



Trends-in-Medicine

July 2005

by D. Woods

Quick Pulse

Trends-in-Medicine has no financial connections with any pharmaceutical or medical device company. The information and opinions expressed have been compiled or arrived at from sources believed to be reliable and in good faith, but no liability is assumed for information contained in this newsletter. Copyright © 2005. This document may not be reproduced without written permission of the publisher.

Trends-in-Medicine

Stephen Snyder, Publisher
2731 N.E. Pinecrest Lakes Blvd.
Jensen Beach, FL 34957
772-334-7409 Fax 772-334-0856
www.trends-in-medicine.com

THE PATIENT PERSPECTIVE ON LILLY/AMYLIN'S BYETTA (EXENATIDE)

Byetta (exenatide, exendin-4), a first-in-class incretin mimetic, is off to a good start with patients. The FDA approved Byetta, a drug derived from the saliva of Gila monsters, on April 28, 2005, as adjunctive therapy to improve glycemic control in Type 2 diabetics who have not achieved adequate control on metformin and/or a sulfonyleurea, but Byetta wasn't launched until June 2005. FDA approval also is being sought for Byetta as monotherapy for patients with Type 2 diabetes.

In order to gauge the reaction of patients who have tried Byetta as well as determine the likelihood of those patients remaining on Byetta, internet diabetes message boards and user groups were scanned. In early July 2005, there was little chatter about Byetta, which is somewhat unusual for a new treatment, but that picked up dramatically by mid-July. Twenty patients were identified who have started Byetta, and they were interviewed for their opinion of the drug and the outlook for their continued use.

These patients have been taking Byetta for no more than a few weeks (range 5-30 days), with the exception of one person who participated in the Phase III and open-label clinical trials. Some patients discovered Byetta on their own, and others started it on the recommendation of their doctor/endocrinologist. Most patients are still learning how long after eating they should inject Byetta.

Patients were generally enthusiastic about Byetta, particularly because of its role as a weight loss aid. Nausea is by far the greatest side effect, but that appears to subside with time. However, one patient has not experienced a decrease in nausea after three weeks and is considering stopping the drug. Other side effects are generally mild.

Half the patients said they will definitely renew their Byetta prescription, and the other half are undecided, with most of these saying it is too soon to decide. Most have a favorable opinion of the drug, saying that it helped them cut down on their insulin, helped lower their blood sugar levels, and helped them lose weight. Comments included:

- "It has really cut down on my insulin by 10 units, and I'm not even up to the full dose yet. Also, I eat a lot less, and the best part is that my blood sugar is always hovering around 100 or lower."
- "Before I was on Byetta, I had an HbA_{1c} of 9.1. I just got my new HbA_{1c}, and it is at 7.7."
- "I've stopped insulin and have lost weight."
- "My blood sugars have really normalized. I don't mind the injections."
- "I went from an HbA_{1c} of 8.7 to 6.2 over a period of six months...It's a minor hassle keeping the drug refrigerated, but the result is well worth it."

- “I’m seeing a lower blood sugar average, plus weight loss is tremendously encouraging. This drug may indeed be a lifesaver for me. My blood sugars are in the 118-150 range, and prior to Byetta they would always be in the 200s and 300s. This evening before dinner my blood sugar was 138. I’d been taking 40 mg of enalapril daily for blood pressure, which, without Byetta, was 200/100. I stopped taking that (enalapril) along with the glucophage five days ago. I had to visit my primary care physician (this week), and my blood pressure was 160/92, without the usual meds. Although that qualifies as hypertension, it was a major improvement for me.”
- “Byetta has kept my blood sugar under control almost from the first day. My doctor switched me over from Lantus (Sanofi-Aventis, insulin glargine), and my weight loss has been nine pounds. It’s a hell of a lot easier than figuring out dosing for Lantus.”

For most patients, the potential for weight loss was a major factor in the decision to try Byetta, and they reported that it does seem to greatly decrease appetite. Several sources said they wanted to stop taking insulin because of weight gain, and others mentioned that the Byetta needle is easier to use than other needles, explaining that the Byetta needle is smaller, with less medication injected.

