



## NEWSLETTER

October 2008 #5

### *Diabetes and Physical Therapy*

#### **OVERVIEW**

Physical therapy can be very valuable in the treatment of diabetes. Many people do not know how to exercise properly and safely. A physical therapist is specially trained to utilize the best exercise for each person's condition, as well as teach which exercises should not be used. Some individuals or personal trainers may not be as knowledgeable about the precautions for various medical conditions. Proper positioning of the body while performing an exercise is important to optimize the benefits of the exercise.

#### **BENEFITS OF EXERCISE:**

- *Improve glucose levels (especially for those with type-2 diabetes)*
- *Decrease use of oral hypoglycemic agents*
- *Reduce body fat*
- *Improve the cardiovascular system*
- *Promote stress reduction*
- *Increase function and strength*
- *Improve balance and decrease fall risk*
- *Reduce blood pressure*
- *Improve carbohydrate metabolism*
- *Improve well-being and diabetes control*

#### **EVALUATION**

Each person referred for physical therapy receives a personal evaluation by a licensed physical therapist. Components of the evaluation include a thorough medical history, examination of co-morbidities, and questions about glycemic (blood sugar) control. Each person should discuss physical therapy and exercise goals with the physical therapist, including any functional problems or difficulties.

The Physical Therapists will assess the patient's strength, range of motion, flexibility, gait, balance, sensation, posture, joint mobility, soft tissue tightness, and an examination of the skin with an emphasis on the legs.

#### **TREATMENT**

The results of the physical therapy evaluation are used to formulate a treatment plan. The plan may include joint mobilization, soft tissue mobilization, range of motion exercises, gait training, balance activities, strengthening exercises, and different types of aerobic exercises.

Since there are many different problems associated with diabetes, each person's plan of treatment may vary. People with cardiovascular or heart problems may need a treadmill test and evaluation by a cardiologist before beginning an exercise program. This is especially important if the person has been sedentary and has had diabetes for a long period of time.

Peripheral arterial disease, which is another manifestation of diabetes, is very responsive to the correct physical therapy plan of treatment. People with peripheral arterial disease (especially those with intermittent claudication) can make significant gains with therapy, decreasing leg pain while increasing walking distance.

People with retinopathy should avoid anaerobic exercise and should not perform any jarring or straining maneuvers. For people with nephropathy, low-moderate exercise may be performed, refraining from high-intensity or strenuous exercises. People with peripheral neuropathy may benefit from exercise, but the exercises must be specifically tailored to their problems due to the dangers associated with the loss of protective sensation in the feet. Intense weight bearing exercise should be avoided since this could possibly lead to ulcerations or fractures.

### **EXERCISE PRECAUTIONS**

Before and after exercising, individuals should check his or her feet for blisters or reddened areas of skin. Blood glucose should be measured before exercise and if greater than 250mg/dl, exercise should not be performed. Carbohydrates should be taken every hour during exercise if the blood sugar is 80 - 100mg/dl. Post-exercise blood glucose levels should also be measured, since exercise usually decreases the amount of glucose in the blood. Good glycemic control is necessary while exercising.

Before deciding if exercise should even be performed, a physician and physical therapist must first determine any contraindications to exercise. It is essential for each person to be medically stable before beginning any exercise program. Safety is of the utmost importance. Safety issues should be discussed with the physical therapist prior to exercising for a thorough understanding of precautions.

### **RESULTS**

Physical therapy is a powerful adjunct to medical treatment. A life-style of exercise for people with diabetes can greatly help to maintain blood sugar levels, increase strength, reduce the risk of cardiovascular disease, and increase functional ability. Talk to your doctor about the possibility of including physical therapy in your diabetes treatment plan. The sooner your start, the sooner you will be on your way to a healthier life!

***If you have any questions, please feel free to contact us at any time.***

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