Living Well with Diabetes

The comments presented here are intended to help you utilize the *Living Well with Diabetes* presentation with an educated audience. The content can be adjusted to fit the needs of a variety of audiences. These Suggested Comments are not meant to be a script, but can be used to help you prepare for an extemporaneous talk, using your own personal style. I hope you find them useful.

[Bracketed comments in bold are my notes to you, the educator.]

(*Parenthetical comments in italics provide more in-depth information, and may be useful for more educated or interested groups*.)

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| Slide | Suggested Comments |
| 1Title | The focus of this presentation is on strategies that people with diabetes can use to “live well” with their disease. Exactly what living well with diabetes means may vary from person to person, and this can be part of our discussion today.  |
| 2Overview | The plan for this workshop is to cover some basics about diabetes; talk about the range of emotions that people may experience when diagnosed with diabetes; the critical importance of building a health care team that you can work with; and then four important aspects of living well with diabetes – meal planning, physical activity, diabetes medications, and blood glucose monitoring. At the end, I’ll share a list of helpful resources, and you may have others that you want to recommend as well. I’d like this to be a discussion and not a lecture so please feel free to ask questions and participate during the slide presentation. |
| 3Diabetes 101 | What does the term diabetes mellitus mean? From the Greek, diabetes means “to flow through” and in Latin, mellitus means “honeyed.” So diabetes mellitus refers to sweet urine … which is one of the hallmarks of this disease. *(Sugar in the urine is caused by excess glucose in the blood being filtered through the kidneys and spilling into the urine.)*The first description of the condition was about 3,500 years ago, in ancient Egypt. In 1860, a German doctor, Paul Langerhans, discovered clusters of cells in the pancreas that produced the hormone insulin and they were named for him (*these “islets of Langerhans” also are called the beta cells of the pancreas*).Injectable insulin was first used in humans in 1921 and it was like a miracle for people with diabetes. (*Prior to the discovery of insulin, and Banting and Best’s discovery that it could be injected [into dogs], the outlook for people with diabetes was bleak since there was basically no medical treatment to help them live healthy lives.*)Currently (2011) almost 26 million people in the U.S. have diabetes, and about 7 million of them do not yet know that they have the disease. The majority of people with diabetes have type 2, which used to be called non-insulin-dependent diabetes.Let’s see how insulin works and how a problem with using insulin causes type 2 diabetes. This film is from the American Diabetes Association. |
| 4Insulin Resistance and Defective Insulin Secretion(FILM) | [Double click on the screen to activate the video clip. Be sure that the .WMV file included in this presentation is in the same folder as the PowerPoint presentation!]What is another term for “defective insulin secretion?”“Insulin secretory dysfunction” also is used to describe the inability of the pancreas to secrete enough insulin to make up for severe insulin resistance.Are there any questions about this film? |
| 5So What Happens When a Person is Diagnosed with Diabetes? | There are a range of emotions that people can feel when first learning that they have diabetes. Would anyone like to share their feelings when they first were diagnosed? [This may or may not be comfortable for you; it is a good way to get people involved in the discussion, and it’s a very important topic.] There really are many ways that a person might respond to this diagnosis, depending on who you are, what your experience with diabetes has been in the past, your knowledge about the disease, and so on. Let’s see some of the ways in which people respond. |
| 6Emotional Reactions Vary | How many of these have you experienced? Do you think one is more likely to be felt than others? Why? Would anyone like to share an experience in moving from one emotion to another? Can you begin to “live well” with diabetes while experiencing one of the strong emotions listed here? … It would be difficult. Here are comments that represent each of these emotions. See if you can match them with the correct emotion:“I don’t test when I think that my blood glucose is high.” (fear)“Scientists will find a cure for diabetes, I’m sure.” (hope)“I did something bad in my life, and this is my punishment.” (guilt)“It isn’t fair.” (anger)“If I stop thinking about diabetes, it will go away.” (denial)“I feel so lonely; no one knows what I’m going through.” (sadness)“It could have been worse!” (relief)“I’ll never be able to figure all this out.” (frustration)“I will learn all I can about diabetes and deal with it.” (adaptation)The goal for everyone with diabetes is to reach the point where your emotions and your attitude will allow you to adapt to having this condition, and learn all you can to live well with the disease. There are many examples of people who are living or have lived successfully with diabetes. Are you familiar with Mary Tyler Moore (actress), Halle Berry (actress), Patti LaBelle (singer), Ella Fitzgerald (singer), B.B King (musician), Nick Jonas (singer), and Nicole Johnson (former Miss America)? |
