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Effect of diabetes on daily life and role of yogic activities on diabetes

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Abstract

Diabetes is a demanding disease, so it can affect life in many ways. Managing diabetes can be stressful. The way we feel when our blood glucose levels are low or really high adds to the stress. On top of that, there are the worries that we might develop complications, and the burden of dealing with any complications we may already have. It is no wonder that many people feel that diabetes affects their quality of life. Regular exercise patterns can be extremely beneficial to older patients with diabetes. In their case, the condition is partly due to lack of physical activity. A few minutes of brisk walking and joint movements, coupled with some gentle yoga postures – Triangle Pose, Standing Spinal Twist, and Butterfly Pose – followed by relaxation in yoga Nidra can help. Some specific Yogic activities to tackle diabetes better: Supta Matsyendrasana, Dhanurasana, Paschimottanasana, Ardha Matsyendrasana, Shavasana, Kati chakra asana, Pawan mukat asana, Trikon asana, Vajar asana, Mandukasana, Gomukh asana, Ardha matsyendrasana & Shavasana Kriya: Neti, Om Chanting, Kapalbhathi, Kunjal Kriya, Agnisara.

Keywords: diabetes, triangle pose, standing spinal twist

Introduction

Diabetes mellitus, usually called as diabetes is a disease of metabolic disorder where the blood sugar levels tend to remain high either because insufficient insulin is produced in pancreas or because the cells not responding to the insulin produced.

Frequent urination, increased thirst and increased hunger are most common early symptoms of this disease. There are three major forms of diabetes namely Type1, Type 2 and third form is known as gestational diabetes.

Type1 and Type 2 were formerly known as insulin dependent and insulin non-dependent diabetes. In patients of Type1 diabetes, body fails to produce insulin and thus an insulin pump is required to inject it. In Type 2 diabetes, the cells are not able to use the insulin properly because of insulin resistance. Third form is when a pregnant woman develops a higher blood sugar level without having any previous history of diabetes.

Diabetes has other forms too like congenital resulting from genetic defects in secreting insulin, cystic-fibrosis related, steroid diabetes and other monogenic forms of the disease.

Patients diagnosed with Type 1 diabetes have to depend upon insulin injections for lifetime and have to undergo regular tests for blood glucose level with special diet to prevent sugar levels from increasing. Type 2 is the most common and prevalent form of diabetes around the world.

Overweight or obese people have higher risks of developing Type2 diabetes. Increased abdominal or belly fat also known as visceral fat also puts people on a higher risk as body's cardiovascular and metabolic systems are destabilized in obese bodies. By losing excessive weight, controlling and maintaining healthy diet, doing regular physical activity, Type 2 diabetes can be controlled and patients can prevent the problem from progressing where they have to take regular insulin tablets.

What are the symptoms of diabetes?

People who think they might have diabetes must visit a physician for diagnosis. They might have SOME or NONE of the following symptoms.

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Frequent urination, Excessive thirst, Unexplained weight loss, Extreme hunger, Sudden vision changes, Tingling or numbness in hands or feet, Feeling very tired much of the time, Very dry skin, Sores that is slow to heal, More infections than usual.

Diabetes that stays over a period of time can cause other health problems too. Eyes, kidneys and nerves can get damaged and chances of heart stroke are always high. Old age, family history of diabetes, impaired glucose tolerance, prior history of gestational diabetes and physical inactivity are some factors that put an individual on the risk of Type2 diabetes. Men with lower testosterone levels are at higher risk of developing the Type2 diabetes. Auto-immune, genetic and environmental factors play considerable role in the onset of Type 1 diabetes although the risk factors are not clearly defined.

Prevention techniques of the Type 1 diabetes are not highly determined since it is the environmental triggers that predispose individuals at the risk of this ailment. Type 2 diabetes which is mostly associated with obesity can be prevented by doing regular physical activity.

Although prevention is always better, but in case diabetes develops in an individual, there are mechanisms to cure it too. Pancreas transplantation, artificial pancreas development and genetic manipulation are recent advancements in research and science which have made cure of diabetes a possibility. But there are many hurdles in trying out these ways which include preventing rejection of immunes, finding appropriate number of insulin cells, keeping them active etc.

Type1 diabetes lasts for life and there is no defined cure. Type2 diabetes is where a person can reduce dependence on medication with controlled diet to check glucose levels and bring lot of exercise in their routine. (Wikipedia, 2014). When we talk about diabetes management, blood sugar control is frequently the predominant theme. After all, keeping your blood sugar level within your target range will assist you in living a healthy life.

