



# BASIC INFORMATION: Diabetes SELF CARE

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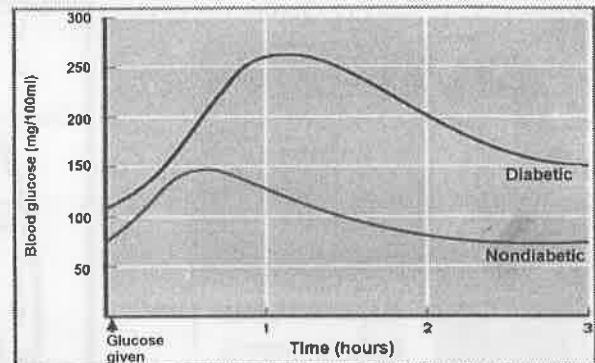
*Diabetes is a long term journey, a condition requiring continuing medical care, ongoing education & support to prevent acute complications and reduce risk of long term complications. Education that improves understanding and self-management with the help of a Diabetes Educator/doctor is one of the best ways for managing diabetes related problems. There's a lot to learn, but you don't have to do it alone. This information will help you get started but you need to continue communication with your Diabetes Educator/doctor.*

## 1. What is diabetes ?

Diabetes means that your blood glucose [also called blood sugar] is too high. Our blood always has some glucose because our body needs glucose for energy for its normal function. But too much glucose in the blood is not good for our health.

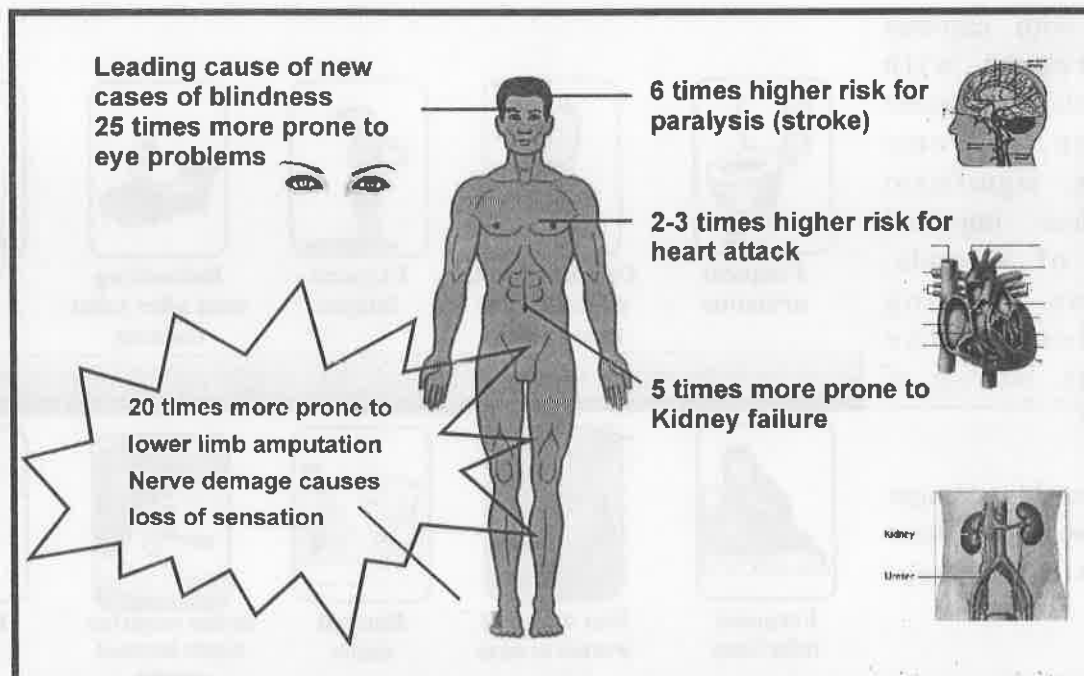
Normally our blood sugar (glucose) level before eating is 70-100mg/dl and after eating is less than 140mg/dl.

**DIABETES** is said to be there if the Blood sugar before eating (fasting) is more than or equal to 126mg/dl and/or 1 to 2 hours after eating is more than or equal to 200mg/dl.