| 7Emotional ReactionsDenial | Denial is not a feeling. It’s a way of protecting oneself from emotions that are too overwhelming. The problem is that people who deny that they have diabetes are not able to do what they need to do to take care of themselves. This can cause health complications from the disease due to lack of self-care.Eventually, everyone needs to accept that they have diabetes so they can move on and “live well” with their disease. It may not be easy and there is a lot to learn, but everyone can make small steps on a daily basis that can make a big difference.  |
| 8Emotional ReactionsFear | There is no denying that diabetes is a serious disease with severe health consequences for many people. Some newly diagnosed people may already have symptoms of complications – like numbness in the feet or problems with their vision. No doubt that is frightening. However, too much fear can be paralyzing, just as denial can. It also can take the enjoyment out of life, and can be a serious emotional challenge. *People with excessive feelings of fear need to get help from a counselor to get back on the right track*.The good news is that a little bit of fear can be motivating. Perhaps fear led some of you to come here today …  |
| 9Emotional ReactionsAnger | Why me? It’s not fair! These are not uncommon reactions to a diagnosis of a serious health problem, including diabetes. It’s okay to accept anger as a normal part of dealing with a serious illness, as long as it is only for a short while after diagnosis and then perhaps once in a while when things get overwhelming.Excessive anger that lasts a long time, is very strong, or is directed inappropriately needs to be dealt with professionally. Sometimes it’s hard to just work things out yourself. *(Anger can lead people to stop taking care of themselves. This is self-destructive. Anger may cause someone to abuse a spouse or child either physically or emotionally, which is harmful to those around them as well as to the individual.)* |
| 10Emotional ReactionsGuilt | Did you ever ask yourself if things would be different “if only” you had done something differently?If only I had exercised more …If only I had eaten perfect meals and snacks every day …If only I had …. Too much of that kind of talk is obviously harmful to your psyche. If it makes you stop taking care of yourself, it’s VERY harmful and must be dealt with.On the other hand, small doses of guilt can actually help motivate some people to get back on track after backsliding. |
| 11Emotional ReactionsSadness | It is common for people to feel sad when they finally realize that diabetes is not going to go away. They may have gone through fear, anger, and guilt, and now they are just sad that the situation is the way it is. This is an important time in the adjustment to a life with diabetes. People often begin to make necessary adjustments in how they see themselves, and then begin to deal with their situation in constructive ways. If sadness turns into depression it must be dealt with as soon as possible, preferably with a mental health professional with experience dealing with clinical depression.  |
| 12Emotional ReactionsFrustration | People with diabetes have a lot to learn and to deal with in order to manage their condition. Sometimes it’s hard to figure out why your blood glucose readings fluctuate or why they are higher at some times than others.To deal with frustration, try to look at things that are going well, instead of focusing on the aspects of diabetes care that are less under your control. And don’t give up on your treatment plan just because things aren’t going exactly the way you want them to. |
| 13Emotional ReactionsRelief | Some people may have expected a diagnosis more frightening than diabetes, and for them it is a relief that they don’t have something worse. Diabetes can be managed, and people can appreciate that and feel empowered by it. It’s helpful to not go overboard with this if it leads to neglect of care. Diabetes can be managed but it does take knowledge, motivation and perseverance for you to live well with the disease. |
| 14Emotional ReactionsHope | Hope can get us through challenging times. All of us have our own sources of hope … from relationships and communication with family and friends to our own knowledge of our condition and new research being done to make living easier or better. If we are positive, we can help others who may not have the support system or inner strength that we do. |
| 15Emotional ReactionsAdaptation | Living well with diabetes can result in a sense of balance in life. You work on managing your disease, but you also have other parts of life that may have nothing to do with diabetes. As you learn to manage diabetes, you will feel better physically and that can help you feel better emotionally as well. Have you found that the two go hand in hand? |
| 16Building Your Health Care Team | The primary care team should include these members. It’s important to remember that the person with diabetes is a critical member of the care team. You should play an important role in determining your treatment care strategy, and you should understand WHY certain treatment goals are set and HOW to attain them. An endocrinologist has special training in diabetes care and is a good choice for the primary care physician for care of diabetes. A Certified Diabetes Educator or CDE may be a registered nurse, registered dietitian, or other health practitioner who has additional training and certification in diabetes management. A CDE is a key member of any diabetes care team. The RD will work with you to identify meal planning strategies within your food preference, cultural values, and your economic means.  |
