

# Diabetes Complications

## What is diabetes?

Having diabetes means that there is too much sugar (glucose) in your blood. When you eat food, your body breaks down much of the food into glucose. Your blood carries the glucose to the cells of your body. An organ in your upper belly, called the pancreas, makes and releases a hormone called insulin when it detects glucose. Your body uses insulin to help move the glucose from the bloodstream into the cells for energy. When your body does not make insulin (type 1 diabetes), or has trouble using insulin (type 2 diabetes), glucose cannot get into your cells. The glucose level in your blood goes up. Too much glucose in your blood (also called hyperglycemia or high blood sugar) can cause many problems. Diabetes complications can include:

- Frequent infections
- Slow healing wounds
- Slow emptying of the stomach (gastroparesis)
- Sexual problems
- Nerve damage (neuropathy) that causes numbness or tingling in hands or feet
- Heart disease
- Stroke
- Blindness
- Amputations
- Kidney failure
- Coma or death

## What can I expect in the hospital?

You may need to stay in the hospital because you need more treatment for your diabetes complication than you can safely receive at home. This may include treating very high or very low blood sugar.

Several things may be done while you are in the hospital to monitor, test, and treat your condition. They include:

### Monitoring

- You will be checked often by the hospital staff.
- You may have fingersticks to check your blood sugar regularly. This may be done as often as every hour. You will learn how to check your blood sugar level in order to manage your diabetes when you go home.
- A heart (cardiac) monitor may be used to keep track of your heartbeat.
- Your blood oxygen level may be monitored by a sensor that is attached to your finger or earlobe.
- Your fluid intake may be monitored closely by keeping track of everything you eat and drink and any IV fluids you receive.

- You may have a small tube (catheter) placed into your bladder through the urethra (the opening from the bladder to the outside of the body) to drain and measure urine from the bladder.

## **Testing**

Testing may include:

- Blood tests (Hemoglobin A1c) to check your average blood sugar over the past 3 months
- Blood tests to check for infections
- Blood tests to check to see if your body is making insulin
- Blood, urine, or other tests to monitor how well your organs are functioning
- Urine tests to check for bacteria in your urine
- Arterial blood gas (ABG): A blood test to measure the levels of oxygen and carbon dioxide in your blood
- X-rays: Pictures of the inside of the chest to check for infection

## **Treatment**

The treatment for diabetes mellitus and its complications depend on the type of diabetes and the complications that you have, as well as how well your blood sugar is controlled with treatment. The goal is for you to keep your blood sugar level in a normal range to prevent other complications. Treatment may include:

- You will have a small tube (IV catheter) inserted into a vein in your hand or arm. This will allow for medicine to be given directly into your blood and to give you fluids, if needed.
- Your provider may prescribe medicines to:
  - Keep your blood sugar controlled
  - Treat other medical problems that may have been caused by or made worse because of diabetes
  - Treat pain
  - Treat or prevent an infection
  - Prevent side effects, such as nausea or constipation, from other treatments
- Ask your healthcare provider about the symptoms and causes of low blood sugar and what to do when you have low blood sugar. Carry some form of sugar at all times, so you can treat low blood sugar quickly.
- You may need physical therapy treatments if you have an infection or have had surgery to help the body part heal. Physical therapy may also include exercises for weak muscles, use of splints or special shoes.
- You may need surgery to treat complications of diabetes. This may include surgery to:
  - Remove infected tissue that will not heal because of your diabetes. This may include amputation of an infected body part
  - Treat gastroparesis by inserting a feeding tube or removing a blockage

- Reduce leaking from blood vessels in the eyes. The surgeon may also use a laser to help reduce the growth of abnormal blood vessels or to clear bleeding into the eye.
- Treat sexual dysfunction in men by implanting a penile device to allow erections
- You may need physical therapy treatments if you have an infection or have had surgery to help the body part heal. Physical therapy may also include exercises for weak muscles, use of splints or special shoes.
- You may need kidney dialysis to help filter your blood if your kidneys are not working properly.