Role of yogic activities on Diabetes

The practice of breathing techniques is called pranayam in Yoga and it calms the mind. In the realm of the spiritual yoga brings awareness and the ability to be still. Through meditation inner peace is experienced. Along these lines, yoga is a down to earth theory including each part of a person's being. It educates the advancement of the person by the improvement of self-control and mindfulness. Anybody regardless of age, wellbeing conditions of life and religion can rehearse yoga. Yoga teaches our feeling of force with the power of our own. So it's truly exceptionally supportive to keep us fit (Zivdar and Zivdar, 2014) [4].

Yoga is very beneficial for our health. In the event that we peep into the advantages of yoga, they are various. It enhances physical wellness, stretch, controls general prosperity, mental clarity and more noteworthy self-comprehension. Individuals of any age can do yoga and it can likewise be adjusted for individuals with incapacities or unique needs. The asanas upgrade muscle quality, coordination, adaptability and can keep our body fit control cholesterol level, decreases weight, controls pulse and enhances cardiovascular performance. (Dubey, *et al.*, 2014) [1].

The effect of yogic practices on the management of diabetes has not been investigated well. We carried out well designed studies in normal individuals and those with diabetes to assess the role of yogic practices on glycaemic control, insulin kinetics, body composition exercise tolerance and various co-

morbidities like hypertension and dyslipidemia. These studies were both short term and long-term. These studies have confirmed the useful role of yoga in the control of diabetes mellitus. Fasting and postprandial blood glucose levels came down significantly. Good glycaemic status can be maintained for long periods of time. There was a lowering of drug requirement and the incidence of acute complications like infection and ketosis was significantly reduced. There were significant changes in the insulin kinetics and those of counter-regulatory hormones like cortisol. There was a decrease in free fatty acids. There was an increase in lean body mass and decrease in body fat percentage. The number of insulin receptors was also increased. There was an improvement in insulin sensitivity and decline in insulin resistance. All these suggest that yogic practices have a role even in the prevention of diabetes. There is a beneficial effect on the co-morbid conditions like hypertension and dyslipidemia (Sahay, 2017) [2].

Daily practice of yoga does reduce the blood sugar levels, the blood pressure, weight, the rate of progression to the complications, and the severity of the complications as well. The symptoms are also reduced to a great extent, so are number of diabetes related hospital admissions. The quality of life questionnaires do reveal a remarkable improvement in the scores. These finding are uniform for all those who are trying to find effect of yoga on diabetes.

How Yoga works on Diabetes?

- Glucagons secretion is enhanced by stress. Yoga effectively reduces stress, thus reducing glucagons and possibly improving insulin action.
- Weight loss induced by yoga is a well-accepted mechanism.
- Muscular relaxation, development and improved blood supply to muscles might enhance insulin receptor expression on muscles causing increased glucose uptake by muscles and thus reducing blood sugar.
- Blood pressure plays a great role in development of diabetic and related complications, which is proven to be benefited by yoga. The same holds true for increased cholesterol levels.
- Yoga reduces adrenaline, noradrenalin and cortisol in blood, which are termed as? stress hormones?. This is a likely mechanism of improvement in insulin action.
- Many yogic postures do produce stretch on the pancreas, which is likely to stimulate the pancreatic function

Some yoga postures that are helpful in diabetes include Vajrasana (kneeling pose), Shoulder Stand, Plow Pose, Lying-Down Body Twist, Bow Posture, Two-Legged Forward Bend, and Sitting Half-Spinal Twist.

Nadi Shodhana Pranayama is also good for diabetics. It helps release stress and flush out toxins from the body. Another excellent technique to combat diabetes is a unique breathing technique, Sudarshan Kriya, designed by Sri Sri Ravi Shankar. It has helped several diabetics across the world reduce blood glucose levels and control their condition from getting worse. You can learn the technique at an Art of Living Part-1 program.

Regular yogic exercise helpful in Diabetes

- Diabetes happens because the blood cells do not respond to insulin produced. When you follow a regular exercise regimen, your body starts responding to insulin, helping in reducing blood glucose, and also sometimes the dosage of medication required.
- Exercise helps improve blood circulation in the system,

particularly in the arms and legs, where diabetic patients mostly complain of problems.

- It is an excellent way to fight stress, both at the body and mind level, which in turn helps keep glucose, levels down.
- Regular exercise patterns can be extremely beneficial to older patients with diabetes. In their case, the condition is partly due to lack of physical activity. A few minutes of brisk walking and joint movements, coupled with some gentle yoga postures – Triangle Pose, Standing Spinal Twist, and Butterfly Pose – followed by relaxation in yoga Nidra can help.

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