| 17Building Your Health Care Team | Depending on a person’s health status, he or she may need other specialists to be involved in care. An exercise specialist can be very helpful in setting appropriate physical activity goals within a person’s abilities, but it may be challenging to find an appropriate person to fill this need in many counties.A podiatrist is necessary if any foot problems are identified during routine care. It is critical for everyone with diabetes to have a dilated eye exam every year. This is often done by an eye specialist, or ophthalmologist. For emotional challenges, a psychologist or psychiatrist (the latter an MD who can prescribe medications) should be included in the health care team.Other specialists may be contacted if health complications such as kidney disease or cardiovascular disease are identified. Here you see a Podiatrist or Chiropodist providing proper foot care. |
| 18Diabetes Self-Management | Four of the cornerstones of diabetes self-management are meal planning, physical activity, taking medications as needed, and blood glucose monitoring. These four practices together help people with diabetes manage their disease. Diabetes self-management education helps people with diabetes learn how to manage their disease by teaching them skills to do all four of these self-management behaviors. [You can mention the *Take Charge of Your Diabetes* program at this time, if it will be available in your county.] |
| 19Meal Planning Goals | Meal planning is a key component of the nutritional management of diabetes. It helps people to achieve their blood glucose goals. Meal planning also plays an important role in reducing risk for health complications, particularly cardiovascular disease, which is the leading cause of death in people with diabetes. Planning and eating healthful meals contributes to weight management, which can improve insulin resistance and blood glucose control. Healthful eating habits also contribute to overall health. |
| 20Nutrient Recommenda-tions | One of the main nutrient goals is to consume a diet that provides calories to achieve a healthy body weight. Recommendations related to types of fat are set to decrease risk for cardiovascular disease and are the same as for the general public. The optimal balance of the energy nutrients – protein, fat and carbohydrates – for persons with diabetes is not known and may be different for different people.  |
| 21Meal Planning Strategies | Good food choices for people with diabetes are basically the same as for anyone else. Can you name a few dietary improvements that are recommended by health authorities to make the typical American diet a healthier way of eating?[Give them a chance to answer, and then add any that they haven’t mentioned.]* Increase fruits and vegetables, to add vitamins, minerals *(especially potassium, which can decrease the effect of high sodium in the diet and calcium from green leafy vegetables for bone health)*, and dietary fiber.
* Decrease fat, especially saturated fat and *trans* fat. *(Trans fat in the diet comes mainly from hydrogenated or partially hydrogenated fatty acids; this means that they have had hydrogen added to them for shelf stability and to make them more solid at room temperature. When fatty acids in oils are hydrogenated their shape is changed to the trans form which makes these fatty acids act like saturated fatty acids in the body. Many products have been reformulated to remove trans fat since the food label now has to have trans fat included.)*
* Switch to low-fat (1%) or fat-free milk
* Decrease sodium, to reduce risk for high blood pressure

Weight control is an important issue for many people with diabetes. For obese persons, losing just 5 to 10 % of their body weight (or about 10 to 20 lbs for a 200-lb person) can improve glycemic control and reduce insulin resistance. Balancing calories with physical activity to achieve or maintain a healthy weight is good advice for the whole family and for many people in this country this advice translates to: “eat less!”Spacing meals and snacks through the day, particularly foods high in carbohydrates, is critical for people with diabetes. Let’s look a bit closer at distributing carbohydrates in the diet, and then we’ll see how the Idaho Plate Method can make meal planning simple. |
| 22Evenly Distribute Carbohydrate | For people with diabetes the main focus in the diet is on carbohydrate because it is the only macronutrient (the other two macronutrients are protein and fat) that is 100% converted to glucose in the body. Therefore, foods high in carbohydrates have the greatest effect on blood glucose and should be spaced as evenly as possible among the meals and snacks eaten throughout the day. This will help you to avoid blood glucose highs and lows.Carbohydrate counting is an accurate and direct way of learning how many grams of carbohydrates you are eating at a meal or snack. Grams of carbohydrate are listed on the Nutrition Facts panel on most foods, are available in the Exchange Lists book (Choose Your Foods) from the American Dietetic and American Diabetes Associations, and the Basic Carbohydrate Counting pamphlet from the American Diabetes Association. Also, a registered dietitian (RD) can be very helpful in teaching you how to count carbohydrates and balance them throughout the day. A free version of the Exchange Lists is available from the National Institutes of Health at this website: <http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/fd_exch.htm>  |
