

## Meeting 2



## Medicine and Glucose Balance

### Welcome!



### Glucose Balance Makes a Difference!



We are so happy to see you again! Today's topic is Medicine and Glucose Balance. We will talk about:

1. Different types of diabetes medicines,
2. How they help glucose stay in balance, and
3. The importance of taking medicine as prescribed by your provider.

The earth has much to offer that can make a difference with diabetes. There are many medicines that have come from plants and animals. Medicines can be thought of as gifts that will help you live a long and healthy life.

First let's take a few minutes to review our last meeting together. In meeting 1, **Glucose Balance Makes a Difference**, we said to get and keep your glucose in balance, it is important to:

- ✓ Know your glucose numbers,
- ✓ Know what makes them go up and down,
- ✓ Self-test often, with a goal of 70 - 130 before eating and lower than 180 two hours after eating,
- ✓ Get A1c to lower than 7,
- ✓ Work with your provider and diabetes team, and
- ✓ Don't give up! The goal is progress, not perfection!

Before we get started on today's meeting, let's visit with Kaipō and Uncle Tommy again.

On this day, Uncle Tommy has many things planned. He has to get an early start to get all of his chores done around the house, get to his appointment at the clinic, and then he has promised Kaipō that he will watch him play in a soccer game.



With so much to do, Uncle awoke early, got dressed and went outside. As he watched the sun rise in the east, he thought to himself, "I am a very lucky man to see such a beautiful sunrise."

A few blocks away, Kaipō was getting ready for school and thinking about the game. He knew his Uncle would be there to watch him. Uncle never missed a game. Kaipō couldn't wait to show Uncle some of his new soccer moves. "Mom, can I go have breakfast with Uncle before I go to school?" Kaipō asked. "Sure," his mom said, "but don't be late for school." "Thanks mom," he said as he grabbed his bag and ran to Uncle Tommy's house.



“Hi Uncle,” Kaipo said as he gave his Uncle Tommy a big hug. “Just wanted to remind you not to forget the big game today.” Uncle smiled, returning the hug, and said, “You don’t have to worry. I will be there. I have a lot to do today, but I am up early so that I can get them done before the game.”

“How about some breakfast?” Auntie Nani asked Kaipo when she saw him. He nodded his head and sat down at the kitchen table. Kaipo watched his Uncle check his blood sugar and take his medicine. “Uncle, why are you taking medicine? Are you sick?” he asked. Uncle smiled as he answered, “I’m not sick. I’m taking this medicine to stay healthy. It is for my diabetes.”



“Remember that I told you that I take care of my diabetes so I can do things with you that I enjoy so much?” “Yes, Uncle,” said Kaipo as he smiled and remembered what his Uncle had told him when they had gone fishing.



Uncle continued, “Well, the doctor has told me that even though I am doing all I can to take care of my diabetes, that sometimes my body needs help. This medicine helps my blood sugar stay right where I want it. I have made it a habit to take my medicine every morning before I eat, and before I go outside to do my work.”

You know, Kaipo, this medicine is much like the medicine that we used to gather in the country. It is just in a different form, but it helps me stay well.” Kaipo looked a little puzzled and asked, “You mean they put plants in pills for us to swallow?” “They sure do,” Uncle said. “A lot of things come from the earth and the people that make the medicine put it into a pill or shot for us to take. You are going to learn so much more as you go through school, so you better get going. I will see you at the game, okay.”



“Okay, Uncle. The game starts at 4:30, so don’t be late. I know we are going to win the game,” Kaipo said as he ran out the door. Uncle watched as Kaipo left the house, smiled at his wife and thought to himself, “I sure am thankful that there is medicine that helps me feel good.

I love Kaipo and wouldn’t want to miss seeing him grow up. He sure reminds me of myself when I was a boy.” “Well, I guess I better get started if I want to get to the game on time,” Uncle said as he walked out into the yard to begin his work.

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Uncle has learned about taking care of his diabetes and how medicine can help. You will be doing the same today. In this way, you can also enjoy your children and grandchildren. So let's get started.

Did you know that diabetes in Native Hawaiian, Pacific Island, and Filipino communities is mostly type 2 diabetes? Very few people have type 1 diabetes.

For people with type 2 diabetes, we said that:

- the body is not able to use the insulin it makes, or
- the body is not able to make enough insulin to keep blood glucose in balance.