## 2. Why are high sugars not good? - What are the complications of diabetes?

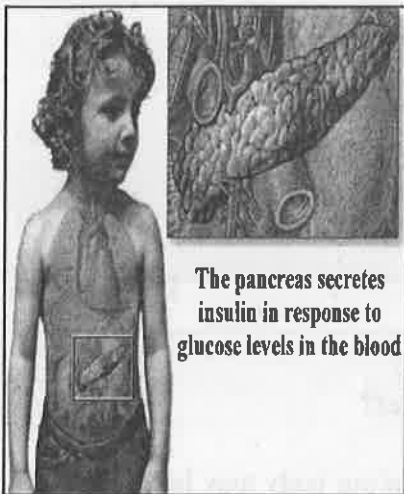
High sugars damage the Blood vessels and nerves, hence all the parts of our body may be affected. But the major problems are: as depicted below.



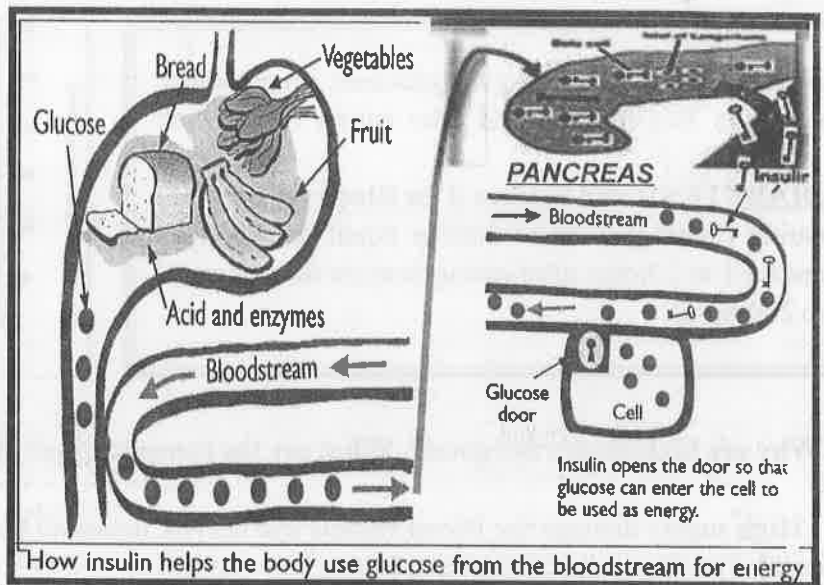
### 3. What happens normally when we eat and what is the role of insulin, why do we get high blood glucose?

- After whatever we eat, food is broken down into sugars (glucose) in the stomach which is the source of energy for the cells (muscle, liver, fat). This sugar is absorbed through the stomach wall into the blood stream. The glucose (sugar) in the blood goes to all the organs in our body.
- We have an organ named **PANCREAS** (insulin Factory) which makes **INSULIN** in response to change (increase) in blood glucose levels. This insulin enters the blood and with glucose goes to each and every organ in our body.
- Every cell (muscle, liver, etc) in our body has small doors for the blood glucose to enter into them and a Key is needed to open the door of the cells.
- Insulin is a chemical that acts as the **KEY** which opens the door of the cells and helps glucose to enter into the cells to be used for getting energy.
- Once glucose goes into the cell blood sugar level comes down
- Without insulin glucose cannot enter into the muscles (also fat, liver) and hence do not get energy and the blood sugar levels increase in the blood.

Diabetes develops when insulin is not secreted by pancreas or the target cells are resistant to the action of available insulin.



The pancreas secretes insulin in response to glucose levels in the blood



How insulin helps the body use glucose from the bloodstream for energy

### 4. How do I know if I have diabetes? What are the Symptoms of Diabetes?

Patients with diabetes may present with extreme thirst, frequent urination, extreme tiredness, significant weight loss, impaired healing of wounds, numbness, tingling sensation of the extremities, blurring of vision, etc.

