Diabetes can be a pain. People need to prick their fingers several times each day to test blood sugar levels. And they may also need to give themselves daily insulin injections (shots).

Even patients who are good about following doctor’s orders may not do these actions as often as they should. The good news is that there are many new ways to test and treat diabetes.

New Ways to Test Blood Sugar Levels

- **Video games.** Gluco Boy® is a glucose meter that can be used with the Nintendo Game Boy® video game system. Gluco Boy unlocks special games as a reward for children who maintain good blood sugar control.

- **Eye sensors.** Doctors are studying ways of using contact lenses to monitor blood sugar levels. Thin, plastic sensors are embedded inside the contact lenses. They can be used by everyone (even people who do not wear contact lenses).
The sensors change color to reflect changes in the body’s glucose level. This product is not yet ready to be sold but should be within the next two to three years.

- **Smart tattoos.** Doctors are also doing research on how skin markings (like tattoos) can help monitor glucose levels. Instead of ink, these tattoos have tiny polymer (plastic) beads that change color when a person’s glucose level gets too low. These types of tattoos have been tested on animals and will be soon studied in humans.

- **Under-the-skin sensors.** These types of sensors would go under a person’s skin. They are smaller than the size of a dime and need no outside connections. For instance, one sensor uses “magnetoelastic technology.” This is like the plastic tags that stores put on clothing to prevent theft. With sensors like these, people would just wave their hands or arms in front of a reader to get a glucose reading.
New Ways to Get Insulin

• **Pressure, not needles.** Doctors are finding ways that people can get insulin through a “jet injection system.” One system uses pressure to quickly put medication under the skin. While people report feeling pressure, they say it is much less painful than a regular injection.

• **Insulin you can inhale.** Exubera® is a rapid-acting inhaled insulin that was just approved by the FDA (U. S. Food and Drug Administration). People use it by breathing in medication through a dispenser (about the size of an eyeglasses case). Even when taking this medication, people will still need to test blood sugar and may need to take insulin injections. Exubera can cause side effects such as coughing or a decrease in lung (breathing) capacity. Be sure to talk with your doctor about whether this new drug is right for you.

*Translated from Haven’t Got Time for the Pain: What’s new and in the works for pain-free diabetes management*

[http://www.amputee-coalition.org/inmotion/nov_dec_06/havent_got_time_for_pain.html](http://www.amputee-coalition.org/inmotion/nov_dec_06/havent_got_time_for_pain.html)