

## Patient Information

### APIDRA<sup>®</sup> 10 mL vial (1000 units per vial) 100 units per mL (U-100) (insulin glulisine [recombinant DNA origin] injection)

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Read this “Patient Information” that comes with APIDRA (uh-PEE-druh) before you start using it and each time you get a refill because there may be new information. This leaflet does not take the place of talking with your healthcare provider about your condition or treatment. If you have questions about APIDRA or about diabetes, talk with your healthcare provider.

### **What is the most important information I should know about APIDRA?**

- **Do not change the insulin you are using without talking to your healthcare provider.** Any change in insulin should be made cautiously and only under medical supervision. Changes in insulin strength, manufacturer, type (regular, NPH, analog), or species (beef, pork, beef-pork, human) or method of manufacture (recombinant DNA versus animal-source insulin) may need a change in the dose. This dose change may be needed right away or later on during the first several weeks or months on the new insulin. Doses of oral anti-diabetic medicines may also need to change, if your insulin is changed.
- **You must test your blood sugar levels while using an insulin such as APIDRA.** Your healthcare provider will tell you how often you should test your blood sugar level, and what to do if it is high or low.
- **When used in a pump do not mix APIDRA with any other insulin or liquid.**
- **APIDRA** comes as U-100 insulin and contains 10 milliliter (mL) of APIDRA. One milliliter (mL) of U-100 insulin contains 100 units of insulin. (1 mL = 1 cc).

### **What is diabetes?**

- Your body needs insulin to turn sugar (glucose) into energy. If your body does not make enough insulin, you need to take more insulin so you will not have too much sugar in your blood.
- Insulin injections are important in keeping your diabetes under control. But the way you live, your diet, careful checking of your blood sugar levels, exercise, and planned physical activity, all work with your insulin to help you control your diabetes.

### **What is APIDRA?**

- APIDRA (insulin glulisine [recombinant DNA origin]) is a rapid-acting insulin analog. Because APIDRA is made by recombinant DNA (rDNA) technology and is chemically different from the insulin made by the human body, it is called an insulin analog. APIDRA is used to treat adults with diabetes for the control of high blood sugar.
- APIDRA is a clear, colorless, sterile solution for injection under the skin (subcutaneously). APIDRA may also be given by infusion into one of your veins (intravenously) by health care professionals only.
- The active ingredient in APIDRA is insulin glulisine. The concentration of insulin glulisine is 100 units per milliliter (mL) or U-100. APIDRA also contains m-cresol, tromethamine, sodium chloride, polysorbate 20, and water for injection. Hydrochloric acid and/or sodium hydroxide may be added to adjust the pH.
- You need a prescription to get APIDRA. Always be sure you receive the right insulin from the pharmacy.

### **Who should not take APIDRA?**

**Do not take APIDRA if you are allergic to insulin glulisine** or any of the inactive ingredients in APIDRA. Check with your healthcare provider if you are not sure.

**Before starting APIDRA, tell your healthcare provider about all your medical problems including if you:**

- **have liver or kidney problems.** Your dose may need to be adjusted.
- **are pregnant or plan to become pregnant.** It is not known if APIDRA may harm your unborn baby. It is very important to maintain control of your blood sugar levels during pregnancy. Your healthcare provider will decide which insulin is best for you during your pregnancy.
- **are breast-feeding or plan to breast-feed.** It is not known whether APIDRA passes into your milk. Many medicines, including insulin, pass into human milk, and could affect your baby. Talk to your healthcare provider about the best way to feed your baby.
- **about all the medicines you take including** prescription and non-prescription medicines, vitamins and herbal supplements.

### **How should I use APIDRA?**

See "**Instructions for Use**" including the sections "**How do I draw the insulin into the syringe?**" and "**How should I infuse APIDRA with an external subcutaneous insulin infusion pump?**" for additional information.

- Follow the instructions given by your healthcare provider about the type or types of insulin you are using. Do not make any changes with your insulin unless you have talked to your healthcare provider. Your insulin needs may change because of illness, stress, other medicines, or changes in diet or activity level. Talk to your healthcare provider about how to adjust your insulin dose.
- You should take APIDRA within 15 minutes before a meal or within 20 minutes after starting a meal.
- Only use APIDRA that is clear and colorless. If your APIDRA is cloudy or colored, return it to your pharmacy for a replacement.
- Follow your healthcare provider's instructions for testing your blood sugar.
- Inject APIDRA under your skin (subcutaneously) in your upper arm, abdomen (stomach area), or thigh (upper leg). Never inject it into a vein or muscle.
- If you use a pump, infuse APIDRA through the skin of your abdomen.
- Change (rotate) injection sites within the same body area.