Because diabetes is different for each person, the treatment for each person will be different.



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### Why Medicine?



Medicine is an important part of the diabetes treatment plan. Medicine is not a cure for diabetes. Diabetes does not go away by taking medicine. It is not like an antibiotic that is taken to cure an infection.

Diabetes medicine helps the body use the insulin it does make, OR helps the body make enough insulin to use the food we eat for energy and stay in balance. Keeping glucose in balance is key to preventing serious problems.

Some people may be able to stay in balance by eating healthy and by being physically active. Other people may need to take diabetes pills or insulin, along with eating healthy and exercise to stay in balance.

### Diabetes Changes Over Time



You are probably wondering why that is! Well, as time goes by, your body changes. People who don't take diabetes medicine at first may need to start taking medicine later to continue to stay in balance. Just as our bodies change over time, so too does diabetes. This means that diabetes care and treatment will also change over time.

It is the nature of diabetes that requires people to take medicine. It is not a "failure" of diet, "failure of not living right," or "failure of a person" that causes the treatment of diabetes to change.



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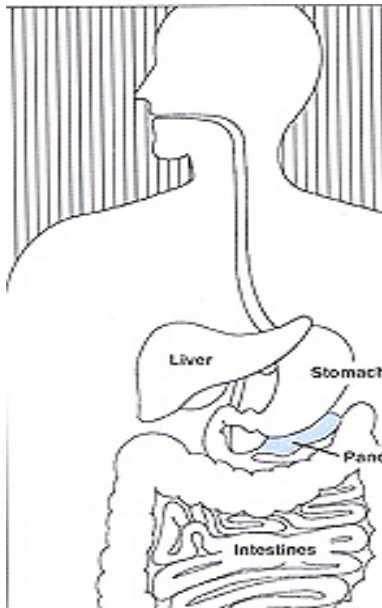
## Medicine and Glucose Balance



### Diabetes Medicine

Sometimes your doctor may add or change your medicine. Your doctor may do this if:

- Blood glucose is not at the target goal,
- There is a change in eating, activity, weight, or stress,
- There are new health problems, or
- Other medicines are making blood glucose too high or too low.



There are a lot of different kinds of diabetes medicines. They work in different ways but they all help to lower blood sugar. Your healthcare provider decides which medicine is best for you based on your age, lifestyle, health, and your A1c.

There are two ways of getting diabetes medicine – either in pill form or by injecting insulin. Diabetes pills are grouped by the way they work. Pills work in different body organs, such as the liver, pancreas, muscles, and intestines. Let's talk about groups of diabetes pills listed in the table on the next page.

## Groups of Diabetes Pills

Group	Organ (Body Part it works on)	What it does or how it helps	Generic Name (Brand Name)
<b>Group 1 Sulfonylureas</b>	Pancreas	Helps the pancreas make or release more insulin.	Glyburide (Micronase, Diabeta, Glynase Pres Tab) Glipizide (Glucotrol, Glucotrol XL) Glimepiride (Amaryl)  <u>Not used much anymore:</u> Chlorpropamide (Diabinese) Tolazamide (Tolinase) Tolbutamide (Orinase)
<b>Group 2 Biguanides</b>	Liver	Lowers blood glucose by stopping the liver from making too much glucose.	Metformin (Glucophage)
<b>Group 3 Alpha-glucosidase inhibitors</b>	Intestines	Helps slow the absorption of starches in foods we eat.	Acarbose (Precose)  Miglitol (Glyset)
<b>Group 4 Meglitinides</b>	Pancreas	Helps the pancreas put out insulin quickly.	Repaglinide (Prandin)  Nateglinide (Starlix)
<b>Group 5 Thiazolidinediones</b>	Muscle Cells	Helps to make your body muscle cells more sensitive to its own insulin, so that the insulin can work better.	Rosiglitazone (Avandia)  Pioglitazone (ACTOS)
<b>Group 6 Combinations</b>	Pancreas and Liver	Helps pancreas make more insulin AND stops liver from making too much glucose.	Glyburide + Metformin (Glucovance) Metformin + Rosiglitazone (Avandamet) Metformin + Glipizide (Metaglip)



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### What group is your medicine in?

Let's look at your medicine and find which group it is in.