Check your blood sugar if you have any of these symptoms (See picture)



Frequent urination



Unusual thirst, especially for sweet drinks



Extreme fatigue



Bedwetting even after toilet training



Tummy pain

**BUT REMEMBER SOME OF YOU MAY NOT HAVE ANY TO THESE**



Frequent infections



Slow healing of wounds or sores



Blurred vision



Sudden weight loss despite increased appetite



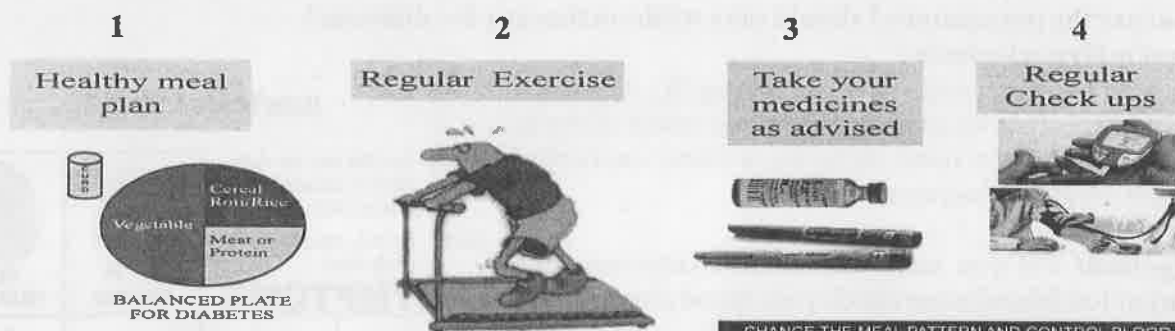
Behavioral problems

## 5. What are the different types of diabetes?

The types of Diabetes Mellitus are

- Type 1 diabetes** - requiring Insulin from onset of disease due to self-destruction of cells in the Pancreas that make insulin. This can occur at any age but is more common in children, teenagers or young adults. In this condition the pancreas produces little or no insulin and hence **LIFE LONG INSULIN THERAPY** is a must.
- Type 2 diabetes:** This is the most common type of diabetes. This occurs usually in adults above 40 years of age. Being overweight and inactive can increase the chances of developing Type 2 diabetes. In this type of diabetes the pancreas does not make enough insulin and the fat, muscle, or liver cells are resistant to the action of available Insulin. They require oral tablets, to maintain their blood sugar. Insulin may be added if blood sugars are not controlled with tablets.
- Gestational Diabetes:** Transient high blood glucose during pregnancy.
- Other types-** your doctor will let you know if you have it. Drugs like steroids increase blood sugar.

## 6. How do I manage diabetes? 4 simple steps are:



- EAT HEALTHY - EAT SLOWLY. RESTRICT SUGARS, CEREALS, SALT AND OIL.**

**THREE MEALS AND 3 SNACKS** reduce the fluctuations and improve sugar control.

- EXERCISE:** To get maximum health benefit you should exercise at least 30 to 60 minutes a day, for at least 10 to 20 minutes each time. Start by walking about 1 km in 20 mins. Your pace should go upto 2 kms in the same time in about 2 months. Other exercises: Some of the other activities like swimming, dancing, cycling, playing volley ball, basket ball etc are also beneficial in diabetic patients.

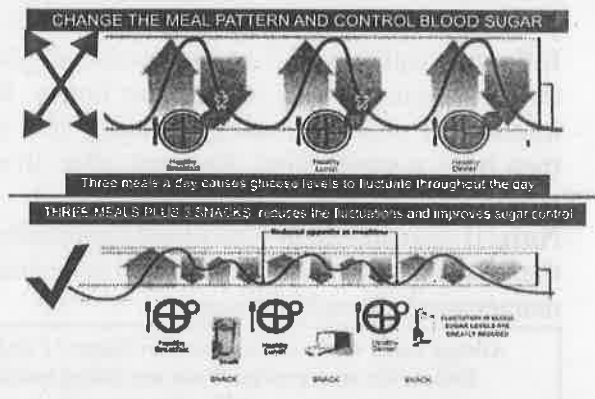
- REGULAR CHECK UPS:** Monitoring Blood sugar is the key for good care. The Targets are : Fasting blood Sugar (70-120mg/dl) and 2 hr post meal sugars (100-180 mg/dl)

