

Just Another Reason Why I Hate Diabetes:

Ella Fitzgerald



By **Walter M. Bortz II, MD**



Very few of us are known by our first name alone. But “Ella” can be only one person. Born in Virginia, April 25, 1917—into poverty and a broken home—Ella, as a young child, moved to Harlem where she was soon orphaned. At age 15 she was confined to the Colored Orphan Asylum and then to the New York State Training School for Girls, which prompted her escape to the street where she lived a homeless existence for a few more years of her childhood.

At age 16, she entered an amateur music contest at the famous Apollo Theater in Harlem, New York where she had intended to dance, but was so intimidated by the earlier performances that, impromptu, she instead sang two songs for which she won the first prize of \$25. Members of the audience lent support and shortly thereafter she affiliated with Chick Webb’s band—with whom she recorded several early songs. In 1938, at age 21, she recorded the silly nursery rhyme, “A-Tiskit, A-Tasket,” which sold one million copies, and with effort... I feel I can recall hearing it.

Her voice was so pure and so broad that her repertoire was vast: melancholy ballads, sweet lullabies, hopeful love songs, oldies and new releases. Dizzy Gillespie urged her to improvise, which led to her signature adoption of “scat”—using her voice as a musical instrument. Her recordings with Louis Armstrong are immortal... “How High the Moon” was a huge success. Ella’s glorious sounds still echo in the deep chambers of my memory.

Over the subsequent years she sold 40 million albums, won 13 Grammys, sang at Carnegie Hall 26 times, was awarded the

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Relapse Prevention

Richard R. Rubin, PhD, CDE



Let’s face it: it’s just plain easier to eat what you want and to not exercise or check your blood glucose regularly, than to do all the hard work involved in taking the best possible care of yourself.

Even when you are doing that hard work the temptation to give up, or at least to take a break, is there all the time. And in some situations that temptation can be very strong.

When you are in a situation where you are tempted to lapse there’s often a battle going on inside of you. If you are feeling strong and confident you can overcome the temptation, stick with your efforts, and “do the right thing.” But if you aren’t feeling strong and confident and the temptation is really powerful, you will give in and slip or lapse.

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February is
National
Heart
Month

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National Medal of Art award by President Reagan, was presented honorary degrees at Dartmouth and Yale, and her portrait was made into a stamp by the US Postal Service. From the years 1956 to 1964 she exhibited her vast talent and recorded numerous song books; the one I remember most impressively was the Cole Porter set of gorgeous songs; I almost wore it out. Ira Gershwin remarked, "We didn't realize that our songs were so good until Ella sang them." Ella is acknowledged to be the finest female jazz singer of all time.

All of this success was accomplished against the backdrop of marital discord and ugly racism. Ella stayed cool—always.

Sometime around 1970, at age 53, she developed diabetes. Its ravages started to take a terrible toll. Most photos of her from this era reveal thick lenses as the result of diabetic retinopathy. Almost cruelly, one of her big hits was a song entitled, "I Used to be Color Blind, Until I Met You."

Further, prompted by a sequence of cardiovascular encounters, she had quadruple coronary artery bypass surgery in 1986; then the further terrible indignity of having both legs amputated in 1993. This singular person loved the world over, became reclusive. I almost tear up just recalling these vicious encounters.

Although there will never, ever be another Ella... there are tens of millions of other persons, each unique and contributing to the richness of this world, enduring the torments of diabetes. It is a cruel irony that this life that brought so much joy to so many—myself included—should end with a slow, painful fall of the final curtain. Have you found, as I have, that life isn't fair? Some of nature's rules should be rewritten. DRWF is trying.

Ella died at her home in Los Angeles June 15, 1996, at age 79.

The American Diabetes Association provides the broad statistic that the diagnosis of diabetes shortens one's life, on average, by 15 years. Applying this to Ella's life might mean that she may have lived to 94—if she hadn't met up with this hideous disease. How many more dreamy memories might she have created for us? How many more delicious melodies might she have sung?

This speculation was heightened by a recent TV news spot telling of Tina Turner's upcoming world tour at age 70. Asked about this, Tina ventured that she anticipated still performing until she was 100.

