

Introductory Resistance Program

3

Guidelines for Progression in Resistance Training

Follow the plan identified to gradually increase repetitions, sets, and resistance to meet Diabetes Canada's recommendation of resistance activity 3 times a week.

Initial Resistance Plan Progression

Table adapted from: Warburton, et al. 2006

Program Stage	Week	Frequency (days/week)	Intensity		RPE (10 pt)	Duration (min)
			Exertion Level			
Initial stage	1	2	Light		2	1 x 8
	2	2	Light		2	1 x 10
	3	2	Moderate		3	1 x 12
	4	2	Moderate		3	2 x 8
	5 - 7	2	Moderate		3	2 x 10
	8 - 10	2	Moderate		3	2 x 12
	11 - 13	3	Moderate		3	2 x 8
Improvement*	14 - 16	3	Somewhat Strong		4	2 x 10
	17 - 20	3	Somewhat Strong		4	2 x 12
	21 - 24	3	Somewhat Strong		4	2 x 15
	25 +	2 - 3	Moderate Strong		3 - 4	2-3 x 8-15
	Maintenance	25 +	2 - 3	Moderate Strong		3 - 4

*Start at the improvement stage if you are somewhat active and have no medical limitations.

Beginning Program: Resistance Band Training

- Involves mostly seated exercises for those with mobility difficulties.
- Requires a resistance band (available at most stores).
- A good starting program for those who have not done resistance exercise.
- A good option for indoor exercise when it is raining or snowing!

Guidelines for Resistance Training

Important Safety Considerations and Tips:

It is recommended you see a diabetes care provider or a qualified exercise professional, or refer to the resistance training video, to learn how to do the exercises provided in this handout.

Only Do the Exercises You Are Able To Do

- Make sure that you do not do any exercises that hurt (for example, sore shoulder or sore knee – see a physician or physiotherapist if you have any questions).
- If you have confirmed eye or kidney disease, discuss resistance exercises first with your physician or diabetes care provider.

Maintain Stable and Proper Posture for each Exercise

- Keep your chest out.
- Avoid rounding the shoulders or twisting your back.

Keep Each Movement Slow and Controlled

- 3 seconds up; 3 seconds down

Do Not Hold Your Breath

- Exhale with effort.
- Release your breath with each repetition.

Keep to a Comfortable Range of Motion

- Use a complete range that is comfortable for you.

Use an Appropriate Resistance

- Pick a band that makes it moderately hard to do the exercise.

Increasing the Resistance Used

- Change the length of the resistance band
 - Shorter band = harder
 - Longer band = easier

Where to start

- Begin at the initial stage if you are inactive and want to start easy with resistance exercise.
- Begin at the improvement stage if you are somewhat active and have no medical limitations.

Resistance Training and Diabetes

Keeping your muscles active and healthy through regular resistance training will greatly improve your management of diabetes. Diabetes Canada recommends resistance activities 3 times a week.

Benefits of Resistance Training

Resistance exercise uses more muscles than just walking. It uses upper body muscles that are rarely used in modern society today.

Resistance training also maintains or increases lean muscle. This helps to burn calories at rest throughout the day. This is important for weight control and diabetes management, especially as we age.

REMEMBER: You don't have to go to a gym to get the benefits of resistance training. All you need are simple forms of resistance such as:

- Exercise bands.
- Your own body weight.
- Light dumbbells or hand weights.
- Other items you may find around the house such as milk jugs filled with water.

The resistance program shown in this handout works all muscles in the body, using a resistance band, to better manage your diabetes and improve your health.

If you are unsure about how to do the exercises in this handout, seek the help of an exercise resource, diabetes care provider or qualified exercise professional to help you get started and keep you going.



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Begin with 8 exercises. As you feel comfortable, add 1-2 exercises a week (up to 12 exercises).

Hips & Thighs

1



Start: Sit at the front of the chair, chest up, and feet hip width apart. Slowly lift out of the chair with your knees directly over your toes. Keep your back straight and arms out.
Finish: Hold the top position with knees bent. Slowly bend knees to lower yourself to the chair. Don't drop to the chair.

Chest

2



Start: Place the band around your upper back. Grab the ends of the band with elbows bent and palms facing down or inward.
Finish: Press out, extending your elbows forward to shoulder level. Slowly return to starting position.

Upper Back

3



Start: Grasp the band with both hands in front of your chest with the elbows slightly bent and shoulders down.
Finish: Keep elbows slightly bent and pull band outward until the band reaches across your middle chest. Hold the end position briefly, squeezing the shoulder blades together. Slowly return to starting position.

Middle Back

4



Start: Wrap the middle of the band around an extended foot. Grasp both ends of the band at the outside of your knee with your outside hand.
Finish: Pull band backwards and slightly up until your outside hand is beside your ribcage. Pause. Slowly lower to starting position.

Shoulders

5



Start: One foot and hand anchor one end of the band. The other hand is beside the shoulder grasping the band, hand level with the chin, and arm straight up from the floor.
Finish: Extend the arm overhead until directly over the shoulder. Try not to lean to one side. Pause. Slowly lower to starting position.

Shoulders

6



Start: Anchor as per #5 with slightly shorter band. Grasp the band at position just outside the knee. Can have palm down or palm forward (easier on the shoulders).
Finish: Lift arm to side with elbow slightly bent. Lift to shoulder height or slightly below shoulder height if you have shoulder problems. Pause. Slowly lower to starting position.

Upper Arm - Front

7



Start: Keep same anchor position as #6, except slightly shorter band length. Grasp band with palm facing up.
Finish: Curl hand to shoulder keeping your elbow at your side at the lower ribs. Pause. Slowly lower to starting position.

Upper Arm - Back

8



Start: Seated at the front edge of the chair and chest up. Place the band around your knee, anchoring the band with one hand on the opposite thigh and holding the other end of the band down at your side with your elbow bent.
Finish: Extend your elbow until your arm is straight down by your side. Pause. Slowly return to starting position.

Legs - Front

9



Start: Tie the band in a knot and wrap around your feet, or tie the band around one leg of the chair with your foot through the loop.
Finish: Extend one leg out, keeping your knee in the same position. Keep your posture. Pause. Slowly return to starting position.

Legs - Back

10



Start: Stand behind the chair holding the back for support. Wrap the tied band around your ankles, or tie the band around a leg of the chair with your foot through the loop.
Finish: Curl one ankle up. Keep the knee in the same position and your back stable. Pause. Slowly return to starting position.

Lower Back

11



Start: Stand behind the chair holding the back for support, with knees slightly bent, and leaning forward with back straight. You can wrap a band around your ankles, or do the exercise without a band.
Finish: Extend one leg out so that it is in line with your body. Don't over-extend the leg or arch in the low back. Pause. Slowly return to starting position.

Abdominals

12



Start: Seated comfortably in the chair, chest up, and both knees bent with the feet on the ground in front of you.
Finish: Lift one knee so that it is higher than the opposite knee, or slightly rock back with both feet on the ground. Tighten your abdominals. Keep your chest up. Pause. Slowly return to starting position.