*If you have diabetes (diabetes mellitus), the most important thing you can do is to control your*

**“ABCs”:** **“A”** stands for **“A1c”** A1c is a blood test that shows what your average blood sugar level has been during the last 2-3 months. (Your target A1c levels should be below 7%)



- “B”** stands for **“blood pressure”** If you have diabetes, High blood pressure puts you at risk for heart attack, stroke, and kidney disease. (Your target BP levels should be below 130/80mm Hg).
- “C”** stands for **“cholesterol”** and complications High cholesterol (fat) increases your risk of heart attacks, strokes, and other serious problems. (Your target LDL cholesterol levels should be below 100mg/dl)



**6. What are the medications used in diabetes control?**

**A. Insulin :** All the patients with type 1 diabetes require insulin. Some patients with type 2 diabetes who initially respond to diet and / or oral diabetic medications eventually require insulin therapy. There are a wide variety of different insulin preparations available now. These differ in onset of action, time to peak effect and duration of action. Your doctor will prescribe you the type of insulin, which suits your needs.

**B. What are the tablets/ medicines used in diabetes?** The tablets used are those which increase insulin secretion (glimepiride, glibenclamide, glipizide, gliclazide) or reduce the resistance of the cells (metformin, pioglitazone) Meet your doctor to adjust the dosage of medicines to achieve **ABC targets** and evaluate you for presence of any complications.

**7. Can I stop medicines when my diabetes is controlled?**

In most of the cases, people with diabetes will require medicines throughout the life. Hence you should never stop the medicines even after blood glucose is controlled. Always take medicines according to the doctor's advice.

**8. What are the precautions I should take while on therapy for diabetes?**

**A. What is Hypoglycemia :**

If your blood glucose drops too low (<70mg/dl), it is called hypoglycemia. It is caused by taking too much diabetic medicines, missing a meal, delaying a meal, exercising more than usual or drinking alcohol.

**Management :** If you have any of the symptoms (See Picture) of low blood sugar check your blood glucose with your glucometer. If the level is <70 than have one of the following right away: 2 to 3 teaspoons of glucose, a cup of any fruit juice, 2 tps of sugar or honey. Retest after 15 minutes, If you sugar are persistently low treat again and then have a small meal. Recheck after 30 min and make sure that sugars reach above 100 mg/dL.









**Note:** If you can't check your blood sugar and have symptoms then treat it anyway because slightly higher blood sugar is less dangerous than low blood sugar.

**(Low Blood Glucose)**

Causes: Too Little food, too much Insulin or diabetes medicine, or extra activity

Onset: Sudden, may progress to insulin shock.

**SYMPTOMS**

|   |   |   |  |
|---|---|---|--|
| <br>SWEATING        | <br>DIZZINESS        | <br>ANXIOUS  | <br>HUNGER    |
| <br>IMPAIRED VISION | <br>WEAKNESS FATIGUE | <br>HEADACHE | <br>IRRITABLE |

Always carry Glucometer, Glucose / Sugar / Candies / Raisins for emergencies if you are taking insulin

**B. Taking care of your feet:**

- Wash your feet daily with lukewarm water and soap, just as you wash your hands.
- Never walk barefoot- neither indoors nor outdoors.
- Examine your shoes every day for cracks, pebbles, nails and other irregularities which may irritate the skin.



1 Wash your feet daily with lukewarm water and soap. 2 Dry your feet well, especially between the toes. Check your feet for blisters, cuts or sores, redness or swelling. Tell your doctor right away if you find something wrong. Never walk barefoot indoors or outdoors.

**FOOT IS THE MIRROR OF DIABETES CARE**

**C. QUIT SMOKING AND ABSTAIN FROM ALCOHOL**

To remain healthy your blood sugar should not be too high or too low



**EAT HEALTHY  
BE ACTIVE  
THINK POSITIVE**

**Raise awareness,  
Act on your Diabetes, Now!!!**

*Healthy Family is a happy Family*