

AIDS FOR INSULIN USERS

● By Erika Gebel Berg, PhD

These tools can make life with injections easier

Injecting insulin can be challenging if you have limited sensation or pain in your hands, vision problems, or are afraid of needles. Fortunately, clever inventors have developed products that can give people with diabetes a little help with their insulin injections. In this section, we've included products that help people with dexterity problems 🖐️, vision impairment 👁️, and needle anxiety 😬.



INSUL-EZE (AmbiMed)

This clear plastic tube fits over the barrel of a syringe, magnifying its markings by 2X. Insul-Eze fits most syringes and insulin bottles. 👁️

MAGNIFICATION

BD MAGNI-GUIDE (BD)

This clear plastic tube fits over the barrel of a syringe, magnifying its markings by 1.7X. The needle end of BD Magni-Guide fits snugly with Eli Lilly insulin vials, which helps with stability while drawing insulin. (Insulin vials from other manufacturers may not fit properly.) 👁️



SYRINGE MAGNIFIER (Apothecary)

This device clips on to any standard syringe barrel to magnify its markings by 2X. 👁️ apothecaryproducts.com/syringe-magnifier.html (minimum order: \$50)



● Diabetes Innovator

RICK ADMANI

Not all diabetes innovation involves invention—sometimes it just means bringing a product that improves quality of life to market. Uncontrolled diabetes is a risk factor for vision loss, which can make taking insulin a challenge. “I had a grandfather who lost his vision because of diabetes,” says Rick Admani, COO of Prodigy Diabetes Care, the Charlotte, N.C., company that makes **COUNT-A-DOSE** (p. 74). It’s a device that allows a visually impaired person to fill a syringe with the desired amount of insulin. “The whole reason I’m in this business,” Admani adds, “is that it’s emotional for me.”

Admani, who has a background in biomedical engineering, had worked with the National Federation of the Blind developing the Prodigy line of talking blood glucose meters for people with diabetes and low vision. A few years ago, his contact from the federation reached out to him about the Count-a-Dose. The owner of the product had threatened to take it off the market because of difficulty with production and Food and Drug Administration regulations. “He did not want to invest more money in the product because the profit wasn’t attractive,” Admani says. “Prodigy took over the product and worked with the FDA to get the regulatory issues resolved.”

So, a year after the prospect of being taken off the market, Count-a-Dose was here to stay. “We get a lot of e-mails saying they appreciate us bringing the product back on the market,” says Admani. “These patients want independence and don’t want to wait for someone to come home to give injections.”

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INJECTION PORT

INSUFLON (IntraPump Infusion Systems)

This patch-like device reduces the number of times needle injections are necessary. The cannula is inserted into the skin at an angle of 20 to 45 degrees with a needle as the guide. Once inserted, the needle is removed, leaving the flexible cannula under the skin. The shallow angle of insertion makes it suitable for children and others with little tissue under the skin. Injections are made into a plastic tube that lies flat against the skin. The port must be replaced at least every three days. Compatible with syringe or pen needles. Available by prescription only. 😊

To find many of these products, ask your pharmacist or medical supply retailer or check online health-product stores.

Aids for Insulin Users

NEEDLE SAFETY



SECURITEE BLANKET (Regato Enterprises)

Like a cozy, this product fits around an insulin vial to make it easier to grip and less likely to break if dropped. Available in three sizes, depending on insulin type. 🐾👁️

VIAL SAFE (Vial Safe)

This plastic case protects insulin vials from breaking and helps users get a good grip while drawing insulin. Available in two sizes, depending on insulin type.

🐾👁️
vialsafe.com



INJECTION SAFETY GUARD (Apothecary)

This attachment fits over the cap of an insulin vial, creating a barrier that protects the hand holding the vial from accidental needle sticks. 🐾
[apothecaryproducts.com/
injection-safety-guard.html](http://apothecaryproducts.com/injection-safety-guard.html)
(minimum order: \$50)



INSUL-CAP (AmbiMed)

This plastic cap attaches to the top of an insulin vial to help users draw insulin into a syringe by increasing stability. To use, open the lid, insert the needle and syringe into the cap, draw the insulin, and then remove the needle from the cap for injection. Available in blue and orange, to help distinguish different types of insulin. 🐾👁️

PAIN RELIEF



BUZZY (MMJ Labs)

This vibrating bee-shaped device reduces the pain of insulin injections by distracting the user. It has a cold pack on the back and is placed near the injection site prior to injection. The combination of cold and vibration can diminish the sensation of the needle. It comes in two sizes and is also available in ladybug and plain black versions. 😊
buzzy4shots.com



SHOTBLOCKER (Bionix Medical Technologies)

This flexible plastic disk has a grid of blunt points on its underside. When pressed against the skin around an injection site, the numerous contact points distract the patient from the sensation of an injection. 😊
[bionixmed.com/med_
pages/shotblocker.html](http://bionixmed.com/med_pages/shotblocker.html)
(minimum order: box of 50)



UNIFINE PENTIPS PLUS (Owen Mumford)

This one-time-use device combines an insulin pen needle with a pen-needle remover. Users insert the pen into one side of the device and turn the pen until the needle screws onto the pen. Then, after injection, the user inserts the needle side of the pen into the other side of the device and turns the pen until the needle locks into place. The remover then safely houses the used needle until disposal. Compatible with all leading insulin pen brands. 🖐️👁️



● Diabetes Innovator

RACHAEL JACQUES

Unless you have a photographic memory, trying to pinpoint the tiny spot where you last injected insulin can be difficult. That's why Rachael Jacques, who lives near Minneapolis, invented **TARTOOS** (p. 75), an injection site rotation aid that's also a temporary tattoo. She recognized the challenges of injection site rotation through her work as a community health educator. She says, "One question kept coming up: 'I understand I'm supposed to rotate injection sites, but how do you remember where you last injected?'" Injection site rotation is important because injecting too often in one spot can cause people to develop lumps of fat or scar tissue under the skin that can change how insulin is absorbed.

