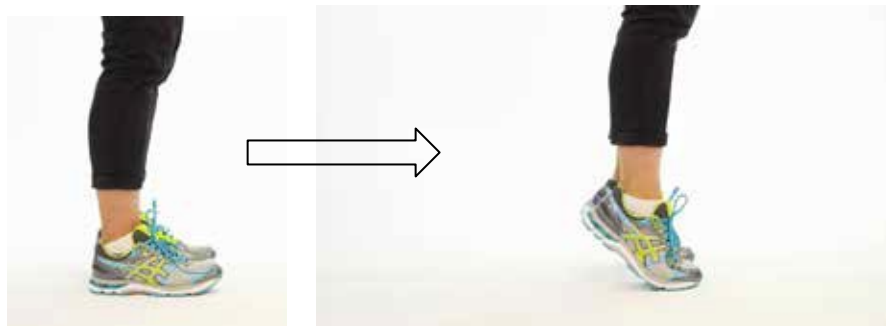
**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

**My Diabetes Team Prescribed:**

**\_\_ set (s) of \_\_ repetitions using \_\_\_\_\_ (colour) band**

**6) Heel Raises** (calf muscles)

For an alternative see exercise **6A**



**Equipment:** Chair for balance (if needed), as you get stronger add dumbbells for added resistance

**Step 1:** Hold a dumbbell in each hand and your arms at your sides. Stand with your feet hip width apart, heels on the floor and draw your belly button in towards your spine

**Step 2: Start** by slowly raising your heels so you are standing on your toes

**Step 3:** Slowly return to the starting position. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:**

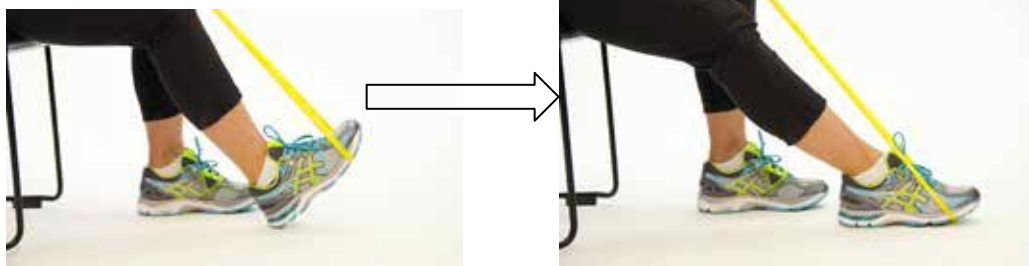
\_\_\_ set (s) of \_\_\_repetitions (no added dumbbells)

OR

\_\_\_set(s) of \_\_\_repetitions using\_\_\_pounds

**Health club alternative:** Seated calf raise or standing calf raise machine

**6A) Toe Press** (calf muscles)



**Equipment:** Exercise band (tie band to form a loop), chair

**Step 1:** Sit in a chair. Loop the middle of the band around the ball of your right foot and grasp the ends of the band with both hands. Wrap the ends of the band around your hands. This will help you hold onto the band during the exercise

**Step 2:** Extend your right leg out in front of you resting your right heel on the floor and your toes pointing up. Sit with a straight back. Draw your belly button in toward your spine

**Step 3: Start** by pushing your right foot down against the resistance of the band pointing your toes forward towards the floor

**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

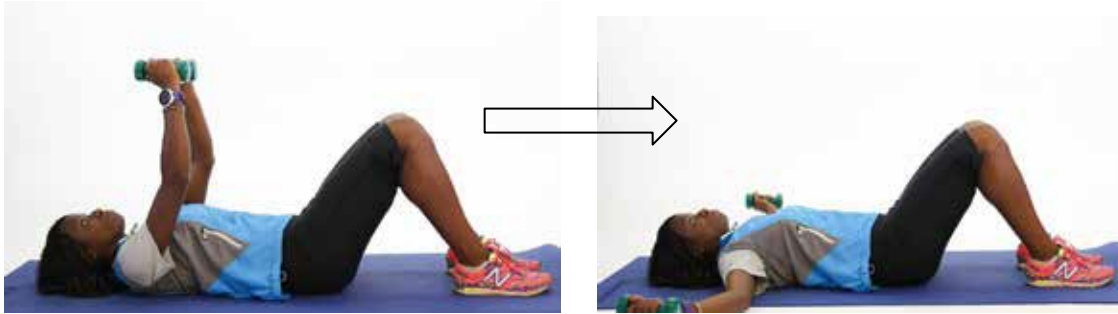
**My Diabetes Team Prescribed:**

\_\_ set (s) of \_\_ repetitions using \_\_\_\_\_ (colour) band

**Health club alternative:** Seated calf raise or standing calf raise

**7) Chest Fly** (chest muscles)

For an alternative see exercise **7A**



**Equipment:** Dumbbells, exercise mat

**Step 1:** Bend your knees and place your feet flat on the floor

**Step 2:** Grab 1 dumbbell in each hand. Extend your arms straight up (over your chest) towards the ceiling. Draw your belly button in toward your spine

