

# Do you want to know?

## Diabetes Mellitus

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### What is it?

Diabetes mellitus is a disease resulting from a breakdown in the body's ability to produce or utilize insulin. Insulin is essential for the proper metabolism of blood sugar (glucose) and for maintenance of proper blood sugar level. Type 1 diabetes or juvenile (insulin-dependent) diabetes is usually diagnosed before the age of 30. In this type, the pancreas produces little or no insulin. Type 2 diabetes (non-insulin-dependent) is usually diagnosed after the age of 40. In this type, the insulin is either produced in insufficient amounts and/or cannot be used by the body to control blood sugar levels. The most common signs and symptoms of diabetes are:

- increased urination
- increased thirst
- increased appetite
- fatigue and weakness

### What do you need to know?

#### Anti-diabetic pills:

- Take your anti-diabetic pills regularly as prescribed by your physician.
- Do not stop the medication on your own without contacting your physician
- If you obtain a normal blood sugar reading (80-120mg/dl), your blood sugar is under control and you need to continue with the medication, diet, and exercise.
- If your blood sugar is often low, (that is below 70mg/dl) or often high (that is above 200mg/dl), you need to contact your physician.

#### Insulin

- Store insulin vials in the refrigerator if prescribed.
- Check the label on the bottle (type of insulin, expiry

date).

- Roll gently the insulin vials of intermediate and long acting insulin to ensure that all sediment is mixed into the liquid.
- Do not administer cold insulin, warm it by rotating the filled syringe between the hands.
- Wash your hands thoroughly and dry them. Clean the cap of the insulin vial with an antiseptic swab.
- Rotate the vial of insulin between your hands to mix the insulin. If crystals remain in the bottom, it means the insulin is not good for use.
- Draw an amount of air equal to the amount of the dose of insulin that you require, up into the syringe.
- With the insulin vial upright, plunge the needle through the rubber cap, pushing air into the vial, then turn the insulin vial upside down and carefully draw the correct dose of insulin.

#### For mixing insulin:

- Read instructions and consult your physician, pharmacist or nurse.
- Withdraw short acting insulin first then intermediate or long acting insulin second to avoid contamination of short acting insulin.
- Draw air into your syringe equal to the amount of long or intermediate acting insulin and inject the air in the vial, then withdraw the needle and leave the vial aside.
- Inject air into your short acting insulin vial in the same manner but do not withdraw the needle.
- Turn the bottle upside down, withdraw the short acting dose of insulin into the syringe, remove the needle, and insert it in the bottle of long or intermediate acting insulin then withdraw the correct amount of insulin. The fluid should always cover the bevel of the needle.

#### Injection sites:

- Use the upper arms, the thighs and the abdomen for

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insulin injections.

- Rotate sites to prevent tissue damage and to aid in absorption.
- Take the next injection at least 2cm apart from the previous one, and then change to another area when the whole area has been used.
- Clean the site with alcohol where you intend to inject, and then pinch the skin between the thumb and forefinger of one hand
- Hold the syringe by its barrel in the other hand; insert the needle quickly at a 45° angle (90° angle around the umbilicus) into the tissue lying under the skin, depending on needle length and the amount of subcutaneous tissue at the site.
- Press the plunger all the way down to inject all the insulin.
- Withdraw the needle quickly while placing an antiseptic swab gently over site. Apply a light pressure to the site.



### Activity:

- Follow regular daily exercises.
- Be involved in moderate levels of activity (jogging, walking ...).
- Follow a specific exercise plan that is mutually decided upon by the physician and you to fit into daily activities and to prescribe the proper diet and adequate insulin as necessary.
- Exercise at the same time every day.
- Check blood glucose before beginning to exercise.
- Do not perform exercise when insulin or oral antidiabetic agent is at its peak of action.



### Diet:

- Learn how to follow a calculated diet as ordered.
- Eat three or more regularly spaced meals each day, especially before the insulin dose.
- Know the caloric value of foods frequently eaten.
- Avoid concentrated sweets, salts, and foods high in

cholesterol.

- Follow a weight control diet, to keep your weight at normal level.
- Use artificial sweeteners in moderation.
- Decrease alcohol intake because it might affect blood sugar level.
- Take an extra snack before exercise.

### Considerations:



- Quit smoking and decrease alcohol intake.
- Do an eye check up once a year and consult your doctor for any vision problems. Diabetes might affect the eye without symptoms.
- Keep an identification card saying "I am diabetic".
- Watch out for symptoms of hypoglycemia (low blood sugar) such as sweating, trembling, irritability, tingling of lips and tongue or fingers, hunger and mental confusion.
- Carry with you at all times some sugar or candy to eat when you suspect hypoglycemia.
- Try to find out the cause of the hypoglycemic attack and consult your physician. It may be due to insulin overdose, over exercise or little eating.
- Watch out for conditions that are acute complications of diabetes mellitus (diabetic ketoacidosis, hyperosmolar hyperglycemia) manifested by the following symptoms: thirst, loss of appetite, fatigue, abdominal pain, nausea and vomiting.
- Test your blood sugar as ordered by your physician.
- Watch for any infection:
  - a) High temperature (may indicate bladder, kidney and skin infection...).
  - b) Sores in your mouth.
  - c) Changes in color or sensation in your fingertips or toes.
- Do blood tests as ordered to detect any complications such as disease of the kidneys (neuropathy).

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