"I KNEW WE'D HAVE TO HAVE SOMETHING THAT STAYED ON FOR MULTIPLE DAYS AND SOMETHING REMOVABLE"

Jacques says the Tartoos idea just came to her. "I knew we'd have to have something that stayed on for multiple days and something removable," she says. "Temporary tattoos seemed a good medium that takes care of that." Each Tartoo is made up of a 4- by 6-inch grid of 20 small images—the injection targets. Once a site is selected, the user removes the image with an antiseptic wipe and gives the injection at that spot.

Jacques shopped around for manufacturers that used federally approved colorants. "A lot of temporary tattoos come from China, and there's no regulation," Jacques says. Then she ordered 200 Tartoos to start with and applied for a patent (still pending).

With her prototypes in hand, Jacques began marketing. "I started e-mailing all the bloggers in the diabetic community, specifically parents," Jacques says. "As a mom myself, I knew if anyone was going to get behind this product, it was going to be moms and dads." She got positive reviews and requests for the product. "I just want to make it easier in the day-to-day," she says. "If we accomplish that, I'll be super happy."

Aids for Insulin Users

INJECTION AIDS



INJECT-EASE (AmbiMed)

Inserting a loaded syringe into Inject-Ease completely hides the syringe and needle. The tip of the device is pressed against the skin, and then a button on the other end is compressed to automatically inject the insulin. Spacer rings can be used to personalize the injection depth. Designed to work with BD syringes. 😊👉



AUTOJECT 2 (Owen Mumford)

This aid automates insulin injection with a variety of syringes. After securing a loaded syringe inside the Autoject 2, insulin can be delivered at the push of a button and without the needle being visible. Additional features include a safety mechanism that prevents accidental firing, adjustable needle penetration depth, and an indicator that changes color when the injection is complete. An alternate model, the Autoject 2 EI, allows a user to know by feel when an injection is complete. 👉😊👁

DOSING AIDS

COUNT-A-DOSE (Prodigy)

This allows a blind or visually impaired person to fill a syringe with the desired amount of insulin. A syringe is placed in Count-a-Dose so that the needle inserts into an insulin bottle, located in the device's bottle holder. Then, with each click of a dial, a unit of insulin is drawn. Count-a-Dose has places for two insulin vials. Raised dots on the bottle holder allow the user to know by touch which vial is which.

The aid works only with BD Lo-Dose syringes, type U-100, size ½ cc, 50 units. 👁



SAFE SHOT (Borin-Halbich)

This device guides the plunger of a syringe and can be preset to allow a person to draw the same insulin dose with each use. 👉👁

borinhalbich.com



● Diabetes Innovator

RENEE TOBIAS

What do you get when you combine pantyhose, scuba gear, and a broken insulin vial? That would be the **SECURITEE BLANKET** (p. 72), an insulin vial cozy invented by Renee Tobias of Wheeling, Ill. “Mom and I were at Portillo’s,” she says, a popular hot dog chain in Chicagoland. “The insulin is on the table, Mom all set to take it. Her finger touches it and off the table it goes. It broke.” Then the same thing happened during a family vacation, and this time it wasn’t so easy to get a replacement vial. That’s when Tobias decided to apply her craftiness to protecting those fragile bottles.

As a first attempt, she took some foam insulation, cut it to size, and wrapped it around her mother’s insulin vial. “It was really bulky and it wasn’t easy to hold,” she says. So Tobias kept crafting, searching for a solution that could help her mother and others protect their precious insulin. That’s where scuba diving enters this story.

One day Tobias, an avid scuba diver, realized that the neoprene used in wet suits could make a compact, easy-to-handle wrapper for insulin vials. There was one problem, though: The inside of her prototype neoprene cozy was too sticky, so the vials refused to slide into the holder. That’s when Tobias remembered that, back in the old days, divers (including men) would wear pantyhose under their wet suits to help them get the clothing on and off. That was her aha moment: “I’ll glue some of my nylons inside!” It worked. The pantyhose liner made the Securitee Blanket unique enough that she was able to patent the product. Tobias found a California company specializing in neoprene to handle the manufacturing of Securitee Blanket. Nylons are no longer used in the product, but the idea is the same.

The name, Securitee Blanket, came to her easily, Tobias says, because the product really is, by definition, a security blanket. “It reduces the anxiety,” she says. “It really is a blanket, and it gives you a little bit of security.”

“THE INSULIN IS ON THE TABLE, MOM ALL SET TO TAKE IT. HER FINGER TOUCHES IT AND OFF THE TABLE IT GOES IT BROKE!”



SITE SELECTION

TARTOOS (Visual Medical)

This temporary tattoo helps users rotate injection sites. It’s a 6- by 4-inch grid of 20 small images, the injection bull’s-eyes. Before injection, the image at that spot is removed with an antiseptic wipe. Available in robot, flower, and “medicon” (medical icon) images.
myvisualmedical.com