#### **What kind of syringe should I use?**

- Always use a syringe that is marked for U-100 insulin. If you use a wrong syringe, you may get the wrong dose. You could get a blood sugar level that is too low or too high.

#### **Mixing with APIDRA**

- If you are mixing APIDRA with NPH human insulin, draw APIDRA into the syringe first. Inject the mixture right away. **Do not mix APIDRA with any other type of insulin than NPH.**
- **Do not mix APIDRA with any other insulin when used in a pump.**

#### **Instructions for Use**

##### **How do I draw the insulin into the syringe?**

- **The syringe must be new and does not contain any other medicine.**
- **Do not mix APIDRA with any other type of insulin than NPH.** If you are mixing APIDRA with NPH human insulin, draw APIDRA into the syringe first. Inject the mixture right away.

Follow these steps:

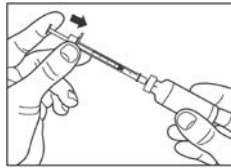
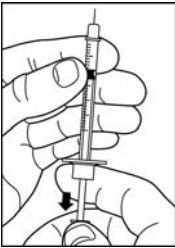
1. Wash your hands.
2. Check the insulin to make sure it is clear and colorless. Do not use the insulin after the expiration date stamped on the label, if it is colored or cloudy or if you see particles in the solution.
3. If you are using a new vial, remove the protective cap. **Do not** remove the stopper.



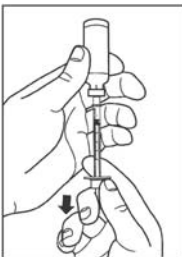
4. Wipe the top of the vial with an alcohol swab. You do not have to shake the vial of APIDRA before use.



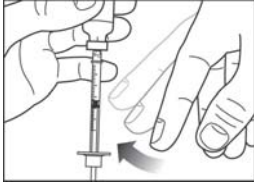
5. Use a new needle and syringe every time you give an injection. Use disposable syringes and needles only once. Throw them away properly. **Never** share needles and syringes.
6. Draw air into the syringe equal to your insulin dose. Put the needle through the rubber top of the vial and push the plunger to inject the air into the vial.



7. Leave the syringe in the vial and turn both upside down. Hold the syringe and vial firmly in one hand.
8. Make sure the tip of the needle is in the insulin. With your free hand, pull the plunger to withdraw the correct dose into the syringe.



9. Before you take the needle out of the vial, check the syringe for air bubbles. If bubbles are in the syringe, hold the syringe straight up and tap the side of the syringe until the bubbles float to the top. Push the bubbles out with the plunger and draw insulin back in until you have the correct dose. If you are mixing APIDRA with NPH insulin, check with your healthcare professional on how to mix.



10. Remove the needle from the vial. Do not let the needle touch anything. You are now ready to inject.

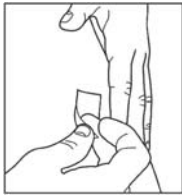
For information on mixing insulins, see section “**Mixing with Apidra**”.

### **How do I inject APIDRA?**

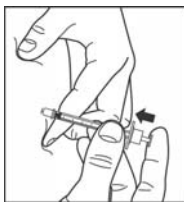
Inject APIDRA under your skin. Take APIDRA as prescribed by your healthcare provider.

Follow these steps:

1. Decide on an injection area - either upper arm, thigh or abdomen. Injection sites within an injection area must be different from one injection to the next.
2. Use alcohol or soap and water to clean the injection site. The injection site should be dry before you inject.



3. Pinch the skin. Stick the needle in the way your healthcare provider showed you. Release the skin.
4. Slowly push in the plunger of the syringe all the way, making sure you have injected all the insulin. Leave the needle in the skin for about 10 seconds.



Pull the needle straight out and gently press on the spot where you injected yourself for several seconds. **Do not rub the area.**

5. Follow your healthcare provider’s instructions for throwing away the needle and syringe. Do not recap the used needle. The used needle and syringe should be placed in sharps containers (such as red biohazard containers), hard plastic containers (such as detergent bottles), or metal containers (such as an empty coffee can). Such containers should be sealed and disposed of properly.

