

PATIENT EDUCATION RESOURCE

Beginner Resistance Exercise Guide

Prepared for members of Pagdin Health

Original educational content: Diabetes Canada

The original resource follows unchanged and retains its publisher attribution.

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Resistance Exercise Beginner

Safety considerations

Please consult with your health care provider before starting an exercise program to make sure you are safe to do so, especially if you have other medical conditions, your health status changes or are pregnant.

If you are not sure how to do these exercises, ask your diabetes care provider or a qualified exercise professional to help you get started.

Guidelines for resistance exercise

Tips to stay safe:

- **Maintain good posture:**
Avoid rounding or twisting your back.
- **Move slowly and with control:**
3 seconds up, 3 seconds down.
- **Don't hold your breath:**
Breathe out when you push or pull, release after each repetition.
- **Stay within a comfortable range of motion.**
- **Use appropriate resistance:**
Choose a band or weight that feels somewhat hard for you.
- **Increase resistance gradually:**
Shorter bands = harder; longer bands = easier. Increase the resistance or add weight as the exercises become easier.

Benefits of resistance exercise for diabetes management

Did you know that resistance exercise (activities that require your muscles to work against a weight or force) will not only improve your overall strength but will greatly improve your management of diabetes?

Resistance exercise:

- strengthens your muscles and bones
- maintains and increases muscle
- helps to keep your blood sugar in your target range.

Resistance exercise can help with reducing complications of diabetes as well as maintaining fitness as you get older. The Canadian exercise guidelines recommend resistance exercise 2-3 times a week.

Getting started

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:

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

Guidelines for Progression in Resistance Training

Start at the 'Improvement' stage if you already exercise sometimes and have no health problems. You can also start there if you have finished 'Initial stage' exercises. If the exercise feels too easy, use heavier weights and do fewer repetitions.

Program Stage	Week	Frequency (days/week)	Intensity	# of sets x repetitions
Initial stage	1	2	Light resistance/body weight	1 x 8
	2	2		1 x 10
	3	2		1 x 12
	4	2		2 x 8
Improvement	5 - 7	2	Moderate resistance	2 x 8
	8 - 10	2		2 x 10
	11 - 13	2 - 3		2 x 12
	14 - 16	2 - 3	Heavy resistance	2 x 10
	17 - 20	2 - 3		2 x 12
	21 - 24	2 - 3		2 x 15
Maintenance	25 +	2 - 3	Try progressing to Intermediate resistance exercises and hand weights	2 x 15 or 3 x 8

Table adapted from: Warburton, et al. 2006

Beginner exercises

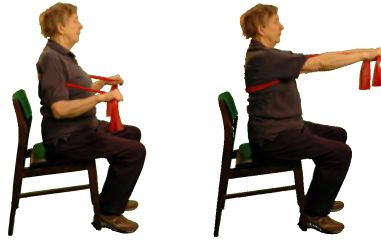
1. Hips & Thighs



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.

2. Chest



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.

3. Upper Back



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.

4. Middle Back



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.

5. Shoulders



START: Anchor as per #4 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.

6. Upper Arm - Front



START: Keep same anchor position as #4, 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.

7. Upper Arm - Back



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.

8. Lower Back



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.

9. Abdominals



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.