I can't help but wonder... If Ella had only danced as well as she sang, might we all still be rocking to her presence? 🍏

The Vegetarian Diabetic Diet

By Usha Kalro, MS, RD, LD

It is that time of the year when people resolve to take steps to improve their health. Some may consider a change in diet; others may choose to increase exercise. A healthier diet plan for most people translates into a higher intake of fruits, vegetables and whole grains. This can be of particular benefit for diabetics, as such diets are low in saturated fats and cholesterol and high in fiber and antioxidants.

Many people are turning to vegetarian diets as more studies show the benefits of a vegetarian diet on human health and the environment. Some also turn to it for ethical reasons, religion, economy or taste.



But what is vegetarianism?

Vegetarianism may be defined as the absence of animal foods in the diet. That includes meats, sea foods, eggs and anything for which a living creature had to die to provide food for humans. Typically, vegetarians do consume honey and dairy products.

Other types of vegetarianism include:

- **Lacto-ovo-vegetarians:** include dairy and eggs in their diet but do not consume any other animal products.
- **Lacto-vegetarians:** include dairy products in their diet but abstain from other animal foods.
- **Ovo-vegetarians:** include eggs in their diet.
- **Vegans:** consume only plant foods. They do not consume eggs, dairy, honey or meats.

The effect of vegetarian or plant-based diets has been extensively studied and there is conclusive evidence that such diets significantly reduce the risk of cancer, heart disease and obesity.



The American Dietetic Association and Dietitians of Canada state: "Vegetarian diets offer a number of nutritional benefits including lower levels of saturated fat, cholesterol,



and animal protein as well as higher levels of carbohydrates, fiber, magnesium, potassium, folate, and antioxidants such as vitamins C and E and phytochemicals.” Vegetarians tend to have a lower body mass index, lower levels of cholesterol, lower blood pressure, and less incidence of heart disease, hypertension, Type 2 diabetes,

renal disease, osteoporosis, dementias such as Alzheimer’s disease and other disorders.

The typical vegetarian diet is rich in fruits, vegetables, beans and legumes, nuts and whole grains. These foods in turn provide high levels of fiber, B vitamins and minerals needed for good health. Let us now examine why a vegetarian meal plan may be important for a diabetic.

Fiber is a very important component in a diabetic diet. Fiber—both soluble fiber found in oats, beans and vegetables and insoluble fiber such as bran from whole grains—slows the digestion of food. This, in turn, slows down the release of glucose in the blood stream; thereby improving insulin sensitivity and glucose tolerance. In addition, when a diabetic eats a fiber-rich meal the desire for further food disappears.

The dark green leafy types of vegetables and the cruciferous types—including broccoli, cauliflower, cabbage, kale and bok choy; beans and peas, nuts and seeds, and whole grains are considered good sources of B vitamins and trace minerals such as phosphorous, magnesium, iron, zinc, chromium and manganese.

Chromium is part of the glucose tolerance factor and improves glucose utilization. Chromium is also directly involved in carbohydrate, fat and protein metabolism.

Magnesium has many functions in the human body. It is used in muscle and nerve functioning and supports the immune system and bone health. Magnesium plays a part in protein synthesis and energy metabolism. It also helps in controlling and preventing hypertension and cardiovascular disease. Its role in Type 2 diabetes is to regulate blood sugar levels.

Manganese is necessary for pancreatic function and several aspects of carbohydrate metabolism.

Patients with diabetes are more likely to have a suboptimal status of zinc, an essential co-factor for metalloenzymes that regulate the metabolism of carbohydrates, lipids, and proteins. Zinc is needed for proper release of insulin.

B vitamins are also important in the metabolism of fats, carbohydrates and proteins.

But one does not have to become a vegetarian to enjoy these benefits. Simply increasing the consumption of fruits, vegetables and whole grains can lead to better blood sugar control and increased energy levels. You can start with just two meatless meals a week and gradually increase it.