| 23Carbohydrate Recommenda-tions | Remember that spacing carbohydrates throughout the day helps you to maintain blood glucose levels and avoid highs and lows.When counting carbohydrates to plan meals and snacks, it is not necessary to distinguish between sugars and starches. However, the type of carbohydrate foods eaten is important for the overall quality of the diet. To get the most nutrients out of the calories you eat, select mostly whole grain foods, fruits and vegetables, legumes, and low-fat or fat-free dairy foods as your primary carbohydrate choices. Save sweets for special occasions or have small portions. |
| 24Dietary Fiber | The recommended level of fiber intake for people with diabetes is the same as for people without diabetes. Current fiber intake in the U.S. is very low and contributes to constipation and diverticular disease. *(Diverticula are outpouchings in the intestines that cause pain, especially when they become inflamed - diverticulitis.)*Different types of fiber have different effects in the body. Soluble fiber helps to decrease serum cholesterol, and insoluble fiber contributes to regularity by keeping the gut contents moving along. A general recommendation for all adults is to consume a combination of fiber-rich foods, such as whole grains, fruits, vegetables, and legumes because they provide vitamins, minerals, fiber, and other substances important for good health. Fiber recommendations are based on calorie intake so the recommended intakes are higher for men and younger adults than for women and older adults. |
| 25Idaho Plate Method | The Idaho Plate Method is a simple way of visualizing the various foods that make up a meal.It is based on the selection of healthy food choices according to a set pattern, visualized as servings on a dinner plate. Non-starchy vegetables take up about half of the plate, a starchy food one quarter of the plate, and a high protein food the other quarter of the plate. In addition, fat-free or low-fat milk and a piece of fruit can be added to the meal. The plate method is not as exact or flexible as counting carbohydrates, but it can be very useful for selecting an appropriate balance of foods from the food groups. |
| 26Physical Activity | The second component of diabetes self-management is physical activity. Physical activity has a number of health benefits that are critical for people with diabetes, including weight management and reducing risk for cardiovascular disease. Improving control of blood glucose and improving insulin sensitivity are important for managing diabetes. Also, when stress is under control, it is easier to do the things we need to do to live a healthy life. |
| 27Physical ActivityReduce Health Complications | Heart disease and stroke are two health complications of diabetes that can be affected by physical activity. By decreasing body weight and blood pressure, and improving the blood lipid profile, the risk for these conditions is decreased. |
| 28Physical ActivityTypes of Physical Activity | The American Diabetes Association recommends aerobic exercise to improve glycemic control, help with weight management and reduce risk of cardiovascular disease. They also recommend resistance (or strength) training if there are no contraindications. Stretching before exercising (but after a brief warm-up) reduces risk of muscle injury during aerobic exercise or strength training. Now wouldn’t it be nice if we could all be as flexible and graceful as these swans! |
| 29Physical ActivityHow Much Physical Activity? | These are the recommendations in the Standards of Medical Care in Diabetes – 2011: People with diabetes should be advised to perform at least 150 min/week of moderate-intensity aerobic physical activity(that’s at 50 to 70% of your maximum heart rate).In the absence of contraindications, people with type 2 diabetes should be encouraged to perform resistance training three times per week. Maintaining flexibility is helpful for everyone as we get older to be able to perform activities of daily living.Consistency in physical activity is recommended. |
| 30Physical ActivityBefore Beginning | Before starting an exercise program that involves more than brisk walking, anyone with diabetes should have a physical check-up. [Review components of the check-up as listed.] Any change in physical activity should be discussed at the routine physical exam so that the doctor can suggest any restrictions that may be necessary. Also, you may want to speak with your dietitian about any changes that you may need to make in your eating plan as you being an exercise program. Your doctor may be able to recommend an exercise specialist or physical therapist, who can give you a fitness test and help you get started in an exercise program that meets your needs. Otherwise, you should start slowly and listen to your body to stay safe. |
| 31Physical ActivityStaying Safe | The basic workout routine for persons with diabetes is to warm up for five minutes and check your blood glucose before beginning your aerobic or resistance exercise. Then cool down for five minutes and re-check your blood glucose. Some people with recently diagnosed diabetes are able to keep their blood glucose in the normal range with a healthy diet and exercise, although most patients are given oral medication when they are diagnosed to help get them in control quickly. This is something you can discuss with your doctor. |
| 32Physical ActivitySpecial Concerns | Although physical activity can be very helpful in diabetes management, certain precautions should be taken to avoid hyper- or hypoglycemia. [Review the four suggestions for maintaining glycemic control.] Stay well hydrated by drinking water before, during, and after exercise. Wear an identification bracelet as shown in the illustration just in case you need help during a workout, and carry a sugar source like glucose tables or raisins in case your blood glucose gets too low during your workout; this is more of a concern for people taking insulin who are at risk for hypoglycemia. For these individuals, if pre-exercise blood glucose is less than 100 mg/dl, a snack should be eaten before exercising and these other precautions should be taken. Exercising with a partner is a good idea for anyone with diabetes. |
