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## **National Diabetes Awareness Week: November**

### ***Dietary recommendations to prevent or treat diabetes***

Three-and-a-half million South Africans - about six percent of the population - suffer from either type 1 or type 2 diabetes mellitus. According to the *2013 report on mortality and causes of death in South Africa diabetes is the fifth highest cause of natural deaths in the country.*

It is estimated that another five million South Africans have pre-diabetes, a condition where insulin resistance causes blood glucose levels to be higher than normal, but not high enough yet to be type 2 diabetes. However, many of these cases go undiagnosed.

It takes on average seven years for a person to get diagnosed with diabetes, as symptoms can be mild and may develop gradually. The result is that about 30 percent of people with type 2 diabetes have already developed complications by the time they are diagnosed.

Diabetes complications are serious and include heart disease, stroke, blindness, amputations and kidney failure. In most cases, these complications could have been avoided entirely by early diagnosis and proper treatment.

Diabetes is a complicated disease with different aspects to consider. To cover all these different aspects, a multifaceted health care team is required. This team should ideally consist of a physician, a diabetes educator and a dietitian.

Patients with type 1 diabetes who are on insulin therapy need specific eating and meal plans based on their insulin treatment and blood glucose control.

However, the disease process associated with insulin resistance and type 2 diabetes can be slowed and even partially reversed by following a healthy diet and lifestyle.

### ***Focus on pulses as an affordable but healthy solution***

Our South African Food Based dietary guidelines were developed to address our current health problems. Their guideline for pulses is: eat dry beans, split peas, lentils and soya regularly.

### **Why?**

Pulses and legumes are rich and affordable sources of good quality protein, carbohydrates, dietary fibre, vitamins and minerals and phytochemicals. They are low in energy, fat and salt. It can improve diet quality and protect against lifestyle diseases.

A high dietary intake of phytochemicals with vegetables, fruits, nuts, legumes and whole grain is associated with a reduced risk for diabetes and other diseases. Approximately half a cup of dry beans or peas results in higher intakes of fibre, protein, folate, zinc, iron and magnesium with lower intakes of saturated fat and total fat. Increased consumption of dry beans and peas-economical and nutrient-rich foods could improve the diet quality of South Africans.

Several studies showed the beneficial effects of pulses on cardiovascular disease risk factors, and the metabolic syndrome and diabetes. For example consumption of five cups per week of pulses (peas, chickpeas, navy beans, and lentils) over eight weeks in an *ad libitum* diet reduced the risk factors of the metabolic syndrome.

In a meta-analysis including 11 clinical trials, the intake of non-soy legumes reduced total cholesterol, LDL cholesterol, and triglycerides by 7%, 6%, and 17%, respectively, without significant changes in body weight. Short-term studies have demonstrated that legume consumption lowers blood glucose and insulin responses and increases insulin sensitivity when compared with white bread or pasta. Finally, a higher intake of legumes also reduces colorectal cancer risk as shown in a recent meta-analysis including 14 cohort studies.

## **15 dietary recommendations to prevent and treat diabetes**

1. The dietary guidelines for diabetic people are based on the guidelines for healthy people without diabetes. Variety means eating different foods within a meal, on different days and preparing food in different healthy ways. This ensures that our diet contains sufficient nutrients and that it is more enjoyable.
2. As little as five to ten percent weight loss improves insulin resistance, therefore overweight and obese diabetics should be advised to lose weight.
3. Eat at least three balanced meals per day.
4. Drink at least six to eight glasses of water per day.
5. Increase you fibre intake: eat whole wheat bread instead of white bread; eat oats, oat bran, or whole wheat cereals e.g. high-fibre cereal for breakfast; eat lots of vegetables and fruit; eat legumes regularly (peas, lentils, beans and soya), and include barley, samp, brown rice and whole wheat pasta in your diet.
6. Diabetic patients may benefit from low GI / GL foods as long as they are incorporated into a balanced diet, and the use of high fat low GI food items and a general disregard to portion sizes is avoided.
7. Limit your fat intake, especially saturated- and trans fats (animal fats, full cream dairy products, chocolate, coconut, hard margarine, full cream products, baked goods for example. pies and cookies] and palm oils [e.g. coffee creamers and artificial cream). Rather include more mono-unsaturated fats in limited amounts in your diet (e.g. use canola oil or olive oil instead of sunflower oil, spread avocado or peanut butter instead of margarine on bread).
8. Eat fish two to three times per week and chicken more regularly than red meat.
9. Small portions of meat can be eaten daily. Replace meat more frequently with fish, chicken and legumes (peas, beans, lentils and soy and eggs). Polonies, viennas and sausages are not healthy; rather eat beans, eggs, nuts, peanut butter or lentils.

10. Eat at least five portions of fruit and vegetables every day. Buy vegetables and fruit in season and try to include as much variety as possible. Eat one fruit at a time and avoid the consumption of more than 125ml fruit juice per day.
11. Aim to eat or drink at least two cups of milk, cottage cheese or yoghurt per day. Low fat is better, it has all the protein and calcium, but less fat.
12. Follow the correct cooking methods: boil, steam, bake/grill in the oven and "braai" over coals, thus limiting the addition of any form of fat (e.g. margarine, oil, mayonnaise, cream and cheese) during food preparation.
13. Use small amounts of salt in food preparation and avoid the use of extra salt at the table. Rather use herbs, salt-free spices and flavouring instead of salt. Avoid processed foods with a high salt content.
14. If you consume alcohol (beer and wine), use it in moderate amounts (one to two glasses a day) and always with a meal.
15. Manage your carbohydrate and sugar intake by limiting or avoiding cake, cold drinks, sweets, cookies, and sugar-sweetened desserts and drinks (including alcohol), which are very high in energy, but low in nutrients.

Information supplied by the Nutrition Information Centre in the Faculty of Medicine and Health Sciences (FMHS) of Stellenbosch University (NICUS). NICUS offers a free nutrition information service to the public and health professionals.

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