To help you get started, below is a recipe for delicious meatless chili:

Healthy Recipe

Meatless Chili

(6 servings)

Ingredients:

- TVP (Texturized Vegetable Protein) Chunks- 2 cups
- Red Beans, 15 oz can - 1
- Pinto beans, 15 oz can - 1
- Crushed tomatoes, 28 oz. can - 1
- Tomato sauce or puree- 1 small can
- Onion, chopped - 1 medium
- Garlic cloves, crushed - 6-8
- Celery - 2 stalks
- Cumin powder - 1-2 teaspoons
- Paprika - 1 teaspoon
- Hot chili powder to taste
- Lemon/lime juice - 1 tablespoon
- Olive oil - 2 tablespoons
- Vegetable broth or water - 2-4 cups

Method:

1. Soak TVP chunks in hot water for 15-20 minutes. Squeeze and set aside.
2. Heat oil in a heavy-bottom pan; sauté onion, celery and garlic until fragrant—about five minutes.
3. Add all spices; stir, add TVP chunks, vegetable broth or water and let simmer for 10 minutes.
4. Rinse beans, add to the pot.
5. Add tomatoes, stir well and let simmer.

Taste and adjust seasonings.

Serve with steamed brown rice or cornbread.

Nutritional analysis per one cup serving:

Calories: 331, Carbohydrates: 53g, Protein: 18g

Fat: 5g, Fiber: 15g, Sodium: 759mg, Cholesterol: 0g

Internet Resources for Meal Planning

By Kathy Gold, RN, MSN, CDE

Planning ahead is the best way of ensuring that you eat healthy meals. Planning your meals for the week may help you stay the course. There are many resources available to help you do this. In my search of the Internet I found three sites that may help you understand how foods affect your blood sugar and, therefore, help you plan accordingly. All of these efforts take time. However, the time you invest now will produce big payoffs in the future in keeping you healthy.

The NutritionData website at www.nutritiondata.com is probably one of the most comprehensive sites available. It offers a listing that includes most foods, allows you to track your nutrition, provides helpful suggestions, and also includes information on the glycemic index of foods. Another handy tool is that it can provide nutrition information on your personal recipes, allowing you to evaluate the healthfulness of any favorite recipe, as well as how you can make it healthier.

The American Diabetes Association offers *My Food Advisor* at <http://tracker.diabetes.org/myfoodadvisor.html>; this site allows you to:

- Explore 5,000 different foods
- Search database by setting your own criteria for carbohydrates and four other nutrients
- Search for healthy alternatives
- Easily add up the carbs, fat and 20 other nutrients you eat in a day
- Browse recipes or search by criteria that you select
- Save meals and recipes to your personal recipe box

For instance, you can look at three categories of foods: carbohydrates (the foods that affect your blood glucose level), meats and substitutes, or fats and others. A listing of the food is provided and you can then choose the food you would like to add to your menu. It

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University of Minnesota Receives \$40 Million for Type 1 Diabetes Research

The Richard M. Schulze Family Foundation has pledged \$40 million to the University of Minnesota for diabetes research. This is the second largest gift to diabetes research in the United States, and is to be paid over five years. In recognition for this generous donation, the University of Minnesota will rename the Diabetes Institute for Immunology and Transplantation to the Schulze Diabetes Institute.

Bernhard Hering, MD; co-director of the Schulze Diabetes Institute states, "Curing Type 1 diabetes is possible. We only need to declare it possible, engage the brightest minds, be contagiously committed, and break all barriers. This gift is breaking big barriers by boosting resources, raising awareness, and injecting a sense of urgency and responsibility."

The University of Minnesota researchers have had a successful record of reversing diabetes with human islet transplants; however, due to the shortage of donor organs and the challenges of immunosuppression therapy few individuals have been able to benefit from this treatment. The University of Minnesota has been a pioneer in developing an abundant supply of islet cells and safer immunosuppressant therapies. This generous donation will allow them to continue to move their research forward. Dr. Hering states confidently: "We have the capacity to cure this devastating disease and help people enjoy a happy and productive life, no longer constrained by diabetes and constant fears and worries."

It is hoped that through this generous donation from the Schulze Foundation many patients may be helped to achieve a cure for diabetes. The Schulze Diabetes Institute, the Stem Cell Institute, the Center for Translational Medicine, and other University of Minnesota resources will work together in developing a three-pronged attack against diabetes using human islet transplantation, pig islet transplantation, and stem cell-derived islet cells. This collaboration will be led by Dr. Bernhard Hering and Meri Firpo, PhD of the Stem Cell Institute, and Bruce Blazar, MD from the Center for Translational Medicine.