**Step 3:** **Start** with your palms facing in and elbows slightly bent, lower the dumbbells to the floor, extending your arms straight out sideways from your shoulders. Palms should be about 1 to 2 inches off of the floor

**Step 4:** Slowly return to the starting position. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:** \_\_\_\_\_set(s) of \_\_\_repetitions using\_\_\_\_pounds

**Health club alternatives:** Seated fly machine or cable fly

**7A) Wall Push-Up** (chest muscles)



**Equipment:** Wall

**Step 1:** Stand facing a wall, then take one step back

**Step 2:** Place your palms against the wall directly in front of you and in line with your shoulders. Next, move your hands across the wall so they are slightly wider apart than your shoulders. Draw your belly button in toward your spine

**Step 3: Start** by bending your elbows and leaning your whole body towards the wall

Note: to make this exercise more difficult, place feet further away from the wall

**Step 4:** Gently push against the wall until you are back to your starting position. Start with about 10 repetitions and build up slowly to 15

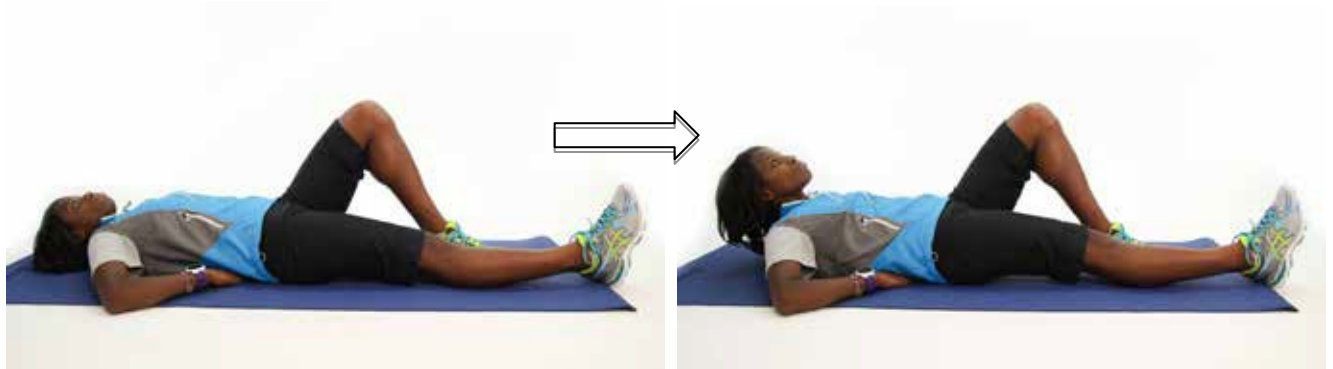
**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

**Health club alternative:** Chest press



## 8) Curl-Up (stomach muscles)

For an alternative see exercise **8A**



**Equipment:** Exercise mat

**Step 1:** Place your hands under your body at the lower end of your back to keep the spine comfortable and prevent straining your back

**Step 2:** Bend your left leg and place your left foot flat on the floor. Keep your right leg stretched straight out. Draw your belly button in towards your spine

**Step 3: Start** by slowly raising your head, neck and shoulders straight up off of the floor to the point that you feel your stomach muscles working

**Step 4:** Slowly return to the starting position. Start with about 10 repetitions and build up slowly to 15

### **Note:**

- Halfway through your repetitions switch legs, so that the left leg is now straight and the right leg is now bent
- When this exercise is done properly you should only feel your stomach muscles working. You should not feel a strain or pain in your neck muscles
- Avoid using your elbows to help move your shoulders off of the floor

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

**Health club alternatives:** Seated abdominal curl

**8A) Seated Forward Curl** (stomach muscles)



**Equipment:** Chair

**Step 1:** Sit towards the middle or front of a chair and lean back so you are in a half-reclining position (do not touch the back of the chair). Keep your back and shoulders straight, your knees bent, feet flat on the floor and draw your belly button in towards your spine

**Step 2: Start** by bringing your back forward so that you are sitting upright. Keep your hands on your legs

**Note:** Keep your back straight as you come forward, so that you feel your stomach muscles working. Do not lean forward with your shoulders

