Being Active and Diabetes

Benefits = improve blood sugar levels, helps maintain weight, improves mood and concentration, reduces stress and anxiety, improves sleep and self-esteem, reduces fatigue and raises endorphins, promotes healthy aging, lowers risk for cancer, lowers LDL cholesterol and raises HDL cholesterol, improves blood pressure and reduces risk for heart disease

Aerobic Activity

- Definition = Increases heart rate and body's need for oxygen
- Lowers blood sugar – sugar goes right to your working muscles
- Helps with weight loss
- At least 150 minutes of moderate-to-vigorous-intensity exercise
    - Moderate intensity = Working hard enough that you can talk, but not sing, during the activity
        - Examples: walking briskly (a 15-minute mile), Light yard work (raking/bagging leaves or using a push lawn mower), Light snow shoveling, Actively playing with children, Biking at a casual pace
    - Vigorous intensity = Cannot say more than a few words without pausing for a breath during the activity.
        - Examples: Jogging/running, swimming laps, rollerblading/inline skating at a brisk pace, Cross-country skiing, Most competitive sports (football, basketball, or soccer), Jumping rope

Strength Training

- Definition = Activity that strengthens muscles and preserves muscle mass and bone density as you age
- Reduces your risk for osteoporosis and bone fractures
- Increases metabolism
- Aim to complete strength training exercises 2x/week in addition to aerobic activity
- Examples: weight machines, lifting free weights , resistance bands, calisthenics or exercises that use your own body weight to work your muscles (examples are pushups, sit ups, squats, lunges, wall-sits and planks)
    - 30 minutes, 3 times per week can increase insulin action in individuals with type 2 diabetes
    - Does not have to be 30 minutes straight! Research suggests that 3, 10-minute bursts of activity are similarly effective at controlling blood sugar

Flexibility and Balance

- Stretching can be done as part of a warm-up and cool down
- Balance training can help lower your risk for falls as you age

Progression

- It is best to gradually increase activity
- It may take at least 6 months for a sedentary person to establish an effective and sustainable exercise routine

Checking Blood Sugar and Exercise:

- No medication or metformin only → Not necessary to check blood sugar before exercise
- Glucose-lowering medication → Blood sugar should be at least 90 mg/dl before exercise
- Insulin → Blood sugar should be at least 110 mg/dl before exercise. May need to discuss with your medical provider about adjusting your dose if needed.
- Medications to be on lookout for hypoglycemia:
    - Sulfonylureas such as glipizide, glimepiride, or glyburide
    - Alpha-glucosidase inhibitors such as acarbose, miglitol
    - Meglitinides such as Starlix and Prandin
    - A combination of 2 or more diabetes medications: Biguanides + SGLT-2 Inhibitors; GLP-1 Agonists; Sulfonylureas; alpha-glucosidase inhibitors; meglitinides

Do I Need a Snack?

- Do your medications cause hypoglycemia?
    - If so, you may need a snack.
- Did you eat in the past 2 hours?
    - If so → you may not need a snack. Check your pre-exercise blood sugar to decide, if needed.
    - If not → you may or may not need one based on your medications and type of exercise planned.
- Keep snacks on hand in case of hypoglycemic event during or after exercising:
    - 5 or 6 small hard candies
    - 1 packet sports gel
    - 1 tablespoon of honey or syrup
    - 3 or 4 glucose tablets
    - 1/2 cup (4 ounces) of regular, non-diet soda
    - 1/2 cup (4 ounces) of fruit juice

Special Considerations:

Ask your medical provider for further guidance on exercise if you have any of the following:

- Heart disease, Peripheral vascular disease, Moderate to severe eye disease (retinopathy), Peripheral neuropathy/ulcers, Autonomic neuropathy, End stage renal disease

Advanced retinopathy

- Need to avoid certain activities, such as heavy lifting, diving, or activities that jar the head, such as jogging, high impact aerobics, racquet sports, boxing and competitive sports).
- Best activities are walking, stationary cycling, low impact aerobics.

Your Feet:

- Make sure to wear socks that keep moisture away from your feet and comfortable, well-fitting shoes.
- Check your feet for any sores before and after exercise as you might not feel pain in your feet because of your diabetes.
- Call your doctor if you notice any changes on your feet.