

Success Stories: How Alameda County Department Public Health Department's Diabetes Program Helps People Live Better With Type 2 Diabetes

By Deborah Burstyn

Do you know that a bagel is the equivalent of four slices of white bread? Or that taking just a 15 minute stroll after a meal can help stabilize your blood sugar? Or that the size of your fist makes a handy portion control guide when you're dining out and can't whip out measuring cups?

If you are a person with diabetes, knowing these helpful tips and others like them could over time mean the difference between life and death. That's why the Alameda County Public Health Department's Chronic Disease Program has made it a priority to get this information and more out to those who need it.

As diabetes rates across the US continue to climb to staggering new heights, Alameda County residents with Type 2 diabetes are learning how to manage their condition and improve their odds. Those odds include decreasing the higher risk of heart attacks, stroke, kidney disease, neuropathy and blindness that people with diabetes are prone to at a national cost of \$245 billion, according to 2013 data from the American Diabetes Association (ADA).

From Alameda to Livermore, from Oakland to Fremont, adults of various ages, ethnicity and years of living with the disease are taking an eight-week comprehensive diabetes self-management class taught in their communities by registered dietitians, certified diabetes educators, and nurses. The class is followed up by monthly support group meetings and newsletters for the alumni.

Nutrition, cooking demonstrations, exercise, stress, and medication management are among the topics covered. Classes, typically ranging from eight to 12 participants, are in English but can be taught in Spanish, Chinese, Urdu, Punjabi and Farsi to reflect the needs of Alameda County's diverse population. In many cases, the class participants are succeeding in lowering their blood sugar levels and thus lowering their risk of diabetes complications such as amputation or blindness. In every case, the depth of nutrition and health information they are learning is giving them knowledge they never before had access to; knowledge that is empowering them to take control of their diabetes and with it, their overall health.

"We saw too many people with complications from diabetes and a lack of access to education," said Brenda Rueda-Yamashita, Chronic Disease Program Director for the Alameda County Public Health Department. "We had to do something. Doctors do their best but they just can't tell people all they need to know in their allotted 15 minute visit."

The program, started 12 years ago and has become the only Public Health Department program in California recognized by the ADA. Being ADA recognized means a program is reviewed for its curriculum content and the ability to reach outcomes. This also allows Alameda County to be reimbursed by Medicare, Medi-Cal managed care, and private insurances for subscribers' participation.

"The Centers for Disease Control recently recommended the ideal amount of time for diabetes self-management class at 16 hours," Rueda-Yamashita said. "That is what our classes provide." In the early years of the program, in-home case management was also provided. Due to a lack of funding, that portion was eliminated.

The participants receive the important A1c test at the first class to determine their average blood sugar over the last three months. They receive the A1c again three months later to assess change after they have received the education provided by the self-management class. In addition, their weight and blood pressure are also monitored by the instructors.

“Even a one percent reduction in the A1c reduces the risk of complications from diabetes by 35 percent,” says Rueda-Yamashita. “The cost savings to society are huge and to the individuals and their families? Priceless.”

Fun With Food in Fremont

“Good morning,” calls out Rajinder Singh R.D. And it is a good morning with sunlight splashing through the floor to ceiling windows in a low slung office complex that houses the Family Resource Center in Fremont. She writes her name on a white board and turns to face a group of 12 students so diverse that they could have been hired by a casting company for a TV commercial.



Today, the second session of an eight-week class, one of the main topics, along with discussions of protein, fiber and fat, is portion control. Singh’s assortment of props make the carpeted classroom look like a science fair. By the end of the two-hour class she will have incorporated them all including a rack of tubes holding the amounts of sugar in common foods, labeled baggies of portions of legumes and grains, realistic plastic models of single servings of foods like lasagna and corn. During this time she will have handed out to each participant a brand-new earth-toned set of Rubber Maid brand measuring cups, an ADA introductory booklet on *Living with Type 2 Diabetes* and a colorful soft-covered cookbook of healthy recipes from the California Department of Public Health. Plus midway through the 11 am to 1 pm class, Singh will have invited the class to enjoy the buffet of cut raw vegetables and dip and pinwheel sandwiches she has arranged along a counter on the side of the room.

The fun of getting free stuff and Singh’s upbeat breezy delivery help take the sting out of some of the hard truths she presents about appropriate food portions.

“The portion for a potato is the size of an egg,” she proclaims in cheerful astonishment. “So no more eating every bite of those giant potatoes at restaurants, right?”