- “I’m 100 pounds overweight and a Type 2 diabetic, and weight loss looked almost impossible. I just needed a ‘leg up’ to get started, and my endocrinologist recommended Byetta. I definitely have more energy (now).”
- “I’ve been on glucophage for two years. Lantus was added to the mix this past February due to my HbA_{1c} remaining high. I gained a lot of weight – 10 pounds around my midsection – putting me at 223 pounds at 5 ft. 3 in.”
- “My endocrinologist suggested Byetta...I’m on a high dose of insulin, so I’ve had severe weight gain problems. We are hoping to wean me off insulin at some point.”
- “I’m a recently diagnosed Type 2 diabetic and am unable to control my blood sugar levels. Given the choices out there, I begged my doctor not to go on insulin, which she indicated could lead to weight gain. I went on Byetta for the weight loss potential as well as the self-regulating nature of the drug. Maybe I’m wrong, but I’m not really keen on constant monitoring, and Byetta is supposed to ‘stop working’ when blood sugar is normal. I was skeptical at first because I didn’t want to inject. But the (Byetta) pen is painless other than a quick poke. I’m freaked out by needles, so the pen is perfect for me.”
- “I had been on Weight Watchers for nine months or so and lost 30 pounds but had plateaued and quit the program. Of course, I gained all my weight back. My labs had been so much better, my HbA_{1c} was normal, cholesterol was below 200, triglycerides were normal for the first time in several years, and my blood pressure was better. With the weight gain, it all went south. I saw my doctor three weeks ago and told him that I had ‘fallen off the wagon,’ and he said he had something to show me...I was really surprised when he told me about Byetta. I’m a nurse, and this medicine was nowhere on my radar screen.”

Weight loss results have been good. The patient who participated in Byetta clinical trials said he lost 15 pounds over the course of the trials but gained it back once he stopped taking the drug; he plans to start taking Byetta again. Two patients on Byetta for fewer than five days said they hadn’t lost any weight yet, but the remaining seven patients lost from 3-13 pounds. Patients said they don’t think the nausea caused their weight loss, and many said they feel more energetic on Byetta. Several who had switched to Byetta from other drugs – such as Lantus, GlaxoSmithKline’s Avandia (rosiglitazone), and Lilly/Takeda’s Actos (pioglitazone) – said they felt great and had more energy. Their comments included:

- “My appetite has greatly diminished, and it’s easier to resist carbs.”
- “I have lost weight. I’ve lost my appetite. I’m eating about half of what I normally eat.”
- “For the first time in my life, I have forgotten to eat and don’t mind it at all.”
- “I’ve lost a couple of pounds, but it’s too soon to see if they are real pounds and not just water weight, so I won’t jump up and down for joy just yet, though I might anyway just because I feel that good physically.”
- “I’ve stopped insulin and have lost about 12-15 pounds in nearly three weeks.”
- “I’ve lost 11 pounds in three weeks. I don’t believe it’s due to nausea but, rather, to the delayed gastric emptying. I don’t expect to keep losing at this pace, but any loss is a plus.”
- “I don’t feel like eating as much! I’ve lost 12 pounds this month, and I actually check the scale every day...I feel more energized after meals and have started taking tennis classes at night after dinner...I didn’t experience nausea. My weight loss has been due to my eating less. The biggest change is that the drug really does seem to make me want to go out and get fit...I’m sleeping better too (probably from the exercise). I really hate to say it, but it really has changed my life, as much as something could over a month...Byetta has helped transform me. I’m no longer as scared of diabetes, and I feel I’m on my way to a fit, energized, new beginning.”
- “I’ve lost about three pounds so far. I haven’t changed my choices in foods since starting it as I wanted to see if I would really lose weight. I’m 100% sure that the reason for my weight loss is my body telling me it’s full. I’ve started throwing away half my lunch almost every day now. My food intake has decreased by at least 50% per day.”

- “In a word, it’s awesome! I’m usually a four-plate guy at the local Golden Corral (restaurant). Now, I feel full after one plate.”

