Pre-Diabetes and Physical Activity
Impaired Glucose Tolerance is commonly known as Pre-diabetes. It is a transitory state between normal blood sugar levels (Fasting blood glucose 6-7mmol or 110-125mg/dl) and raised beyond the normal range—blood sugar levels (frank Diabetes). One out of three persons with Pre-Diabetes will eventually develop Diabetes Type 2 (DM2) within 10 years if left untreated.

Fortunately, regular physical exercise (in hand with overall lifestyle changes) confers considerable overall health benefits besides preventing and delaying the appearance of DM2. There is a 30 - 40% lower chance of developing diabetes in moderately active people compared with those who are sedentary.
By being more physically active and eating healthier you are improving your body’s ability to control blood sugar and reduce the effects of other risk factors for disease such as high blood pressure, high cholesterol levels and body fat.
Physical Activity Recommendations for inactive pre-diabetic adults:

Your program should include these 3 types of activities in order to improve blood sugar levels:

1. **Aerobic activity** at relative moderate to high intensity; every day of the week as the maximum goal.

2. **Muscle strengthening activity** on two or more days a week working all major muscles groups (legs, hips, back, abdomen, chest, shoulder and arms).

3. **Stretching and Balance exercises** on a daily basis.
Follow the FITT principles for your Aerobic/Cardiovascular workout

**Frequency (How often?)**

- If you aim to do moderate workout; **30 minutes per day, 5 times per week** will do.
- For more intense workout, bouts of 10 or 15min, **2-3 times per day, 3-4 days per week** will suffice.
- Avoid having more than **two consecutive days** without physical activity.
- Make sure to give your body time to recover or adapt when starting a new exercise or progressing it.
Intensity (How hard?)

- If led a sedentary lifestyle, begin with low intensity exercise of short duration and progress it slowly.

- Evidence suggests moderate to high intensity exercise is better for blood sugar control. However, as pre-diabetics are usually free of complications (opposite to their Diabetic counterparts), it is considered safe even at high intensities (i.e. HIIT – High-intensity interval training).

Time (duration/how long?)

- Divide your target-daily minutes in small bouts. For example, 30min can be done in 3 sets of 10min or 2 sets of 15min. This recommended approach is suitable for sedentary/busy people.

- Decrease sitting time by interrupting every 30 minutes with light activity.

Type (how?)

- Any continuous activity that you can maintain for long time is ideal.

- Choose activities that are easy, simple and enjoyable.
Muscle Strengthening Workout Recommendations

- Resistance or strength training is vital complement for any exercise program.
- It helps improve blood sugar control, besides making muscles stronger and more toned helping to carry out daily tasks easier.
- **Frequency:** 2-3 times per week.
- **Intensity:** low to moderate.
- **Volume (weight):** low weight performed at high repetitions.
- **Type:** Body weight, elastic bands, free weights as dumbbells or kettlebells, machines.
Gain additional benefits as every step or activity counts:

- Overall, walk more
- Park always far from your target
- Always use the stairs
- Stretch daily to prevent injuries
- Increase unstructured physical activities (housework, gardening, etc.)

Stay Active
Walking, Gardening
Hiking, Cycling
Active recreation, Swimming
Swimming
Pre-workout low glycemic-index foods are preferred to prevent hypoglycemia.

During the workout, make short sprints or begin with strength training after the warm up followed by the main cardiovascular workout.

Stop exercising if you feel dizzy, unwell, sick or extremely fatigued.

See a doctor in case of chest pain, fainting or shortness of breath with mild exertion.

Safety First!
One-step closer to the recommendation; one step more active, and still gaining health benefits!