Singh holds up a half brick-sized block of lasagna. “This is how much you should eat.” She cautions against the all-you-can-eat pasta deals. “So you spend \$9.99. Does that mean you should put it all in your stomach? And wind up in the hospital?”

Our bodies need fat to transport vitamins but only a little, she explains. “We don’t put fat down the drain because it will clog the drain. Yet we put fat in our bodies even though it will clog our bodies, right?”

Like a stand-up comedian, no ethnic cuisine is immune to Singh. She kids them about the baskets of tortilla chips at Mexican restaurant. “So you’ve just consumed a thousand calories before your food even arrives,” she says with a laugh. She also talks about the challenges of buying lunch on the go. “It’s a package deal for 4.99 – you don’t want to throw away a slice of bread, the bag of chips, the fruit, the cookie because you paid for it. That’s normal. So what do we eat?”

Making your own brown bag lunch makes sense and cents, Singh explains. For convenience, she suggests buying a supermarket rotisserie chicken and slicing some off for sandwiches instead of using healthier processed meats. “Instead of spending six dollars on a sandwich and you don’t know what they are giving you, you can spend one dollar and know it is a healthy sandwich.

“Food is pleasure. It is also a challenge, for me too just like everyone else. I am not going to tell you it is easy,” she adds.

Singh does tell them that when they are dining out to ask the server for a take-home box before their food arrives and to then place half of the restaurant’s portion into it before they begin to eat. Above all, she reminds the group, “Test, test, test. Test your blood sugar before you go to sleep. If it is too low, have a snack.”

After the class ends, participants flock around Singh to ask her more questions and seek more of her straightforward humor-laced advice. And perhaps to have another celery stick or broccoli floret for the road.

Catching On To Carb Counting in Oakland

The Altheim is a stately century-old retirement home built in Oakland for German immigrants. Today the demographics of Oakland may have changed but the venerable building still serves the same purpose – it’s an independent living senior facility. In a large columned room with potted plants and a grand piano, certified diabetes educator Marisa Castaldini RD, MS, CDE asks the gathered group of seven seniors with type 2 diabetes a basic question.

“So tell me, which foods are going to raise you blood sugar?”

“Cookies, pie, candy – all that stuff we love,” calls out Ms. H, 63.

“Corn and rice,” adds Ms. G, 63.

“Milk and yogurt, too,” thoughtfully says Mr. C, 62. “They got milk sugar in them.”



If you thought that just because they are older, inner city and primarily African American, group did not know about good nutrition, you'd be thinking wrong. They are on week three of the eight-week type 2 diabetes self-management class offered by the Alameda County Public Health Dept. and catching on as quickly as eager school kids to the information Castaldini has been presenting to them.

“What about foods labeled sugar free? Should they be on our list of foods to watch out for?” Castaldini continues.

“They be lying sometimes,” responds one of the participants. “They say no added sugar but there's sugar already in the food. Anything in there with -ose at the end? That's sugar.”

The Q and A was Castaldini's review of last week's class. She now moves into the day's key lesson: counting carbs.

“We don't have to get too caught up in where the sugar is coming from if we learn to count carbs,” she says. “There is one number to keep in mind because it will help food labels make sense. And that is 15 grams. An official single serving of carbohydrate is 15 grams.”

She explains how a safe range for people with diabetes is 45 to 60 grams of carbohydrates per meal depending on your gender, height, and weight. Knowing the serving size of foods allows you to make choices.

“I'm Italian so don't tell me I can't have pasta,” says Castaldini who has type 1 diabetes. One-third cup of pasta is 15 grams. So if she has two-thirds of a cup of pasta that's 30 grams, she explains. If she adds a half-cup of peas, the label's recommended serving size, that adds another 15 and she's reached her 45 gram limit. So she may have to forgo dessert at that meal.

“The good news here is that we now don't have to be afraid of foods like rice. There is nothing we can't eat because we are diabetics,” Castaldini happily announces. “You just can't eat too much of it or it will raise your blood sugar.”

To help illustrate her point, Castaldini passes around flattened cleaned cartons of several brands of ice cream including high end brand, a middle level brand and a store brand. She walks them through deciphering the labels. “Look at the grams of carbohydrate per serving not the percentage,” she

prompts – to calculate the carbohydrate load of each. Saturated fats and sodium also should factor into their choice, she explains.

“We have to become like Sherlock Holmes,” observes Mr. C. “We need to play detective to figure this stuff out.”

Castaldini agrees and tells the class that the reward of counting carbs is a greater choice in what they eat and is worth it. “I don’t care how old we are, we still have a two- year old inside of us that wants our favorite foods.”

