

Type 2 Diabetes Risk Reduction

Diabetes is a disease of too much sugar (glucose) in the blood. In Type 2 diabetes this is caused by insulin resistance and abnormal insulin production by the pancreas. Insulin is a hormone that moves sugar from the blood into the cells where it is needed for energy. Insulin resistance means that the insulin is less effective at moving the sugar out of the blood and into the cells.

Diabetes increases the risk of heart disease, kidney disease, blindness and leg amputation.

Risk Factors for Diabetes :

- **Genetics / Family History** – Certain ethnic groups have an increased risk of diabetes including Africans, Native Americans, Hispanics and Asian Indians. A family history of diabetes also increases your risk for diabetes.
- **Gestational Diabetes** – A history of having diabetes while pregnant increases the risk of developing type 2 diabetes later on in life.
- **Obesity** (BMI greater than 25) – A major cause of insulin resistance. 80-85% of people diagnosed with diabetes are obese at the time of diagnosis.
- **Increased Waist Circumference** – Girth measurement greater than 40” for men or greater than 35” for women is an independent risk factor for diabetes aside from obesity.
- **Physical Inactivity** – A sedentary lifestyle increases insulin resistance, thereby increasing the risk of diabetes.
- **High Fat Diet** – High fat intake causes lipotoxicity which increases insulin resistance, thereby increasing the risk of diabetes.
- **Impaired Fasting Glucose** – pre-diabetic state which usually progresses to type 2 diabetes with time
- **Elevated C Reactive Protein (CRP)** – CRP is a marker of inflammation in the body. Elevated CRP has been associated with a faster progression from glucose intolerance (impaired fasting glucose) to type II diabetes.

Classification of Fasting Blood Glucose

Category	Fasting Blood Glucose
Optimal	less than 100 mg/dl
Normal	100-109 mg/dl
Impaired Fasting Glucose (Prediabetes)	110-125 mg/dl
Diabetes	≥126 mg/dl

Lifestyle Modifications – Although there are some risk factors which we cannot change (genetics, family history or history of gestational diabetes), recent studies show that intense lifestyle changes reduce the progression from impaired fasting glucose to type 2 diabetes by 58%.

- **Obtain/ Maintain a Healthy Weight** (BMI of 25 or less). If your BMI is greater than 25, make a goal of losing 5% of your body weight.
- **Exercise** – Physical activity decreases insulin resistance. Work with your doctor to develop a plan to increase your physical activity. Work up to walking a minimum of 10,000 steps a day (5 miles); join a fitness center; or find some other way to follow the surgeon general’s recommendation of 30 minutes of moderate intensity activity on all or most days of the week.
- **Nutrition** - Limit total fat intake to no more than 30% of calories and Limit Saturated Fat to no more than 10% of calories
 - * Choose low fat and nonfat dairy products
 - * Eat lean meats (turkey and chicken breast, lean beef, fish)
 - * Limit animal fats (butter, cream, fatty cuts of meat, sausage, bacon, whole milk products, ice cream)
 - * Limit hydrogenated fats and partially hydrogenated fats (hydrogenated peanut butter, stick margarine, shortening)
 - * Increase fiber intake – choose whole grain products and increase consumption of fruits, vegetables, beans and peas.

Symptoms of High Blood Sugar Include: constant thirst, frequent urination, fatigue, blurred vision, frequent infections, slow healing injuries, unplanned weight loss. If any of these symptoms occur, see your physician.