

## Nutrition: Complementary & Alternative Choices

# Types of Diabetes

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The diagnosis of Diabetes means there is a problem with glucose (sugar) metabolism. Glucose is the major source of energy for the body. As sugar is taken into the body by the process of digestion of carbohydrate and simple sugars, it enters the cells as glucose for utilization by the action of Insulin.

**There are three types of diabetes with a fourth being recognized by some.**

**Type I** begins with a decrease of, then a total lack of Insulin production because of a loss of the cells that produce insulin.

**Gestational diabetes** is caused by the build up of hormones to maintain the pregnancy. Pregnancy causes Insulin resistance and an elevation of blood sugar.

**Type II** is hereditary. A family history of Diabetes is the first indication that one might potentially develop a problem with glucose metabolism. Type II is a resistance to insulin at the cellular level. Eventually the pancreas cannot make enough Insulin for normal glucose metabolism. The glucose starts to build up in the blood stream and tissues. Uncontrolled, it eventually results in neurological, cardiovascular, kidney, vision problems and/or early death - to name only a few serious complications.

It may be possible to prevent the progression of this process from insulin resistance to totally uncontrolled Type II Diabetes. Progression of the disease may be slowed or halted with early recognition and early defensive action.

### THREE SIMPLE STEPS TO HEALTHY INSULIN METABOLISM

1. The **most** important step you can take is to eliminate high carbohydrate foods, like potato chips and high sugar (high carbohydrate) foods. The low carbohydrate lifestyle approach to eating is VERY important. This diet, plus exercise can help maintain optimal weight and function.
2. Exercise is another important step in this process. It helps maintain optimal weight and function. Experts recommend minimal amounts of exercise per week that is dependent on one's age and general health.
3. Weight loss is also essential, especially if you have a high BMI\* index.

Taking these three steps will lower the glucose impact on the cells in the pancreas that produce insulin, thereby preserving or prolonging their function. When one considers that the destruction of these cells is not reversible, the sooner action is taken the better.

Diabetes is a problem for a large part of the population. It affects people of all ages. More and more young people are being diagnosed as being overweight and many them will progress to

Type II Diabetes. An increase in Type II Diabetes is also associated with the use of many medications, such as Statin drugs. Check with your pharmacist for potential side effects of medication you may be taking.

**Type III** diabetes, newly recognized by some, is a condition where the brain loses its ability to utilize glucose as an energy source and brain cells start to die. Fortunately this death can be prevented if ketones, which can be used by brain cells as an energy source, are available.

You know Type III Diabetes as dementia or Alzheimer's - conditions that affect the aging population. See my paper on 'Alzheimer's and Senile Dementia'.

**Common sources of carbohydrate** are sweets, many vegetables (potatoes are high, turnips are low), bread and pasta. You can find many good tasting meal, dessert and drink suggestions at Atkins.com. They also sell drinks and bars that satisfy your desire for 'sweets'. Be careful with sugar substitutes (as opposed to other sweeteners - like Stevia). Aspartame is a sugar substitute that is responsible for many neurologic problems. See my paper on 'Aspartame'.

I also have a nutritional protocol for 'Diabetes'. At a minimum, it is always important for people eating our typical Western diet to have a proper multi vitamin/mineral supplement like **Ultra Vites**, and preformed, long chain, polyunsaturated omega 6 and omega 3 essential fatty acids (LC-PUFA), as are in **Ultra Omega-Linic**. It is extremely important for those who have Diabetes, or those who have a family history of Diabetes to follow these diet, nutritional supplements and exercise recommendations.

In summary, **Healthy blood sugar levels** are dependent upon 3 things: diet, exercise and weight management. I highly recommend a low carbohydrate diet. You can get a lot of help with low carbohydrate food choices, including such things as bread, pasta and deserts, from Atkins.com. A web search will turn up other sources of low carbohydrate foods.



OverWeight?

\*BMI index is a ratio of body weight to height with age calculated into the results. It provides an indicator of body fat.

Visit the [BMI calculator](#) on Line to check how you are doing!