## How should I infuse APIDRA with an external subcutaneous insulin infusion pump?

**Do not mix APIDRA with any other insulin or liquid when used in a pump.**

- APIDRA is recommended for use in the following pumps and infusion sets: Disetronic<sup>®</sup> H-Tron<sup>®</sup> plus V100 and D-Tron<sup>®</sup> with Disetronic catheters (Rapid<sup>™</sup>, Rapid C<sup>™</sup>, Rapid D<sup>™</sup>, and Tender<sup>™</sup>); MiniMed<sup>®</sup> Models 506, 507, 507c and 508 with MiniMed catheters (Sof-set Ultimate QR<sup>™</sup>, and Quick-set<sup>™</sup>)<sup>‡</sup>. Refer to the instruction manual of your specific pump on proper use of insulin in a pump. Call your healthcare provider if you have questions about using the pump.
- If the pump or infusion set does not work right, you may not receive the right amount of insulin. Hypoglycemia, hyperglycemia, or ketosis can happen. Problems should be identified and corrected as quickly as possible, see instruction manual for your pump. Because APIDRA starts working faster and does not work as long, you may have less time to identify and correct the problem than with regular insulin.
- If you start using APIDRA by pump infusion, you may need to adjust your insulin doses. Check with your healthcare provider.
- You must use insulin from a new vial of APIDRA if unexplained hyperglycemia happens, or if pump alarms do not respond to all of the following:
  - a repeat dose (injection or bolus) of APIDRA
  - a change in the infusion set, including the reservoir with APIDRA
  - a change in the infusion site.

If these actions do not work, you may need to restart your injections with syringes and you must call your healthcare provider. Continue to check your blood sugar often.

The infusion set, reservoir with insulin, and infusion site should be changed:

- every 48 hours or less
- when unexpected hyperglycemia or ketosis occurs
- when alarms sound, as specified by your pump manual
- if the insulin has been exposed to temperatures over 98.6°F (37°C). If the insulin or pump could have absorbed radiant heat, for example from sunlight, that would heat the insulin to over 98.6°F (37°C). Dark colored pump cases or sport covers can increase this type of heat. The location where the pump is worn may affect the temperature.
- Patients who get skin reactions at the infusion site may need to change infusion sites more often.

### **What can affect how much insulin I need?**

**Illness.** Illness may change how much insulin you need. It is a good idea to think ahead and make a "sick day" plan with your healthcare provider in advance so you will be ready when this happens. Be sure to test your blood sugar more often and call your healthcare provider if you are sick.

**Medicines.** Many medicines can affect your insulin needs. Other medicines, including prescription and non-prescription medicines, vitamins and herbal supplements, can change the way insulin works. You may need a different dose of insulin when you are taking certain other medicines. **Know all the medicines you take**, including prescription and non-prescription medicines, vitamins and herbal supplements. You may want to keep a list of the medicines you take. You can show this list to all your healthcare providers and pharmacists anytime you get a new medicine or refill. **Your healthcare provider** will tell you if your insulin dose needs to be changed.

**Meals.** The amount of food you eat can affect your insulin needs. If you eat less food, skip meals, or eat more food than usual, you may need a different dose of insulin. Talk to your healthcare provider if you change your diet so that you know how to adjust your APIDRA and other insulin doses.

**Alcohol.** Alcohol, including beer and wine, may affect the way APIDRA works and affect your blood sugar levels. Talk to your healthcare provider about drinking alcohol.

**Exercise or Activity level.** Exercise or activity level may change the way your body uses insulin. Check with your healthcare provider before you start an exercise program because your dose may need to be changed.

**Travel.** If you travel across time zones, talk with your healthcare professional about how to time your injections. When you travel, wear your medical alert identification. Take extra insulin and supplies with you.

**Pregnancy or nursing.** The effects of APIDRA on an unborn child or on a nursing baby are unknown. Therefore, tell your healthcare provider if you are planning to have a baby, are pregnant, or nursing a baby. Good control of diabetes is especially important during pregnancy and nursing.

### **What are the possible side effects of APIDRA and other insulins?**

Insulins, including APIDRA, can cause hypoglycemia (low blood sugar), hyperglycemia (high blood sugar), allergy, and skin reactions.