I have a brochure for each of you that will give you information about the diabetes medicine that you are taking.

The diabetes pill(s) you may be taking will be from one or more of these groups. You may have recognized the names. Now you know what group(s) they are in and how they help glucose stay in balance.

Let's take a minute to read the brochure about your medicine.



**If you have questions about any of your medicines, ASK YOUR DOCTOR OR PHARMACIST.**

### What if the pill isn't lowering my glucose?

Your provider may begin by prescribing one of these pills to help lower your glucose. If the pill does not lower your glucose, your provider and diabetes team may:

- Ask you to take more of the same pill, or
- Add a new pill, or
- Ask you to change to another pill, or
- Ask you to change to insulin.





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#### Insulin helps lower glucose!



For some people, insulin may be needed right away to lower glucose. For others, diabetes pills alone may not keep glucose in balance. If this happens, one or more insulin shots may be added to a treatment plan to keep glucose in balance.

If a person must change to insulin shots, it does not mean that they have done anything wrong. It does not mean that they have failed, and it does not mean that their diabetes is getting worse. **Insulin is given to meet the body's needs.**

Remember, the goal is to keep glucose in balance:

- 70-130 fasting
- Lower than 180 two hours after meals
- A1c lower than 7

Insulin is just another way of getting to your goal. Be sure to ask your doctor or pharmacist if you need help injecting insulin.

#### Improved diabetes care

There have been many new and exciting discoveries in medicine over the years. Insulin and insulin shots have improved the quality and length of life for many people with diabetes. There are also many new types of insulin to match what a body needs, and the needles are so thin that a person hardly feels the shot at all.

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### Get the Most from Your Medicine!



### Questions About Your Medicine

Here are some ways to get the most benefit from your medicine:

1. Take your medicine the way it is prescribed.
2. Keep taking your medicine even when you feel good.
3. Take your diabetes medicine even if you are sick.
4. Talk to your provider about changing your medicine if your glucose levels have not improved.
5. Know the possible side effects of the medicine you take. If you have any side effects, talk to your provider about them. If your glucose gets too low more than a few times in a few days, call your doctor.
6. Tell your provider about over-the-counter medicine you are taking, such as vitamins, herbal medicines or teas, or anything else.
7. If you feel you need to stop taking your medicine for any reason, talk to your provider first.

If you or your family has questions about your medicine, **ask your health care provider or pharmacist.**

**Remember, diabetes medicines work together with healthy eating and exercise to lower blood sugar.**

The best way to tell if your medicine is working is with the A1c test. **Have your A1c measured every 3 to 6 months** to see if your medicine is working.

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Let's do a role-play about asking the doctor a question about diabetes medicine.

Mary has had diabetes for three years now. She has been eating healthier, exercising regularly, and taking her diabetes medicine to lower her blood sugar. She has gotten her glucose down from 240 to 180, but it hasn't changed in a while. She knows that she still has a lot to do to get it below 130, but she has made a lot of progress and she feels better. Mary has a clinic appointment today and wants to talk to her doctor about her medicine. She wants to ask him if the medicine is doing what it is supposed to be doing. Mary puts her logbook and the list of questions she wants to ask into her purse.

At the clinic, the doctor appears to be rushed but Mary knows if she doesn't ask today, she won't do it at all. So she gets the logbook and her list of questions out of her purse.

**Mary:** Dr. Smith, I need you to look at my logbook and tell me if my medicine, Metformin, is working to get my glucose numbers down.

**Dr. Smith:** You know Mary, your glucose today is pretty good and you are doing fine.

**Mary:** What is my number today? I have been doing the self-testing at home but my blood sugar number hasn't changed in a while.

**Dr. Smith:** Well, let's see that logbook of yours. Hmm... Mary, I notice that you are working hard at getting your glucose number down. You're exercising 30 minutes 3 times a week – good! Your blood glucose numbers are about what I would expect taking into consideration what you are eating, the exercise you are doing and the dose of your medicine.

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**Mary:** What is my glucose number today? We set a goal for me to work on the last time I was here and I want to know if I am reaching that goal?

**Dr. Smith:** Your A1C is 8 today. That is an average of about 180 for the past three months and it is down from 10. I think that you are going to reach your goal that you set and I am proud of you.