Learning About Damage Control in Dublin

Gathered around a sleek wood-grained conference table in compact sage-colored meeting room, the group of nine older adults – four women and five men – could be members of the board of directors of an organization. But they are members of a much larger group – Americans with type 2 diabetes who now number 26 million. They meet here each month at the Dublin Senior Center as a support group for those who have completed the eight-week class on diabetes self-management.

Today Theresa Kim, a registered nurse at Fremont’s Washington Hospital who is a teacher-in-training to become a certified diabetes educator, fills in for Marisa Castaldini, a registered dietician and certified diabetic educator who is attending a diabetic educators conference. Kim gets the group going by prompting them to introduce themselves



A husband and wife attend the class together. The husband has type 2 diabetes and the wife does not. One of the participants jokes with them that the wife has “type 3” diabetes – diabetic lingo for the supportive spouse.

Mr. G, 83, shares how he carries his emergency medical information on an inexpensive flash drive on his key ring.

Mr. W, 65, remarks how initially he found diabetes to be more overwhelming than a bout of cancer he had. “With cancer you just show up and get your radiation or chemo. But with diabetes you have to count your carbs, measure your sugar. It’s all on you. But thanks to this program, I have learned how to manage it.”

Ms. K., a 76 year-old retired nurse in the group comments, “I did not want to admit to myself that I had

diabetes. As a result of my denial, I have complications. But I am getting myself back in shape thanks to this program. That booklet we got the first week of class? It's like a little bible to me. The information is wonderful and so are the handouts that give us all the latest information on medications and tests.”

Tests, it turns out, are the topic for the day. After everyone has introduced themselves, Kim deftly shifts the focus to explaining the physiology behind the important A1c test. Soon she is at a white board drawing a simple diagram of a kidney and its blood vessels. Soon she is also drawing a simple heart and eyeball with similar blood vessels.

“Excess sugar crystals in the blood can act like tiny fragments of glass damaging delicate walls of tiny blood vessels, making them vulnerable to plaque build-up,” Kim says. “When you have high blood sugar, the first blood vessels to get damaged are the tiny ones.”

Kim highlights how as a result of multiple elevated risk factors such as high blood sugar, high blood pressure and high triglycerides and LDL cholesterol can lead to damaged tiny blood vessels used by the heart, brain, kidneys, eyes and feet. “Feet are the farthest away from the heart and that increases the risk,” she says.

She names other tests they should be getting annually for their eyes and kidneys. She cites what numbers they should strive for in test results and what the numbers mean. But there is no need to take notes or memorize. She distributes a two-page summary with all that information.

“I’ve learned about diet and calories, portion size, stress, exercise, reading labels, testing and genetics in this program,” observes Mr. D. “I have started losing weight and my last A1c was 5.2. That’s a wow. I find this program very helpful – it’s been great to be able to discuss openly how you feel and getting helpful little hints from everybody.”

Defining Success with Type 2 Diabetes

When asked about success for the program participants, program educator Marisa Castaldini MS, RD, CDE put it this way:

“I think ‘success’ is often defined as people who have improved their numbers, lost weight, have better blood pressure and better A1c test results. Does that mean ‘failure’ if those things are not achieved? If that is our only definition or if we ever begin a ‘pay for results’ program for physicians or educators, we are in big trouble! As educators or physicians, we can only do so much. Nearly 95% of a person’s diabetes is in their hands and life often gets in the way. For me, success is also defined by their greater acceptance of their diabetes, greater sense of responsibility of their own care, checking their blood glucose more often, ability to seek out information like attending the support group or getting a subscription to Diabetes Forecast, ability to live their life with their diabetes vs. fighting against it. I’ve always been grateful that I was taught to be a ‘coach’ and to help people meet whatever goals they have rather than tell them what I think they need to know. Many of them will tell you that they simply have a better understanding of diabetes than they had before the class

Or as Dublin support group participant Ms. K. put it, “I like coming to this program because no one makes you feel guilty or like you’re bad person for having type 2 diabetes. There is acceptance here. You learn that it is what it is and you learn to move on and take care of yourself.”

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The Alameda County Public Health Department Diabetes Program began in 2001 and is the only public health department run program in California that is an American Diabetes Association Recognized program. The Program's diabetes team provides self-management classes to adults diagnosed with type 2 diabetes as well as support groups, newsletters and individualized treatment plans to assist people in controlling their diabetes. The classes are offered in six languages and in multiple locations to serve Alameda County residents.

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