The team, led by David Sutherland, MD, PhD, co-director of the Schulze Diabetes Institute, was the first to perform a human islet transplantation in 1974. Since that time, Drs. Hering and Sutherland and the team of researchers have been instrumental in establishing a successful protocol for human islet transplantation. Meri Firpo, PhD of the Stem Cell Institute states, "This gift gives us a significant opportunity to collaborate and bring different and very promising approaches to the same problem. These synergies will help us find the best cure faster. Stem cells provide another source of islets for transplantation and offer us tremendous potential to conquer this complicated disease."

For more information about this project please visit their website at: www.springpointproject.org

Sometimes when people lapse they catch themselves. They recognize what is happening and (as fast as they can) do what it takes to get back on track. That protects them from a relapse.

But other times the lapse shakes the person's confidence in his or her ability to maintain control and stick with the program. This can lead to a slide down the slippery slope to a full-blown relapse.

What triggers your lapses?

What puts you at risk for a lapse or a slip from your diabetes management efforts?

For most people the answer is specific situations that involve one or more of the following:

Internal urges: telling yourself that you deserve that big dessert; that you are too tired to exercise or to check your blood glucose; that you just feel like relaxing or that you feel like celebrating with extra food.

Negative emotions: feeling angry, lonely, bored, sad, tired or frustrated.

Something bad happened: an accident, health problem, or money worries.

Stress with another person: arguments or tension.

Social pressure: people encouraging you to eat things you shouldn't or to eat more than you should; people encouraging you to relax and not exercise; seeing other people eating or relaxing.

It's very important to recognize the specific feelings and situations that lead you to slip or lapse. That gives you a "map" that shows you the locations of the temptations and dan-

ger spots that could throw you off course.

The next step of course is to avoid as many of those temptations and pitfalls as possible, and to get yourself back on course whenever you do slip.

How to avoid lapses and prevent relapse

Some of the same things that will help you avoid lapses will also help protect you from relapses, if you do lapse. Here are some suggestions.

Avoid situations that trigger a lapse.

Think about ways to manage situations that might cause you to lapse. If negative emotions trigger a lapse, what have you done in the past that helps you feel better and avoid a lapse? If social situations are a problem, what has helped you better cope with the temptations these situations pose for you?

Recognize the tricks your mind can play.

Stop and listen to what you say to yourself when you are in danger of lapsing. Do you tell yourself things like: "I missed a couple of days of exercise this week, so this week is shot—I'll just try to start again next week"? Or, "I've had a really rough day; I deserve that big dessert"? Or, "I know my glucose level is high so there's no reason to check"? Thoughts like these are an early warning sign that you might slip. Do thoughts like this really make sense? For example, isn't exercise always a good thing, even if you have missed a couple of days?

Remember, a lapse is not a relapse.

If you lapse, keep calm and don't beat yourself up; that will only make things worse and could trigger a full-blown relapse. A lapse is not a sign that you are weak or that you have failed. No one ever manages diabetes perfectly. In fact, a lapse can be a learning experience. Think about what led to the lapse and how you can protect yourself in the future if you are in the same

situation. Think about what helped you get back on track the last time you lapsed. The lapses you learn from increase your chances of minimizing future lapses and avoiding a relapse.

Stay strong. Staying strong and confident is the key to avoiding lapses and preventing full-blown relapses. So it's important to do things that help you feel strong and confident. They include having fun, changing your thinking, laughing, and relaxing. And don't forget about the strength and confidence you can get from spending time with people who love and care about you. They can remind you what a good, capable person you are.

Keep your personal motivator in mind. Never forget your personal motivator – the reason you are working hard to manage your diabetes. Is your personal motivator being able to play with your grandchildren, or being able to keep doing other things you love to do? Keep that personal motivator in mind. It can help you stay strong when you face temptations and pitfalls that can lead to a lapse.

Don't forget what you are doing right. Lapses are inevitable, but when people lapse they often start thinking they can't do anything right. They may start telling themselves that they will never be able to manage their diabetes. That's why it is important to take a realistic view of what you really have accomplished. Don't forget what you are doing right. Just as no one does everything right when it comes to managing diabetes, everyone does something right. Keeping what you do right in mind can help you stay confident and protect you from a full-blown relapse.