**Mary:** I am glad that I feel that I can ask questions now. Before I didn't know that I could. Thank you, Dr. Smith, for taking the extra time with me today to answer my questions. When am I supposed to see you again?

**Dr. Smith:** I am always happy to see you, but you are doing so well that I don't need to see you for another three months. If you have any problems before then, make an appointment sooner to see me, okay? Mary, continue with your treatment plan that we worked on together, but try to increase your exercise by another 10 minutes. Remember to also follow that meal plan that you worked on with the dietitian. I will see you in three months. Bye!

**Mary:** Thank you, doctor.



How do you think this appointment went?

Do you get your questions answered at your doctors' appointment? If not, why do think this is?

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### Talk with your family about your diabetes medicine

Your family members are important partners in your diabetes care too.

Just as you ask your family for help in preparing a meal, planting a garden, and doing chores around the house, asking your family to help you with your diabetes can make it easier for you.



Family members need to know:

- About your diabetes medicine,
- Where the medicine is kept,
- When you should take your medicine,
- The dose of your medicine,
- Possible side effects of the medicine,
- How often the medicine needs to be refilled at the pharmacy or clinic, and
- Symptoms of low blood sugar (hypoglycemia) and what to do for you if you get hypoglycemia. (See brochure in pocket)



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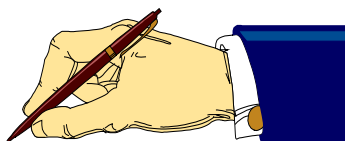
### Let's Review!

During today's meeting we learned that:

- Diabetes changes over time.
- Diabetes medicine is an important part of a diabetes treatment plan.
- Diabetes medicine works together with healthy eating and physical activity to lower blood sugar.
- Diabetes medicine helps the body use the insulin it makes OR helps the body make enough insulin.
- Working with your provider and other partners in care is important, and
- You should ASK questions if you need to know something about your diabetes care!

We have covered a lot of information on diabetes medicines. Knowing about diabetes medicine will help you reach your goal of glucose balance.

### Set a Goal!



Take a few minutes now to write down one goal that you plan to work on this week to stay in balance with medicine. Remember all that we talked about today.

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Uncle Tommy knows the importance of taking care of his diabetes and making sure that he takes his medicine. He has a lot more to share with Kaipo.



On the next few pages you will find a list of questions you can ask your doctor about your medicines, the dictionary of terms, information about low blood sugar (hypoglycemia), and a brochure about alcohol and diabetes.

**Thank You!**

Thank you and we will see you next time when we will talk about Food and Glucose Balance. Be sure to bring your notebook with you.



## **Meeting 2**

# **Questions and Dictionary**

# Medicine and Glucose Balance



By working with and asking questions of your provider and/or diabetes team, you can get the most benefit from your diabetes medicine to reach your goal. Here are some questions you can ask:

- ◆ What is the name of my medicine(s)?
- ◆ When do I need to take each medicine – before a meal, with a meal, after a meal?
- ◆ When and how often should I test my blood sugar?
- ◆ What benefits can I expect from taking this medicine?
- ◆ How long does it take for my medicine to lower my blood sugar?
- ◆ What should I do if I forget to take my medicine?
- ◆ What side effects are there with this medicine?
- ◆ What should I do if I experience any of these side effects?
- ◆ Who should I call if I have any side effects from the medicine?

These are just a few possible questions you may have about diabetes medicine. If you should have questions, write them down and take them with you when you go see your provider and ASK them. Remember, your provider will be happy to answer your questions.

**Dictionary  
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<b>Term</b>	<b>Meaning of the Term</b>
A1c (Hemoglobin A1c)	A blood test that measures the average blood glucose for the last 3 months.
Hyperglycemia	High blood glucose.
Hypoglycemia	Low blood glucose.
Insulin	A hormone that helps the body use glucose (sugar) for energy.
Self-testing (Monitoring)	A way a person can test how much glucose (sugar) is in the blood.
Type 1 Diabetes	A condition when the pancreas makes little or no insulin. The person must inject insulin so that the body can use glucose for energy.
Type 2 Diabetes	The most common form of diabetes. People with Type 2 diabetes produce some insulin but either their bodies do not make enough or their body cannot use it the way it should. Exercise, losing weight, and taking medicine can help a person with Type 2 diabetes stay in balance.