| 33DiabetesMedications | We don’t have time to go into detail about diabetes medications, but we have to say something about this important part of diabetes care. It’s important to learn all you can about the medications you take and how they affect your body. There are three basic types of diabetes medications [review list]. The picture indicates the role of the sulfonylureas – one of the oldest of the oral medications – which helps the pancreas make more insulin to help control blood glucose. Many people with type 2 diabetes take combination oral medications with or without adjunct therapies like Byetta or Symlin. |
| 34Diabetes MedicationsTreatment Protocol | The usual protocol is to try oral medications as the first diabetes medication. But for some people, getting started on insulin is a better choice. It depends on … [review criteria]. This is a decision to make in consultation with your physician. |
| 35Diabetes MedicationsTake Home Message | [Self-explanatory] |
| 36Blood Glucose Monitoring | It is critical for everyone with diabetes to understand the importance of blood glucose monitoring in achieving and maintaining control. Your physician will use these tests to assess how well your treatment regimen is working and make adjustments in one or more aspects of care as needed for optimal control. There are two types of monitoring that provide different results. Both tests are recommended.Self-monitoring of blood glucose (SMBG) provides a snapshot of what the blood glucose is at that moment, and the A1C test provides an average blood glucose reading for the past two to three months. |
| 37SMBG Recommenda-tions | SMBG is a critical part of diabetes self-care. It is performed by the person with diabetes. When done as recommended, SMBG provides a picture of blood glucose control that can identify patterns of concern and guide changes in therapy. Results are expressed as milligrams of blood glucose per deciliter of blood, such as 120 mg/dl. SMBG has greatly improved the management of diabetes.Tight control of blood glucose may not be appropriate for older persons because of increased risk for hypoglycemia. Each person will identify with their health care provider what is “normal” blood glucose for them at various times of the day.Also, discuss with your health care provider which type of meter is best for you. If you qualify, consider Medicare or Medicaid coverage, which will include supplies for some, but not all meters.Get proper instructions from your health care provider. After learning how to use the meter, it is important to demonstrate your technique to be sure you are using it properly so that your results will be accurate.*(Before the advent of SMBG, people with diabetes and their health care providers did not have the specific information necessary to implement changes that would really make a difference in their overall health and risk for complications.)*  |
| 38SMBGWhen to Check? | These are suggested times to check blood glucose. The number of times a day you should check is a decision for you to make with your doctor. The schedule for checking blood glucose levels is based on the type of diabetes, components of therapy, lifestyle, motivation, and ability of the person to use the equipment properly. |
| 39SMBGCheck More Often If . . . | There are several circumstances in which you would check blood glucose more often than usual **[discuss].** |
| 40Hemoglobin A1C | The A1C test routinely is performed by the health care provider or using a home kit. The A1C reflects the average blood glucose for the past two to three months. Results are expressed as a percent, such as 7%. It is also being expressed as estimated average glucose, or just average glucose which is expressed as mg/dl, just like the values for self-monitoring of blood glucose.The American Diabetes Association recommends testing at least two times a year for persons meeting their treatment goals and in good glycemic control, and more frequently when … **[describe]**.A1C does not show highs and lows in blood glucose. This value usually is not used to make meal changes because it doesn’t show when blood glucose levels were out of range. |
| 41A1C and Estimated Average Glucose (eAG) | There is a correlation between the A1C level and average plasma glucose levels. A1C is now often being expressed as average glucose and provided to patients as mg/dl, just like the value you get when testing your blood glucose using your monitor. The American Diabetes Association has identified an A1C of less than 7% as a goal for most persons with type 2 diabetes. However, glycemic goals, including fasting and post-prandial glucose as well as A1C should be discussed with your physician and individualized based on your needs.  |
| 42Helpful Resources | It’s very important to get diabetes information from reliable sources as there is a lot of misinformation out there. Here are a few on-line resources that you can trust.  |
| 43Summary | **[Self-explanatory]** |
| 44 | Linda Bobroff is a professor and Extension Nutrition Specialist at the University of Florida in Gainesville. She developed this presentation for county Extension faculty in Florida to use in programs for mature adults dealing with diabetes.  |