Lapses are inevitable, but relapse is not. I hope that some of the tips in this column will make it easier for you to keep your lapses to a minimum and to avoid relapse altogether. 🍏



Inhaled Insulin May Be Available Again

Mannkind recently announced that their Phase III clinical studies demonstrated positive results for their rapid-acting inhaled insulin—Afresa, previously called Technosphere insulin. Positive results were reported in the clinical trial comparing Afresa and rapid-acting injectable insulin in individuals with Type 1 diabetes. A study of 2,000 individuals with Type 1 or Type 2 diabetes compared the lung tolerance of Afresa users during meals with users of standard treatment. After two years no pulmonary side effects were noted. In another study, a comparison of Afresa during meals with a combination of long-acting basal insulin, pre-mixed rapid-acting analog, and intermediate-acting insulin administered twice a day resulted in comparable improvement in A1C levels. Mannkind hopes to submit a request to the US Food and Drug Administration in early 2009.

Diabetes Costs Exceed \$217 Billion in 2007

In a report by the Diabetes Economic Barometer Study the cost of diabetes, pre-diabetes, and undiagnosed diabetes in 2007 was stated to be \$217.5 billion. This figure surpasses the widely accepted earlier estimate of \$174 billion. The Economic Barometer Study revealed that an additional \$18 billion was spent on 6.3 million undiagnosed individuals with diabetes, \$25 billion was

spent on the 57 million individuals diagnosed with pre-diabetes, and \$623 million was spent on the 180,000 women diagnosed with gestational diabetes.

The research funded by the National Changing Diabetes Program® (NCDP) found that individuals with pre-diabetes required a significant increase in ambulatory visits for a variety of medical conditions: hypertension, endocrine, metabolic and kidney complications. Data also showed an increase in ambulatory and hospital-based care for diabetes complications during the two-year period before diagnosis.

Researchers feel that businesses can reduce the devastating costs of this disease by taking an interest in the well-being of their workforce—engaging employees in healthy lifestyle behaviors and providing them with the tools and information to make better choices for healthy living.

At a recent forum sponsored by Novo Nordisk, executives from large US employers convened to discuss the critical role of business in addressing the diabetes crisis and protecting our present and future workforce. Jerzy Gruhn, president of Novo Nordisk, stated, “As the leading source of healthcare for Americans, businesses have the ability to change the direction of diabetes by tailoring benefits toward prevention, education and access to treatment.”



Internet Resources . . . Continued from Page 4

will provide nutritional information, serving size, and a quick view of the amount of carbohydrate, fat, fiber, and sodium present in the product. It also provides a detailed nutrition label and information about vitamin and mineral content.

The American Heart Association has a grocery list on their website that allows the user to create a list of certified heart-healthy foods. You are able to search the list by category and manufacturer. You can identify the quantity of the item and then print out your list or access it from your PDA or mobile phone. For more information check out: <http://checkmark.heart.org/>

Take advantage of this wonderful technology and use it to help manage your diabetes and plan healthy meals. 🍏



MEDICATIONS

By Kathy Gold, RN, MSN, CDE

Over the next few months *Diabetes Wellness News* will feature a column discussing the medications used to lower blood glucose levels. We have an armature of medications available to treat diabetes and it is important that you are knowledgeable about your medications in order to achieve the greatest benefit from them.

Taking them at the appropriate time and being aware of their peak and duration of efficacy can help you better manage your diabetes. In my experience of educating individuals with diabetes about their medicines, I frequently discover that medications are not taken consistently nor at the time of day that may provide the best benefit. Patients are frequently not aware of the name of their medications, their side effects, or what action they perform.

The information offered monthly in this column will provide you with the facts you need to use your medications effectively as well as provide information enabling you to discuss with your health care professional the various treatment options available that may improve your blood glucose control.

Metformin

Metformin, Glucophage, Riomet (liquid Metformin) and Glucophage XR (extended release) are frequently the first medications an individual with Type 2 diabetes will be started on, and in some cases individuals with pre-diabetes may also be prescribed one of these medications. Metformin should not be taken by children younger than 10 years of age and Glucophage XR should not be taken by teens younger than 17. Metformin is an FDA Pregnancy Class B medication and is not thought to hurt an unborn child. If you plan on breastfeeding your baby it is important to discuss the use of Metformin with your health care provider, as it is not clear if it passes into breast milk or if it will harm a nursing baby.