## **What can I do to help?**

- You will need to tell your healthcare team if you have new or worsening:
  - Fainting
  - Seizures
  - Increased urination or trouble emptying the bladder
  - Increased thirst and dry mouth
  - Increased appetite or loss of appetite
  - Fast or irregular heartbeat
  - Tiredness
  - Fruity odor to breath
  - Change in vision, such as double vision, blurred vision, or trouble seeing out of one or both eyes
  - Floaters, which are black spots or cobweb-like shapes in your vision
  - Numbness in your feet or hands
  - Redness, bumps, blisters, or sores on your skin
  - Signs of infection around your surgical wound if you had surgery. These include:
    - The area around your wound is more red or painful
    - The wound area is very warm to touch
    - You have blood, pus, or other fluid coming from your wound area
    - You have chills or muscle aches
- Ask questions about any medicine or treatment or information that you do not understand.

## **How long will I be in the hospital?**

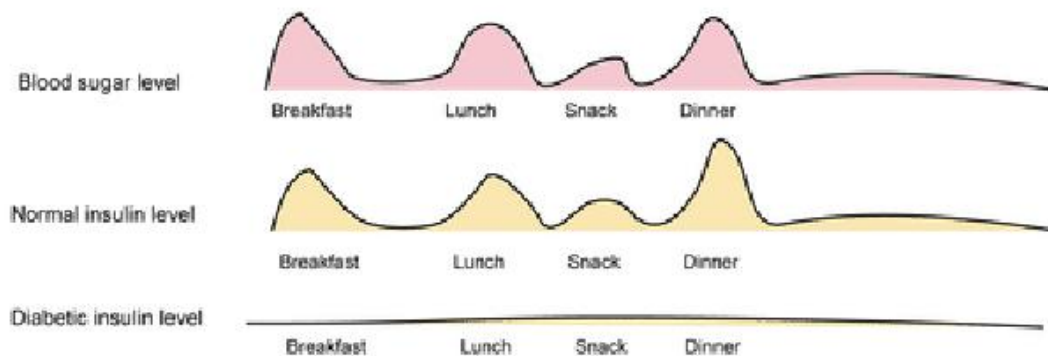
How long you stay in the hospital depends on your symptoms and how well you respond to treatment. The average amount of time to stay in the hospital with diabetes complications is 3 to 5 days.

Developed by RelayHealth.

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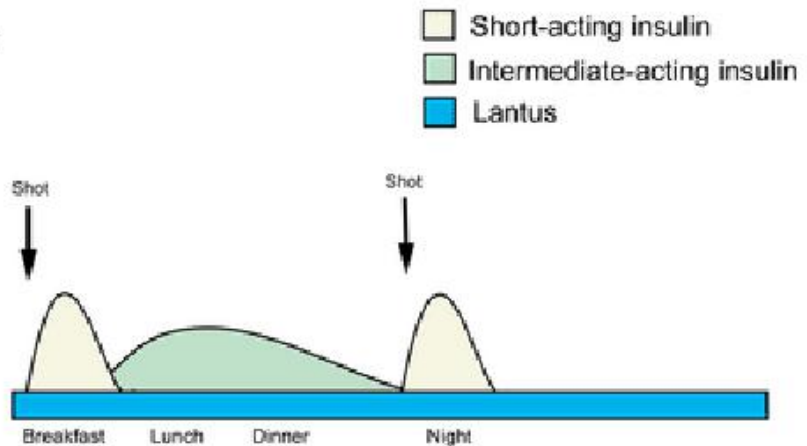
# Diabetes and Insulin

Throughout the day your blood sugar level goes up and down like a roller coaster everytime you eat. Your body should make just the right amount of insulin to help turn the food you eat into energy. A person with diabetes does not make insulin and needs to take insulin at the right times to help the body use the sugar for energy.



