The multiple complex pathophysiologic defects associated with type 2 diabetes mellitus require that multiple drugs be used in combination to improve the patient's overall outcomes, and that treatment should be based on reversal of all known complications, rather than strictly on reducing A1C. Early identification and intervention is critical to prevent or slow the progressive ß-cell failure that already is well established in patients with impaired glucose tolerance.

Source: Adapted from DeFronzo RA. Am J Med. 2010;123(suppl):S38-S48
Understanding Insulin

Insulin is a hormone that helps your body use the sugar (glucose) you get from the food you eat. Insulin levels rise and fall in response to the level of glucose in your blood. Insulin’s main job is to help glucose get from your blood into the cells of your body, where it is used as fuel to keep the cells working normally.

The pancreas is the organ in your body that produces insulin throughout the day.

- When you have type 1 diabetes, you do not produce insulin
- When you have type 2 diabetes, you either do not produce enough insulin or your body’s cells do not respond to the insulin properly, called insulin resistance

When you need to take insulin, there are different types. In some cases, you may use a mixture of different types, such as short-acting and long-acting insulins.

People with type 1 diabetes must use insulin injections to keep their blood sugar at a normal or close to normal level.

People with type 2 diabetes often need to add insulin to control their blood sugar when oral medications or non-insulin injectable medications (exenatide and liraglutide) are not enough.

The number of insulin injections you take may vary from once a day to using different types of insulin at different times of the day. When you first start taking insulin, your healthcare provider will decide on the type, the amount, and frequency of the injections of insulin you need. This will be based on your lifestyle, blood sugar level, and any other diabetic medications you may be taking. Monitoring your diet along with your blood sugar levels will be important in deciding if any changes are needed in your insulin dose.

Remember that insulin injections will lower your blood sugar level whether you have eaten or not. Very low blood sugar, known as hypoglycemia, can cause serious problems. Eating regular meals is very important when taking insulin.

Most people have no problem getting used to taking insulin injections. They feel better when their blood sugar is well controlled. All people with diabetes need to help control their blood sugar by

- Eating a healthy diet
- Doing moderate exercise
- Losing weight or maintaining a normal weight

Adapted from the Nurse Practitioner Healthcare Foundation