#### **Hypoglycemia (low blood sugar):**

Hypoglycemia is often called an "insulin reaction" or "low blood sugar". It may happen when you do not have enough sugar in your blood. Common causes of hypoglycemia are illness, emotional or physical stress, too much insulin, too little food or missed meals, and too much exercise or activity.

Early warning signs of hypoglycemia may be different, less noticeable or not noticeable at all in some people. That is why it is important to check your blood sugar as you have been advised by your healthcare provider.

### **Hypoglycemia can happen with:**

- **Taking too much insulin.** This can happen when too much insulin is injected. For pump users, it could happen if the pump dose is too high.
- **Not enough carbohydrate (sugar or starch) intake.** This can happen if a meal or snack is missed or delayed.
- **Vomiting or diarrhea** that decreases the amount of sugar absorbed by your body.
- **Intake of alcohol.**
- **Medicines that affect insulin.** Be sure to discuss all your medicines with your healthcare provider. **Do not start any new medicines until you know how they may affect your insulin dose.**
- **Medical conditions that can affect your blood sugar levels or insulin.** These conditions include diseases of the adrenal glands, the pituitary, the thyroid gland, the liver, and the kidney.
- **Too much glucose use by the body.** This can happen if you exercise too much or have a fever.
- **Injecting insulin the wrong way or in the wrong injection area.**

Hypoglycemia can be mild to severe. Its onset may be rapid. Some patients have few or no warning symptoms, including:

- patients with diabetes for a long time
- patients with diabetic neuropathy (nerve problems)
- patients using certain medicines for high blood pressure or heart problems.

Hypoglycemia may reduce your ability to drive a car or use mechanical equipment and you may risk injury to yourself or others.

Severe hypoglycemia can be dangerous and can cause temporary or permanent harm to your heart or brain. **It may cause unconsciousness, seizures, or death.**

Symptoms of hypoglycemia may include:

- anxiety, irritability, restlessness, trouble concentrating, personality changes, mood changes, or other abnormal behavior
- tingling in your hands, feet, lips, or tongue
- dizziness, light-headedness, or drowsiness
- nightmares or trouble sleeping
- headache
- blurred vision
- slurred speech
- palpitations (fast heart beat)
- sweating



- tremor (shaking)
- unsteady gait (walking).

If you have hypoglycemia often or it is hard for you to know if you have the symptoms of hypoglycemia, talk to your healthcare provider.

Mild to moderate hypoglycemia **is** treated by eating or drinking carbohydrates such as fruit juice, raisins, sugar candies, milk, or glucose tablets. Talk to your healthcare provider about the amount of carbohydrates you should eat to treat mild to moderate hypoglycemia.

Severe hypoglycemia may require the help of another person or emergency medical people. **A person** with hypoglycemia who is unable to take foods or liquids with sugar by mouth, or is unconscious needs medical help fast and will need treatment with a glucagon injection or glucose given intravenously (IV). Without medical help right away, serious reactions or even death could happen.

### **Hyperglycemia (high blood sugar):**

Hyperglycemia happens when you have too much sugar in your blood. Usually, it means there is not enough insulin to break down the food you eat into energy your body can use. Hyperglycemia can be caused by a fever, an infection, stress, eating more than you should, taking less insulin than prescribed, or it can mean your diabetes is getting worse.

### **Hyperglycemia can happen with:**

- **Insufficient (too little) insulin.** This can happen from:
  - injecting too little or no insulin
  - incorrect storage (freezing, excessive heat)
  - use after the expiration date.

For pump users, this can also be caused when the bolus dose of APIDRA infusion or the basal infusion is set too low or the pump is delivering too little insulin.

- **Too much carbohydrate intake.** This can happen if you eat larger meals, eat more often or increase the amount of carbohydrate in your meals.
- **Medicines that affect insulin.** Be sure to discuss all your medicines with your healthcare provider. **Do not start any new medicines until you know how they may affect your insulin dose.**
- **Medical conditions that affect insulin.** These medical conditions include fevers, infections, heart attacks, and stress.
- **Injecting insulin the wrong way or in the wrong injection area.**

Testing your blood or urine often will let you know if you have hyperglycemia. If your tests are often high, tell your healthcare provider so your dose of **insulin can be changed.**

Hyperglycemia can be mild or severe. It can **progress to diabetic ketoacidosis (DKA) or very high glucose levels (hyperosmolar coma) and result in unconsciousness and death.**

Although diabetic ketoacidosis occurs most often in patients with type 1 diabetes, it can also happen in patients with type 2 diabetes who become very sick. Because some patients get few symptoms of hyperglycemia, it is important to check your blood/urine sugar and ketones regularly.