Metformin is a biguanide. Biguanides act to limit the production of sugar by the liver—helping your body respond better to the insulin it makes naturally and decreasing the amount of sugar your intestines absorb. The cells in our body require glucose for energy. During periods of fasting the liver provides glucose to the cells, and when blood glucose levels normalize the release of glucose ceases. However, in individuals with diabetes the liver tends to release glucose even if blood glucose levels are normal, resulting in higher than normal blood glucose levels. Many individuals with Type 2 diabetes experience high fasting blood glucose levels when they test their blood glucose before breakfast. It is this defect that Metformin (Glucophage) targets. Individuals taking Metformin should experience a lowering in their fasting blood glucose levels.

Metformin is usually prescribed to be taken once or twice a day. In order to minimize side effects and prevent stomach upset, it is usually taken after the meal. Metformin is usually started at a dose of 250-500 mgm once a day to mini-

mize side effects. It is then gradually increased until the therapeutic dose of 1500 mgm is reached. The maximum dose of this medication is 2400 mgm per day. Most patients are maintained at 2000 mgm per day. Metformin is usually taken in doses of 1000 mgm after breakfast and 1000 mgm after dinner. Glucophage XR should not be crushed or chewed, as it is a time-released medication.

Metformin is contraindicated in individuals with kidney disease or heart disease. Individuals taking Metformin should have kidney function tests performed regularly to ensure that they have a normal Creatinine level. Metformin is excreted by the kidneys, and if the kidneys are not functioning correctly a buildup in the level of the medication may result in a condition known as lactic acidosis. As a precaution, individuals should stop their Metformin if they are having a CT scan or x-ray procedure that uses an injectable dye, or if they are going to have surgery. These procedures may result in a decrease in kidney function and place you at risk for lactic acidosis. After you have resumed normal food and fluid intake your doctor will tell you when you can resume your Metformin.

Side effects of Metformin may include: Abdominal discomfort, diarrhea, gas, headache, indigestion, nausea, vomiting or weakness. Low blood glucose reactions do not generally occur when taking Metformin unless Metformin is used with insulin or a sulfonylurea such as Amaryl, Glipizide or Glyburide.

While taking Metformin it is important to avoid drinking alcohol. Heavy alcohol intake increases the risk of lactic acidosis and may also trigger a low blood sugar reaction.

Metformin is frequently combined with other diabetes medications as a single pill – Glucovance, Janumet, Metaglip, PrandiMet, Avandamet, ActoPlus Met. 🍏

FEBRUARY IS NATIONAL HEART MONTH

Heart disease is the leading cause of death in the United States and a major cause of disability. In 2008, an estimated 770,000 Americans will have a new coronary attack and about 430,000 will have a second attack. Every 26 seconds an American will have a heart attack and every minute someone will die from heart disease. The risk of developing heart disease can be reduced by knowing the signs and symptoms:

- ✓ Chest discomfort – most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness, or pain.
- ✓ Discomfort in other areas of the upper body – symptoms can include pain or discomfort in one or both arms, the back, neck, jaw, or stomach.
- ✓ Shortness of breath – may occur with or without chest discomfort.
- ✓ Other signs – these may include breaking out in a cold sweat, nausea, or lightheadedness.

Steps to reduce your risk factors:

- ♥ Prevent and control high blood cholesterol
- ♥ Prevent and control high blood pressure
- ♥ Prevent and control diabetes
- ♥ Eliminate tobacco; quit smoking
- ♥ Moderate alcohol use
- ♥ Maintain a healthy weight
- ♥ Regular physical activity
- ♥ Diet and nutrition

Insulin Trivia

All creatures, great and small, need it.

Insulin is required for all animal life, and it works just about the same in nematode worms, fish and mammals like us. The initial sources of insulin for clinical use in humans were cow, horse, pig or fish pancreases. They all work because they're nearly identical to human insulin. Cow insulin differs from human insulin by only three amino acids, and pig insulin by only one. Before human recombinant analogues were available, Novo Nordisk was able to convert pig insulin into human insulin by removing the single different amino acid and chemically adding the correct one.

Diabetes Wellness Network®

Diabetes Wellness News (U.S. and Canada residents only)

The *Diabetes Wellness News* is published monthly for an annual subscription price of \$24.00 for U.S. and \$32.00 for Canada.

For subscription and billing questions please call toll free at: 1-866-293-3155, Monday–Friday 10am–5pm (EST).

Email to: subscriptions@diabeteswellness.net. Or mail to:

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P.O. Box 587 • Frederick, MD 21705-0587

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