

DIABETES

Take Your Best Shot or Maybe Not! You Have A Choice!

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INTRODUCTION

Diabetes is a leading cause of death in all industrialized nations. Overall, the risk of premature death of people with diabetes is twice that of people who do not have diabetes. Prognosis depends on the type of diabetes, degree of blood sugar control, and development of complications.

WHAT IS DIABETES?

Diabetes is a disease in which the body does not produce or properly use insulin, thereby allowing your blood glucose, or sugar, levels to get too high. Insulin is a hormone that is needed to convert glucose, (sugar), starches and other food into energy needed for your cells to receive energy and for your body to function. The cause of diabetes continues to be a mystery, although both genetics and environmental factors such as obesity and lack of exercise appear to play roles.

There are Type 1 and Type 2 diabetes.

Type 1 diabetes is believed to be an autoimmune disease. The body does not produce its own insulin.

Type 2 diabetes, the more common type, your body does not make or use insulin well. Without enough insulin, the glucose stays in your blood.

Over time, having too much glucose in your blood can damage your eyes, kidneys, and nerves. Diabetes can also cause heart disease, stroke and even the need to remove a limb

CAUSES and RISKS

In Type 1 diabetes, the body's immune system attacks the cells in the pancreas that produce insulin, making your body unable to make the needed insulin. Why this happens is still somewhat a mystery but scientists have agreed that to some extent genetics may contribute as well as environmental factors, such as certain types of viral infections,.

Type 2 diabetes is believed to have a strong genetic link, meaning that it tends to run in families. Risk factors for developing type 2 diabetes include the following:

- High blood pressure
- High blood triglyceride (fat) levels
- Gestational diabetes or giving birth to a baby weighing more than 9 pounds
- High-fat diet
- High alcohol intake
- Sedentary lifestyle
- Obesity or being overweight
- Ethnicity: Certain groups, such as African Americans, Native Americans, Hispanic Americans, and Japanese Americans, have a greater risk of developing type 2 diabetes than non-Hispanic whites.

Aging: Increasing age is a significant risk factor for type 2 diabetes. Risk begins to rise significantly at about age 45 years, and rises considerably after age 65 years.

ELDERLY AT HIGHER RISK

Treating and diagnosing diabetes amongst the elderly requires a flexible and unique approach.

Elderly people are often more frail and susceptible to illness. This can mean diabetes related complications such as PERIPHERAL NEUROPATHY are more common and harder to manage. While all diabetes complications can occur with older patients. Cognitive complications are more common in the elderly. Further problems may include undiagnosed depression, social issues, limited daily means and coexisting health problems. Many elderly diabetic patients are pre-disposed to hypoglycemia.

PERIPHERAL NEUROPATHY AND DIABETES

Peripheral neuropathy is a major complication with diabetics. This type of neuropathy damages nerves most notably in the arms, legs and feet. The feet and legs are likely to be affected before the hands and arms. Many people with diabetes have signs of neuropathy upon examination but have no symptoms at all. Symptoms of peripheral neuropathy may include:

- Numbness or insensitivity to pain or temperature
- A tingling, burning, or prickling sensation
- Sharp pains or cramps
- Extreme sensitivity to touch, even a light touch
- Loss of balance and coordination

These symptoms are often worse at night.

Peripheral neuropathy may also cause muscle weakness and loss of reflexes, especially at the ankle, leading to changes in gait (walking). Foot deformities, such as hammertoes and the collapse of the midfoot, may occur. Blisters and sores may appear on numb areas of the foot because pressure or injury goes unnoticed. If foot injuries are not treated promptly, the infection may spread to the bone, and the foot may then have to be amputated. Some experts estimate that half of all such amputations are preventable if minor problems are caught and treated in time.

TRADITIONAL TREATMENTS

Treatment of diabetes Type 1 almost always involves the daily injection of insulin, usually a combination of short-acting insulin such as regular or Lispro or Aspart insulin and a longer acting insulin such as NPH, lente, glargine, detemir, or ultralente insulins. Insulin must be given as an injection.

Treatment of diabetes Type 2 is usually treated by controlling blood sugar levels through diet, exercise and sometimes by medications. Many Type 2 diabetics eventually take insulin as well.

In patients with type 2 diabetes, physical activity may improve insulin sensitivity and assist in diminishing elevated blood glucose levels into the normal range.

It is vital to educate and to update and crystallize current thinking on the role of physical activity in patients with types 1 and 2 diabetes. With the publication of new clinical reviews, it is becoming increasingly clear that physical activity may be a therapeutic tool in a variety of patients with, or at risk for diabetes.

Treating diabetes in the elderly can present unique challenges. Other disabilities associated with aging can contribute to the complexity of strictly self-managing diabetes. Impaired physical functioning amongst some elderly patients can mean that adjusting to a diabetes care routine is more difficult. Cognitive impairment can also provide an obstacle.

Managing diabetes in the elderly may often have different objectives to treating the condition in younger patients. Some drugs may be less suitable for elderly patients, and treatment plans will almost certainly have to be adjusted. Treating geriatrics with diabetes requires the caregiver to take a multidisciplinary role. The goals should always be the reduction of diabetes-related complications. Many older people with diabetes are under treated.

HOW DOES PHYSICAL THERAPY HELP

Anodyne Therapy is a treatment that has been highly successful in treating diabetic peripheral neuropathy. This treatment uses infrared light in pads that are applied to the area. (see more about anodyne therapy in our Anodyne Therapy article) Anodyne therapy along with manual therapy and active exercises focuses on increasing blood flow and circulation, decreasing muscle restrictions and overall promotion of nerve regeneration.

Research has shown that physical activity can:

- Lower your blood glucose and your blood pressure
- Lower your bad cholesterol and raise your good cholesterol
- Improve your body's ability to use insulin
- Lower your risk for heart disease and stroke
- Keep your heart and bones strong
- Keep your joints flexible
- Lower your risk of falling
- Help you lose weight
- Reduce your body fat
- Give you more energy

- Reduce your stress

PATIENT COMMENTS
DOCTOR'S COMMENTS

References: Sources come from one or more of the following articles and sites:
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