Symptoms of hyperglycemia include:

- confusion or drowsiness
- increased thirst
- decreased appetite, nausea, or vomiting
- rapid heart rate
- increased urination and dehydration (too little fluid in your body).

Symptoms of DKA also include:

- fruity smelling breath
- fast, deep breathing
- stomach area (abdominal) pain.

**Severe or continuing hyperglycemia or DKA needs evaluation and treatment right away by your healthcare provider.**

Other possible side effects of APIDRA include:

**Serious allergic reactions:**

Some times severe, life-threatening allergic reactions can happen with insulin. If you think you are having a severe allergic reaction, get medical help right away. Signs of insulin allergy include:

- rash all over your body
- shortness of breath
- wheezing (trouble breathing)
- fast pulse
- sweating
- low blood pressure.

**Reactions at the injection site:**

Injecting insulin can cause the following reactions on the skin at the injection site:

- little depression in the skin (lipoatrophy)
- skin thickening (lipohypertrophy)
- red, swelling, itchy skin (injection site reaction).

You can reduce the chance of getting an injection site reaction if you change (rotate) the injection site each time. An injection site reaction should clear up in a few days or a few weeks. If injection site reactions do not go away or keep happening call your healthcare provider.

Tell your healthcare provider if you have any side effects that bother you.

These are not all the side effects of APIDRA. Ask your healthcare provider or pharmacist for more information.

### **How should I store APIDRA?**

- **Unopened vial:**

Store new (unopened) APIDRA vials in a refrigerator (not the freezer) between 36°F to 46°F (2°C to 8°C). Do not freeze APIDRA. Keep APIDRA out of direct heat and light. If a vial has been frozen or overheated, throw it away.

- **Open (In-Use) vial:**

Once a vial is opened, you can keep it in a refrigerator or below 77°F (25°C), but away from direct heat and light. The opened vial, either kept in a refrigerator or **at below 77°F (25°C), room temperature**, should be discarded 28 days after the first use even if it still contains APIDRA. Do not leave your insulin in a car on a summer day.

These storage conditions are summarized in the following table:

	<b>Not in-use (unopened)</b>  <b>Refrigerated</b>	<b>Not in-use (unopened)</b>  <b>Below 77°F (25°C)</b>	<b>In-use (opened)</b>  <b>(See Temperature Below)</b>
10 mL Vial	Until expiration date	28 days	28 days Refrigerated or below 77°F (25°C)

- **Insulin pump infusion sets:** Infusion sets (reservoirs, tubing, and catheters) and the APIDRA in the reservoir should be thrown away:
  - every 48 hours or less
  - after exposure to temperatures higher than 98.6°F (37°C).
- Do not use a vial of APIDRA after the expiration date stamped on the label.
- Do not use APIDRA if it is colored, cloudy or if you see particles.

### **General Information about APIDRA**

- Use APIDRA only to treat your diabetes. **Do not** give or share APIDRA with another person, even if they have diabetes also. It may harm them.
- This leaflet summarizes the most important information about APIDRA. If you would like more information, talk with your healthcare provider. You can ask your healthcare provider or pharmacist for information about APIDRA that is written for health professionals. For more information about APIDRA call 1-800-633-1610 or go to website [www.apidra.com](http://www.apidra.com).

### **ADDITIONAL INFORMATION**

**DIABETES FORECAST** is a national magazine designed especially for patients with diabetes and their families and is available by subscription from the American Diabetes Association,

National Service Center, 1701 N. Beauregard Street, Alexandria, Virginia 22311, 1-800-DIABETES (1-800-342-2383). You may also visit the ADA website at [www.diabetes.org](http://www.diabetes.org). Another publication, **COUNTDOWN**, is available from the Juvenile Diabetes Research Foundation International (JDRF), 120 Wall Street, 19th Floor, New York, New York 10005, 1-800-JDF-CURE (1-800-533-2873). You may also visit the JDRF website at [www.jdrf.org](http://www.jdrf.org). To get more information about diabetes, check with your healthcare professional or diabetes educator or visit [www.DiabetesWatch.com](http://www.DiabetesWatch.com).

Rev. April 2007

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