



Licking Memorial Health Systems

1320 West Main Street
Newark, Ohio 43055

Please take a few minutes to read this month's report on **Diabetes Care**.

You'll soon discover why Licking Memorial Health Systems is measurably different ... for your health!

Visit us at www.LMHealth.org.

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Quality Report Card

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Health Tips - Careful Diabetes Management Can Avoid Complications

Diabetes places patients at risk for a wide variety of complications that can be debilitating or even life-threatening. Fortunately, many complications can be avoided, or at least delayed, through healthy lifestyle changes and careful monitoring. Here are some important tips for diabetes management:

Do not smoke

Tobacco smoke raises the levels of blood glucose, blood pressure and cholesterol.

Daily care

Check your blood sugar levels. Your physician may direct you to check as often as several times each day. Examine your feet, and visit your physician for any sores, signs of infection, or change in color or temperature. Do not cut corns or calluses. Do not apply heat to feet. Do not go barefoot. Wear clean, soft socks.

At every office visit

Your physician should check your weight and blood pressure, review your blood sugar levels, and examine your feet for sores.

Every 6 months

You should have an HbA1c blood test to monitor your long-range blood sugar levels and have a dental checkup.

Every 12 months

You should have a dilated eye exam, flu vaccine, a urine test to check your kidney function, a blood test to monitor your lipids profile, and a thorough foot exam by a physician.

Diabetes Care – How do we compare?

At Licking Memorial Health Systems (LMHS), we take pride in the care we provide. To monitor the quality of that care, we track specific quality measures and compare them to benchmark measures. Then, we publish them so you can draw your own conclusions regarding your healthcare choices.

Check out
our Quality
Report Cards online
at www.LMHealth.org.

- 1** Much of the care diabetes patients receive takes place in the outpatient or physician office setting. The physician offices of Licking Memorial Health Professionals (LMHP) measure the most critical indicators for diabetes.

	LMHP 2009	LMHP 2010	LMHP 2011	National
LMHP diabetes patients receiving eye exam	71%	70%	71%	57% ⁽¹⁾
LMHP diabetes patients having HbA1c test	87%	97%	97%	88% ⁽¹⁾
LMHP diabetes patients having lipid profile	90%	94%	95%	83% ⁽¹⁾
LMHP diabetes patients having microalbuminuria test	92%	90%	92%	82% ⁽¹⁾
LMHP diabetes patients having foot exam	87%	90%	92%	80% ⁽²⁾

- 2** While having the testing done is important, the test results (or outcomes) indicate how well the physician, in collaboration with the patient, is managing the diabetes. The hemoglobin A1c (HbA1c) test is a simple lab test that shows the average amount of sugar (also called glucose) that has been in a person's blood over an extended period of time.

	LMHP 2009	LMHP 2010	LMHP 2011	National ⁽¹⁾
LMHP diabetes patients with HbA1c less than or equal to 7%	48%	54%	57%	35%
LMHP diabetes patients with HbA1c less than or equal to 8%	67%	68%	79%	56%

- 3** People with diabetes are at high risk for heart disease. An elevated LDL (“bad”) cholesterol test reveals if an individual has unhealthy fat levels, which increase the risk for heart disease, a very serious complication of diabetes.

	LMHP 2009	LMHP 2010	LMHP 2011	National ⁽¹⁾
LMHP diabetes patients with LDL less than or equal to 100 mg/dL	61%	62%	64%	44%

- 4** The Community Case Management (CCM) program at Licking Memorial Hospital (LMH) provides services to people in the community with diabetes. The American Diabetes Association recommends that a person with diabetes should have an HbA1c blood test at least every six months to monitor glucose levels. LMH staff members work closely with patients and their doctors to ensure that this test is performed as recommended in order to manage each patient's condition better.

	LMH 2009	LMH 2010	LMH 2011	Goal
CCM diabetes patients who obtained an HbA1c test	99%	98%	100%	Greater than 80%

- 5** Licking Memorial Hospital offers special classes and services for people with diabetes. Certified diabetes educators, registered nurses, dietitians and pharmacists provide one-on-one education to patients and work closely with them to set their own meaningful personal goals for improving their health and well-being.

	LMH 2009	LMH 2010	LMH 2011	Goal
Goals met by diabetes education graduates – within six months	91%	90%	93%	Greater than or equal to 80%

Data footnotes: (1) LMHP goal, determined by average of reported commercial, Medicare and Medicaid/Healthcare Effectiveness Data and Information Set measures. (2) National Committee for Quality Assurance – Diabetic Recognition Program.

Patient Story – Ray Podesta

Ray Podesta tried different methods to control his diabetes for more than 40 years. He knew the important role that exercise and diet play in managing his high blood sugar levels, yet his test results consistently revealed that his diabetes was not well controlled. At the beginning of 2012, Ray began using an insulin pump and finally attained the tight control he needs to deter future complications.