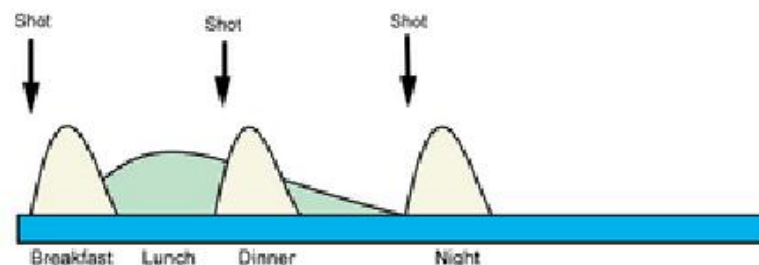
## Taking Insulin Twice a Day

You may need to take insulin twice a day. One common way is to take one shot in the morning that contains a mix of a rapid-acting insulin and intermediate-acting insulin. Then, take a rapid-acting insulin shot again at dinner time. Lantus insulin may be taken at any time of day, but it should be taken at the same time each day, such as before dinner.



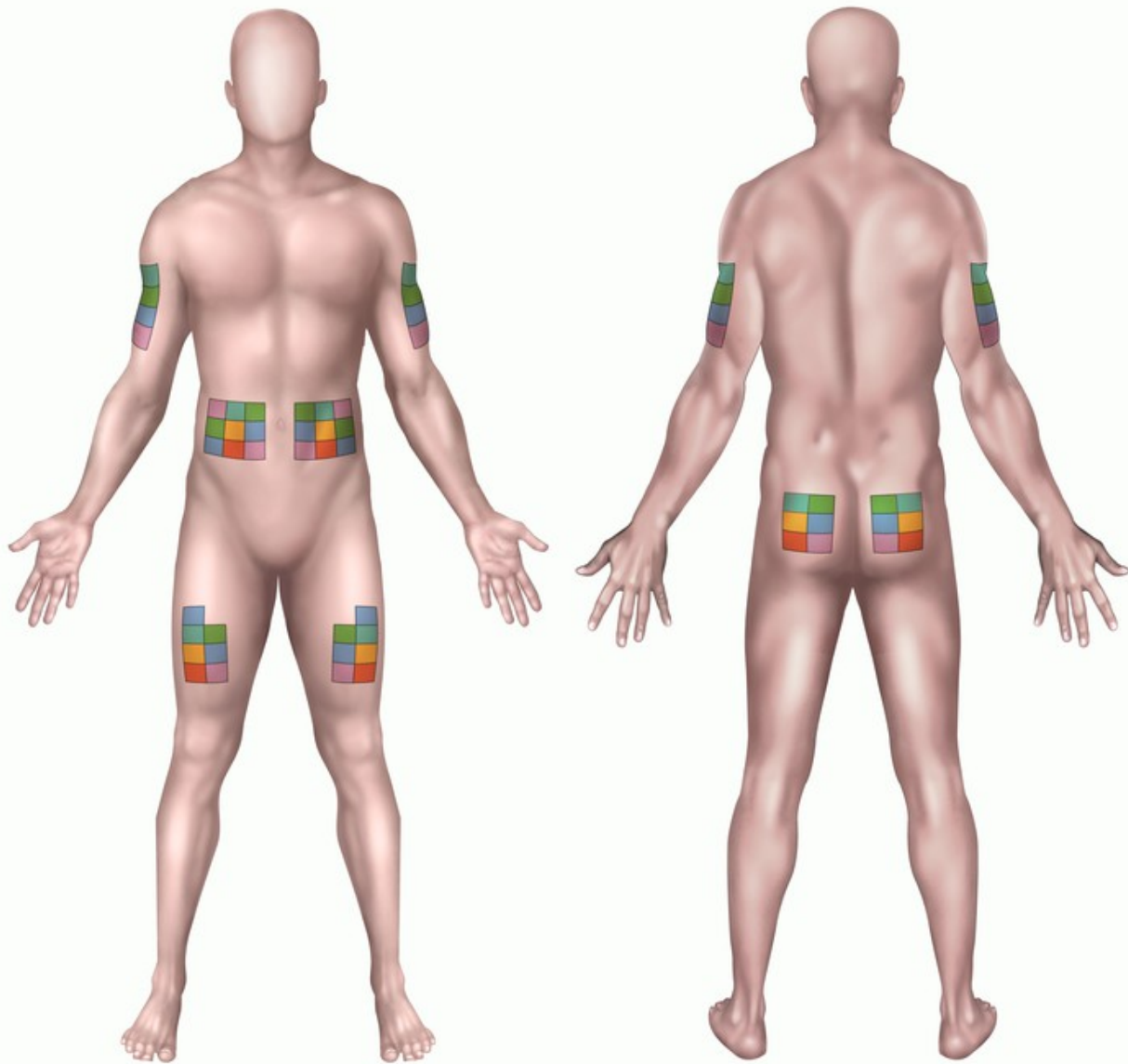
## Taking Insulin Three Times a Day

For even better control, some people take three (or more) shots per day. You can adjust the time of your shots to fit your lifestyle and eating patterns.



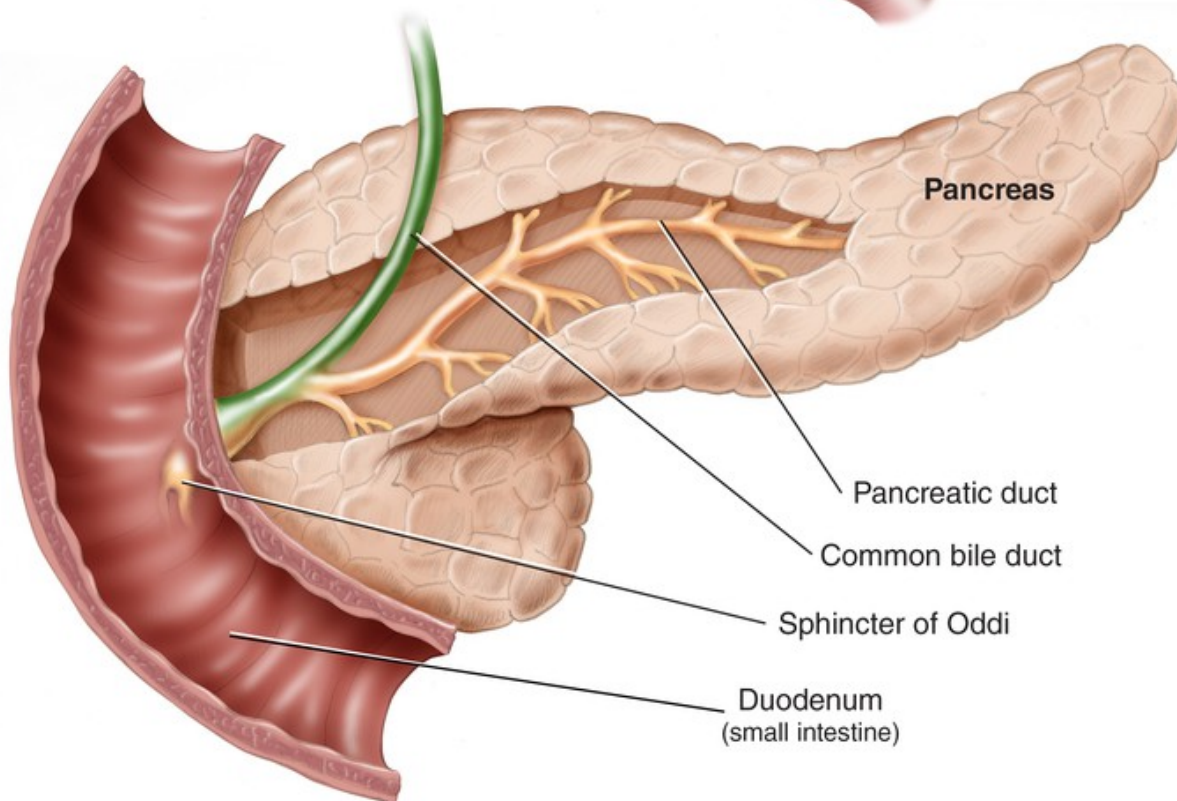
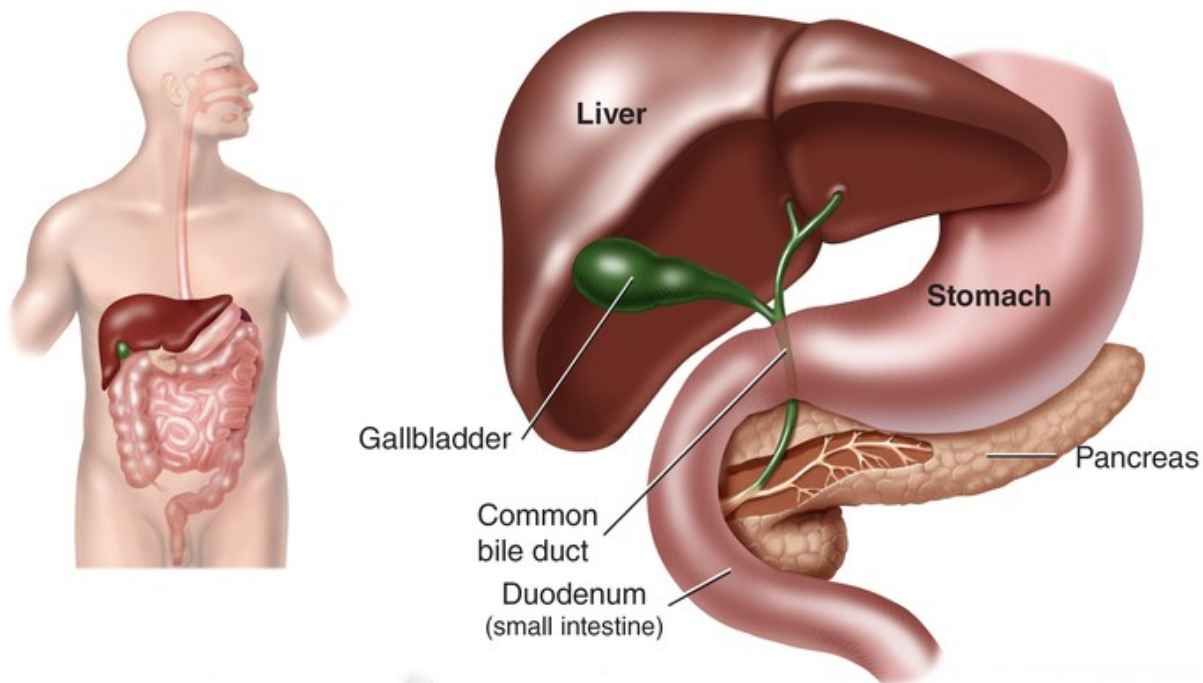
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# Diabetes: Injection Rotation Chart



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# Pancreas



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## How to Give a Subcutaneous Shot with Aspiration



1. Use an alcohol swab to clean the skin where you will give the shot.



2. Gently pinch the skin and insert the needle into the skin at a 45° angle.



3. After you insert the needle completely, release your grasp on the skin.



4. Gently pull back on the plunger of the syringe to check for blood. (If blood appears when you pull back on the plunger, withdraw the needle and syringe and gently press the alcohol swab on the injection site. Start over with a fresh needle.)



5. If no blood appears, inject all of the solution by gently and steadily pushing down the plunger.



6. Withdraw the needle and syringe and press an alcohol swab gently on the spot where the shot was given.

Ask your healthcare provider or pharmacist if you should wear gloves when you give a shot.

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## How to Give a Subcutaneous Shot



1. Use an alcohol swab to clean the skin where you will give the shot.



2. Gently pinch the skin and insert the needle into the skin at a 45-degree or 90-degree angle. Follow your provider's instructions.



3. After you insert the needle completely, release your grasp on the skin.



4. Inject all of the solution by gently and steadily pushing down the plunger.



5. Withdraw the needle and syringe and press an alcohol swab gently on the spot where the shot was given.

Ask your healthcare provider or pharmacist if you should wear gloves when you give a shot.

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