Most patients said they suffered from terrible nausea when they first started Byetta, but they said it subsided over time. Patients with more experience reported that the nausea is greatly diminished if they eat within an hour of taking the injection. Several also mentioned that spicy or heavy foods bring on nausea. A patient on Byetta for six days said, “Nausea is really impacting my ability to function. I spent a couple of hours today with my head on my desk. How long will this last?” Another patient on Byetta for seven days said, “The nausea is awful. I haven’t approached my doctor yet to see if there is anything I can do, but I almost can’t function for a few hours after the injection. The nausea seems to peak about 1.5-2 hours after injection, and it lasts for maybe two hours. When I’m physically working, it seems to diminish in intensity. I’m trying to tough it out and stick with the plan since I’m told this will decrease in time. If it doesn’t, I’m not sure that I can continue.”

However, most other patients said they felt better over time:

- “If I can lose weight, the nausea will be worth it.”
- “I had nausea at first. It was mild, but it was definitely there. It got progressively better a few weeks into the trial. After five or six months, there was no nausea at all.”
- “The nausea was bad at first, which was not surprising, since the first month should be a dose of 5 µg in the morning and night. My doctor called in a prescription for the 10 µg pen. I was so anxious to start, and I had opened the package, so I made the decision to go ahead and start with the 10 µg.”
- “I have mild nausea, but no meds are needed.”
- “I was worried about nausea, but the only change I’ve felt is a feeling of fullness – no nausea at all.”
- “My doctor told me to expect that the nausea would decrease over time.”
- “At first, I had really bad nausea and thought I might throw up. I never experienced any vomiting. As time has gone on, my nausea is so much less. I still have it once a day, but it is fleeting and mild. I have only treated it with saltine crackers, which have worked for me.”
- “I experienced nausea and fatigue about two hours after the injection at first. Now, I don’t notice fatigue at all, and the nausea is fleeting, minimal, and not a big bother.”
- “So far, the nausea hasn’t been horrible, but I keep burping up the taste of food I ate at least four hours ago.”

While nausea was the overwhelming negative side effect, other side effects that patients mentioned included hypo-

glycemia, constipation, dyspepsia, acid reflux, low energy, mild headache, a warm flushing feeling, sweating, and feeling cold. Among the side effect comments were:

- “I have an occasional two-hour period of low energy malaise. I’ve been a Type 2 diabetic for 12 years and insulin-dependent for about five years.”
- “I only experienced hypoglycemia in the evening about two to three hours after eating dinner. This happened perhaps twice a month, with readings in the 50s and 60s. I learned to stop the symptoms and take action to prevent it from going lower than 70; usually a glass of orange juice took care of the problem.”
- “It seems Byetta slows the digestive process, and (I had) constipation. Some of the comments I’ve seen (on message boards) say the weight loss may be due to slower digestion, and that seems reasonable to me.”
- “I have a problem with acid reflux. I think I’ve probably always had a problem with it, but didn’t realize it as much until I started Byetta. I take Gaviscon (GlaxoSmithKline, aluminum with magnesium hydroxide, an antacid), for this occasionally – two or three times a week – and it seems to help.”
- “Besides nausea, dyspepsia was a serious side effect due to the delayed gastric emptying. I’ve learned to eat carefully, limiting anything fatty or spicy. It’s also easier to eat sensibly because I am no longer very hungry. I force myself to eat lunch, and I’m probably eating half what I used to.”
- “Side effects include mild headache and mild nausea, with no meds needed. There is a warm flush, lasting about two hours, but it is not particularly bothersome, and mild constipation. Increased fiber in meals is taking care of that.”
- “Besides nausea and dyspepsia there is another side effect – an hour or two of feeling cold. There is some slight temperature elevation, but not fever.”

Several patients said that they are having difficulty finding Byetta. One said, “I’m in Atlanta, so I have access to all the chain stores, but most have never heard of it, and the ones I have checked don’t have it listed in their ordering system.” Another said, “It took a few days to order Byetta from my local Rite-Aid when I started my prescription. I’m not exactly sure if my insurance will cover the costs yet. There has been some confusion and some conflicting information.” A third said, “I plan to renew my prescription. Some people have had problems with getting the drug. Walgreens didn’t have it, but they were able to order it and have it the next day. My insurance covered the cost minus my \$30 co-pay and the cost of the needles.” Some patients have received free 90-day supplies of Byetta and are slightly worried about whether their insurance will pay once those supplies run out.