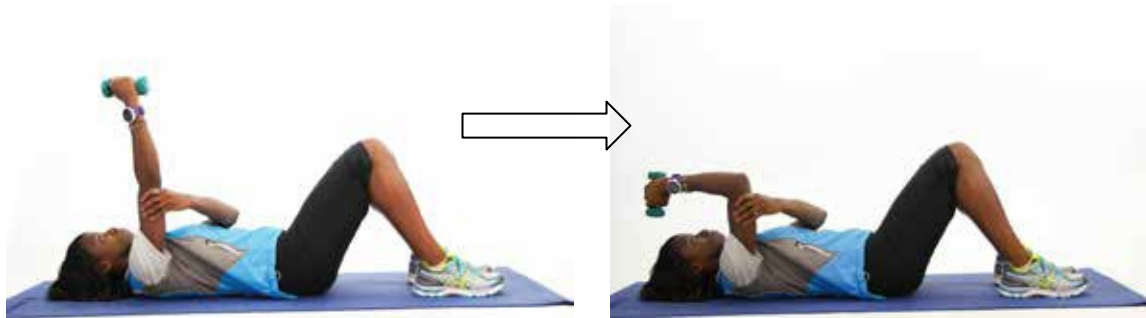
**Step 3:** Slowly return to the starting position. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

**Health club alternatives:** Seated abdominal curl

**9) Supine Triceps Extensions** (arm muscles)

For an alternative see exercise **9A**



**Equipment:** Dumbbell, exercise mat

**Step 1:** Bend your knees and place your feet flat on the floor. Hold a dumbbell in your right hand and straighten your arm up above your right shoulder. Place your left hand below your right elbow for support. Draw your belly button in towards your spine

**Step 2: Start** by slowly lowering the dumbbell down until your right elbow is bent at a 90 degree angle. This is like forming the capital letter “L” with your right arm

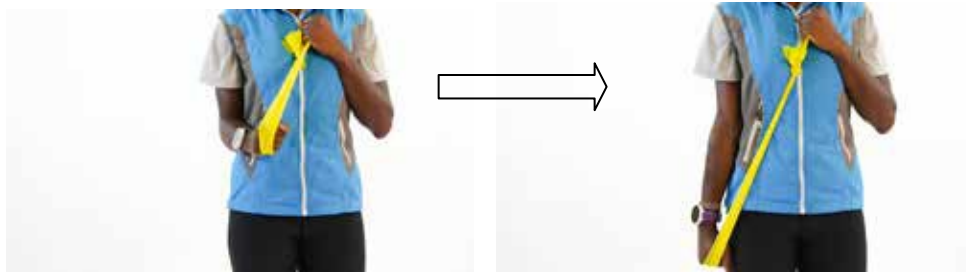
**Note:** When lowering the dumbbell, keep it away from your face

**Step 3:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

**My Diabetes Team Prescribed:** \_\_\_\_\_set(s) of \_\_\_repetitions using\_\_\_\_pounds

**Health club alternative:** Triceps extensions using cables/pulleys, triceps extension machine

**9A) Triceps Extension** (arm muscles)



**Equipment:** Exercise band (tie band to form a loop)

**Step 1:** Tie your exercise band to make a loop. Stand with your feet shoulder width apart and knees slightly bent. Draw your belly button in towards your spine

**Step 2:** Hold one end of the loop in your left hand against your chest (or left shoulder). Hold the other of the loop in your right hand and rest your right elbow against your right side. Bend your elbow to make a 90 degree angle. This is like forming the capital letter “L” between you upper and lower right arm

**Step 3: Start** by extending your right hand downwards until your right arm is almost straight. Your right hand should now be by your right hip