In the early 1970s, Ray taught physical education at Illinois State University. An athletic 23-year-old, he felt physically fit and enjoyed playing lots of basketball and golf, but noticed a curious development. “I was always thirsty,” Ray recalled. His increased thirst was so evident that an acquaintance who had diabetes recognized the symptom and urged him to see a physician.

Ray was shocked to learn that he had type 1 diabetes, meaning that his pancreas was not producing the insulin that his body needed to break down the sugar molecules in food. Although type 1 diabetes often has no hereditary link, Ray learned that his grandmother, had diabetes. “I was very young when she died. All I remember is that she had lost a leg up to the knee, and she was in a wheelchair. After my diagnosis, my father told me that she had diabetes.”

Ray immediately set about managing his blood sugar. He stayed active and learned how to inject insulin and eat a healthy diet. A couple of years later, he changed careers and joined State Farm Insurance. He and his wife, Kristi, moved to Newark in 1984 so that he could transfer to the Ohio regional office.

Since his blood sugar levels continued to run high, Ray visited a nutrition counselor at Licking Memorial Hospital (LMH). The counselor showed him how to count carbohydrates, a method to determine how much insulin he needed to metabolize his meals. “After explaining the basic concept of ‘carb counting,’ the counselor handed me three cookies and asked me how much additional insulin I would need to take if I ate them,” Ray said. “I asked, ‘You mean I can have cookies now?’ I cannot eat sweets every day, but it was nice to know that I could have them once in a while. I can adjust my insulin accordingly.”

In 1998, Ray suffered a heart attack at the age of 50, and he was flown by MedFlight to Columbus to have a stent implanted. He had a second heart attack in 2009, but by that time, LMH’s Cardiology Department had expanded, and he was able to remain in Newark for surgery. Since 1998, he estimates that he has had 15 or 16 angioplasties to treat collapsed arteries. “My high blood sugar was surely a contributing factor, but I also have a family history of heart disease,” he said. “My father had a heart attack when he was 50.”

At the end of 2011, Ray visited Endocrinologist Jaime Goodman, M.D., of Licking Memorial Endocrinology. He was frustrated that his efforts had been unsuccessful, and his family practice physician had suggested that an insulin pump might help. Dr. Goodman agreed that Ray was a good candidate for an



Ray Podesta (left) and his younger son, Michael, posed for a photo on Father’s Day 2012.

insulin pump, and in January 2012, he made the switch.

To Ray’s dismay, the pump system was not an instant success for him. “For the first two or three weeks, I could have thrown the thing out the window!” he said. “I was ready to go back to the injections, and did not care if my blood sugars were high. But Dr. Goodman gave me a pep talk. She was very patient and said it was going to take a little time to get everything adjusted correctly.” After speaking to Dr. Goodman and a representative from Medtronic (the pump’s manufacturer),

Ray changed to a different infusion set, and found it to be a much better match for him.

“Before using the insulin pump, I had been taking five shots of insulin every day – now I change the needle’s location only two or three times each week,” he said. “Going to the insulin pump was the greatest move I ever made. It has changed my life as far as my blood sugar levels are concerned.”

Ray visits Dr. Goodman every three months for a checkup, and sends her glucometer results every two weeks. He explained, “It is really simple. When I take my blood sugar readings, the results are automatically recorded in my pump. I upload the readings to a secure Web site, which Dr. Goodman can access. She checks the readings, and we discuss any adjustments that should be made. She is very thorough, and I realize that she is spending a significant amount of time evaluating my results between my office visits.”

For many years, Ray’s hemoglobin A1c (HbA1c) test results had remained approximately 9 percent. The HbA1c test is used to reveal long-term blood sugar control, and most physicians agree the goal is below 7 or even 6.5 percent. In June, just five months after Ray began to use an insulin pump, Dr. Goodman reported his latest results. Ray said, “When she told me that my HbA1c was 6.4 percent, I asked, ‘Are you sure?’ I had not changed a thing about my diet or exercise. The only difference was the pump.”

Because diabetes has a genetic link, Ray has ensured that his three grown children, Ray, Jennifer and Michael, are informed about the warning signs, such as excessive thirst, frequent urination, unexplained weight loss, extreme hunger, fatigue and irritability. There is no known cure for diabetes.

Ray has noticed a remarkable improvement in supplies and consumer products for diabetes over the years. “The wide variety of sugar-free products in stores, and improvements in insulin therapies make it much easier to manage my diabetes than when I was diagnosed four decades ago,” he commented.

Ray is grateful for the dedicated help from Dr. Goodman and her staff, as well as the Medtronic representative, and Kristi. He credits their support for bolstering him through difficult times and helping him maintain a positive attitude. As Ray sees it, his newly found blood sugar control is a sweet victory for all of them.