**Step 4:** Slowly return to the starting position. When you are done 10 to 15 repetitions, switch to your left side

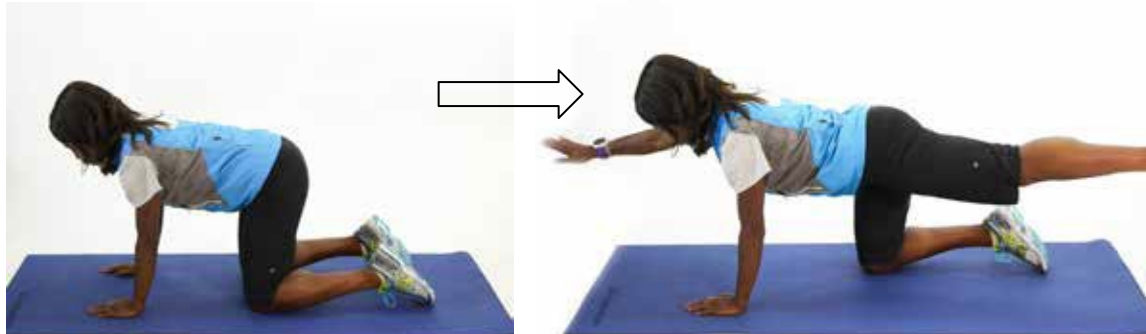
**My Diabetes Team Prescribed:**

\_\_ set (s) of \_\_ repetitions using \_\_\_\_\_ (colour) band

**Health club alternative:** Triceps extensions using cables/pulleys, triceps extension machine

**10) Bird Dog** (back muscles)

For an alternative see exercise **10A**



**Equipment:** Exercise mat

**Step 1:** Get onto your hands and knees on an exercise mat. Draw your belly button in towards your spine

**Step 2: Start** by slowly raising your right arm and left leg off of the floor

**Note:** If it is too difficult, lift only one arm or leg individually

**Step 3:** Slowly lower to the starting position. Repeat the same movement now with your left arm and right leg. Alternate back and forth. Start with about 10 repetitions and build up slowly to 15

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

**10A) Standing Bird Dog (back muscles)**



**Right Leg**



**Left Leg**

**Equipment:** Wall

**Step 1:** Stand facing a wall. Place your hands on the wall to help keep your balance. Draw your belly button in toward your spine

**Step 2:** Start by slowly lifting your right leg behind you. Extend from the hip, keeping your right leg straight

**Note:** You only need to pull your leg out a small distance behind you

You can also alternate your arms with this exercise

**Step 3:** Slowly return to the starting position. Repeat with your left leg. Alternate legs back and forth. Start with about 10 repetitions and build up slowly

**My Diabetes Team Prescribed:**      \_\_\_set(s) of \_\_\_repetitions

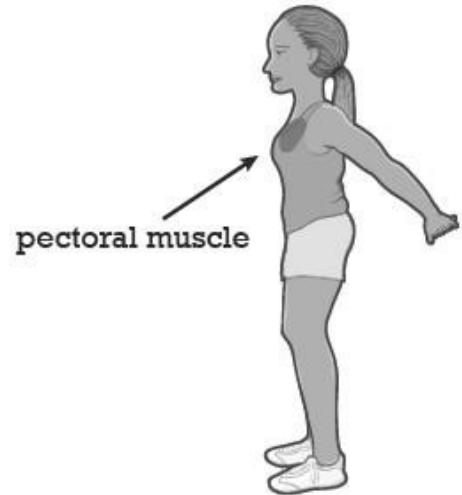


# Stretches

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## 1) Chest Stretch (Pectoral Muscle)

- Stand with your feet shoulder width apart
- Relax your shoulders and make sure they are not hunched up
- Clasp your hands behind your back (if you cannot clasp them, then place them behind your back)
- Looking straight ahead, open up the chest and squeeze your shoulder blades together
- Hold the stretch while continuing to breathe for 15-30 seconds
- Ensure you feel a stretch, not pain/discomfort



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## 2) Shoulder Stretch (Deltoid Muscle)

- Stand with your feet shoulder width apart, arms by your side
- Relax your shoulders and make sure they are not hunched up
- Take one arm and bring it across your chest
- Take the other arm and place it on your elbow to help hold it in position
- Ensure your arm is across your chest and not across your neck
- Hold the stretch while continuing to breathe for 15-30 seconds
- Ensure you feel a stretch, not pain/discomfort
- Repeat to stretch the opposite shoulder



### 3) Thigh Stretch (Quadricep Muscle)

- Using a wall for support, stand sideways to the wall
- Take hold of your ankle, foot, sock, or pant leg as you bend your leg back from the knee (see figure)
- The knee should be facing down toward the floor and in line with the leg that is planted on the floor
- Hold the stretch while continuing to breathe for 15-30 seconds
- Ensure you feel a stretch, not pain/discomfort
- Repeat to stretch the opposite thigh



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### 4) Hamstring Stretch

- Using a wall or table for support, stand sideways to it
- Put all of your body weight on one leg and bend that leg
- Take the opposite leg and place the heel on the floor or on a small step with the toes pointed up. Keep this leg straight
- From this position, bend forward from the waist – you will feel a stretch in the back of the upper leg that is straight
- Hold the stretch while continuing to breathe for 15-30 seconds.
- Ensure you feel a stretch, not pain/discomfort
- Repeat to stretch the opposite hamstring



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### 5) Calf Stretch

- Using a wall for support, face the wall standing with both feet close to it. Place your hands on the wall at chest height
- Take a step back with one leg keeping that leg straight and lean into the wall keeping the front leg bent
- Ensure both feet are facing forward
- As you lean into the wall, you will feel a stretch in the calf of the back leg
- Hold the stretch while continuing to breathe for 15-30 seconds
- Ensure you feel a stretch, not pain/discomfort
- Repeat to stretch the opposite calf