Insulin Pumps Can Improve Blood Glucose Control

Before the use of insulin to lower blood sugar levels was discovered nine decades ago, patients with diabetes were advised to consume an extremely low calorie diet of only 450 calories each day. The patients, near starvation, usually did not live long after their diagnosis. In 1921, the medical community hailed the development of an insulin extract as a miraculous discovery. Although insulin therapy was effective in saving lives, patients were required to follow regimented routines, check their blood sugar levels and self-inject insulin multiple times each day. In the late 1970s, technology emerged that is now allowing many patients with diabetes to delegate much of the insulin therapy to a sophisticated pump delivery system, freeing them to lead more flexible lives.



The small insulin pump automatically delivers insulin according to a programmed rate that is customized to each individual patient, and allows the patient to bolus when additional insulin is needed.

Diabetes patients who self-inject insulin must estimate when their blood sugar levels will rise, and coordinate their insulin injections to peak at the same time. Insulin pumps were developed to mimic the pancreas' natural action by releasing small basal amounts of insulin during the day and allowing the patient to deliver a bolus boost when eating to prevent the rise of blood sugar levels.

Dr. Goodman explained, "Just like cell phones, insulin pumps are constantly becoming 'smarter' and smaller. The first insulin pumps that were developed in the late 1970s were carried in a backpack. Modern insulin pumps are about the size of a pager, and have different features to accommodate patients' needs."

"Many of my patients have been unable to achieve the tight blood sugar control they need to prevent complications," commented Endocrinologist Jaime T. Goodman, M.D., of Licking Memorial Endocrinology. "An insulin pump system can take much of the guesswork out of determining how much insulin is needed, and when to take it. It also eliminates the necessity to take injections every day. I have seen quite a few instances where the use of an insulin pump has dramatically improved a patient's ability to achieve and maintain good blood glucose levels."

Diabetes is a condition where the body either does not produce enough insulin, or has become resistant to the insulin that is produced. Insulin is a hormone that is produced in the pancreas to break down glucose (sugar) in the bloodstream to provide fuel for the body's cells. With diabetes, glucose builds up in the bloodstream.

There are three main types of diabetes: type 1 diabetes is often called "childhood diabetes," but it can be diagnosed at any age. Type 2 diabetes is often called "adult onset diabetes," however, it is increasingly affecting children, as well. Type 2 diabetes is strongly linked to obesity and lack of exercise. The third type, gestational diabetes, can develop in women who are pregnant. It is typically a temporary condition that resolves by itself after the baby is born; however, women who are diagnosed with gestational diabetes are at higher risk for developing type 2 diabetes in later life.

All three types of diabetes require regular check-ups by a physician to prevent possible complications, such as coronary disease, circulation problems, blindness, numbness in the extremities, pain in the extremities, sexual problems and diabetes ketoacidosis. Treatment usually includes a combination of diet control, exercise, losing excess weight, oral medication and insulin therapy through short-acting (quick releasing) and/or long-acting (slow releasing) insulin.

Under normal circumstances, the body's pancreas constantly produces a small, constant (basal) amount of insulin throughout the day. When a person eats, the pancreas reacts to the rising blood glucose level by creating a surge (bolus) of additional insulin.

Insulin pumps are programmed to deliver small amounts of insulin during the day. The delivery rates can be changed for different times of day when the patient may be more resistant to the insulin or more active. Before meals, the patient conducts a blood sugar check, and the pump can help make recommendations as to how much insulin to bolus, based on the current blood sugar level and how much carbohydrate will be consumed. Some patients also have a continuous glucose monitor that measures the interstitial fluid every five minutes and alert the patient if blood sugar levels are rising or falling.

Although insulin pump designs vary according to the manufacturer, they all use a cannula (needle) that is placed under the skin to automatically release insulin. The pumps have a reservoir that contains up to 315 units of insulin. The pumps are worn externally, and are often connected to the cannula by a long, thin tube. The patient wears the insulin pump 24 hours a day, although it may be disconnected from the cannula for a short period of time, such as for bathing, with the physician's permission. The cannula location must be changed every two to three days.

Dr. Goodman joined Licking Memorial Endocrinology in 2010. She said that during her two years of serving patients in Licking County, she has seen dramatic improvements in patients who began using an insulin pump. "I have both type 1 and type 2 diabetes patients who were quite frustrated about being unable to control their blood sugar levels for years. Within just a few months of using an insulin pump, their blood sugars are often well managed, and they feel much better. Early research is indicating that long-term use of insulin pumps to achieve near-normal blood sugar levels may reverse some complications of diabetes, such as neuropathic foot pain, and that is very encouraging."

Most insurance plans now cover insulin pump expenses. To discuss whether an insulin pump would be right for you, or any other endocrinology concern, appointments can be made with Dr. Goodman by calling Licking Memorial Endocrinology at (740) 348-7950. The practice is located at 1272 W. Main St., Building 2 (upper level), in Newark.