



## TEACHER'S GUIDE

### High school module for diabetes prevention education

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Hello.

Thank you for choosing to teach your students about the importance of health and wellness.

We hope that with this guide, you will feel supported in educating your students about preventing diabetes.

As you may know, type 2 diabetes continues to threaten the health and well-being of our community. Approximately 45 percent of adults in Monterey County have diabetes or prediabetes, and type 2 diabetes is rising in children at alarming rates.

Our mission is to change the beliefs and behaviors about type 2 diabetes by educating your students on how small changes to diet and physical activity can make a significant difference.

**Ultimately, our goal is to:**

- decrease the number of children receiving diabetes diagnoses
- reduce the overall risk of diabetes
- build a stronger and healthier community

**In response, the Monterey County Office of Education has partnered with the Healthy Youth Task Force and Aspire Health to provide diabetes prevention education in our schools through the Don't Feed the Diabetes campaign.**

Below are notes and resources for a web-based curriculum for your students. The lesson plan promotes healthy lifestyle habits and health literacy related to type 2 diabetes, and addresses why choosing water over sugary drinks is healthier.

**At the end of the lesson plan, there is a slide with an attestation link. This is to help us track the schools and number of students who participated, and also helps with Blue Zones Project accreditation.**

**If you have any questions, please contact [diabetes@aspirehealth.org](mailto:diabetes@aspirehealth.org)**

**Thank you for providing this diabetes education to your students and helping to create a healthier generation for Monterey County, together.**



## SLIDE 2 – DON'T FEED THE DIABETES

Today we are going to talk about diabetes. Who has heard of diabetes before? Whether or not you've heard of diabetes before, you may have a friend, a family member, or even a classmate that has diabetes without even knowing. One of the first things to know is there are different types of diabetes that have different causes. We are going to learn about type 2 diabetes today because it is a type of diabetes that can sometimes be prevented by making healthy lifestyle choices.

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## SLIDE 3 – CLASS QUESTION

Before we jump in, by show of hands, how many of you feel that you are confident to make healthy choices? There is no right or wrong answer. **ASK YOUR STUDENTS TO RAISE THEIR HAND FOR EACH ANSWER.**

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## SLIDE 4 – WELCOME CLASS

By the end of our class, you will not only learn what type 2 diabetes is, but you will also learn what makes it more likely for us to get diabetes and what we can do every day to help keep us from getting diabetes. At the end of class, I'll show you a website you can visit with your friends and family so that everyone can learn more about preventing type 2 diabetes.

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## SLIDE 5 – CLASS QUESTION

Before we get our lesson started, by show of hands, how many of you know what type 2 diabetes is? Whether or not you said yes or no, we're going to learn more together today.

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## SLIDE 6 – INTRODUCING THE BEAST

Before we get our lesson started, let's watch this video to learn more about The (type 2 diabetes) Beast. **PLAY VIDEO.** 

- What did you learn about The (type 2 diabetes) Beast by watching the video?
- What do the people in the video do that makes The Beast happy?  
Answer options: going to a fast-food restaurant, eating donuts, drinking soda, watching TV, playing video games
- What do the people in the video start doing that makes The Beast leave town?  
Answers options: exercise, play sports, play in the park, drink water, choose a healthy snack, learn more about type 2 diabetes

The way we eat and how much we move our bodies matters. We'll talk in more detail about this throughout our class today.



## SLIDE 7 — WHAT IS PREDIABETES?

Has anyone here heard of prediabetes before?

“Pre” typically means “before”. So prediabetes is a condition that occurs before diabetes. It means your blood glucose levels are higher than normal, but not high enough to be called diabetes.

Many people have it and don’t know it, which is why it’s important to go to the doctor regularly. If a doctor tells you that you have prediabetes, think of it like a notification alerting you that your blood sugar is higher than normal, but there are things you can do to lower it.

Just like we get notifications on our phones that our battery is low — we can do something about that — plug it in. If we get the notification that we have prediabetes, there’s something we can do about that too:

- Be active every day
- Lose weight, if you need to
- Take medicine, if your doctor prescribes it

Doing these things will lower your chances of prediabetes turning into diabetes.




## SLIDE 8 — DIABETES TYPES

It is important to know that there are different types of diabetes:

- **Type 1 diabetes** is related to genetic and/or environmental factors. While healthy lifestyle changes can help support management of type 1 diabetes, lifestyle choices are not able to prevent type 1 diabetes
- **Type 2 diabetes** is typically developed later in life and can sometimes be prevented through lifestyle changes
- **Gestational diabetes** develops during pregnancy, but most women’s blood sugar returns to normal after giving birth



## SLIDE 9 — HOW DOES YOUR BODY TURN FOOD INTO ENERGY?

Now that you’ve learned about prediabetes and the different types of diabetes, let’s watch a video to learn more about The Beast (type 2 diabetes). As I mentioned before, today we are learning about type 2 diabetes because it is a type of diabetes that can sometimes be prevented by making healthy lifestyle choices. **PLAY VIDEO** 

- What did you learn from the video?
- What affects glucose’s ability to enter into our cells and give us energy? (Insulin)
- And when glucose can’t enter our cells and we have too much glucose in our blood, it is called what? (Diabetes)
- What risk factors can put you at risk for type 2 diabetes? (Weight, family history, age, too much sitting, food we eat)

Great job. Now you’ve learned more about how our body turns food into energy and what type 2 diabetes is. Remember, the healthy choice is your choice. And we’ll learn how to make healthy choices today. But first, let’s learn about the warning signs of type 2 diabetes.



## SLIDE 10 — WARNING SIGNS OF TYPE 2 DIABETES

Sometimes, signs and symptoms can show up if your blood sugar is too high, BUT it's important to know that these symptoms can sometimes be so mild that they go unnoticed. It is always best to see your doctor for regular visits.

- You're more thirsty than usual
- You have to go to the bathroom more
- Even though you're eating, you still feel hungry
- Your vision is blurry



## SLIDE 11 — WHAT CAN YOU DO EVERY DAY TO PREVENT DIABETES?

We have talked about prediabetes and type 2 diabetes. Can anyone tell me the difference between prediabetes and diabetes?

- **ANSWER:** Prediabetes is when your blood sugar is higher than normal, but not high enough to be considered diabetes.

We've talked about risk factors that may make it more likely for someone to develop type 2 diabetes or high blood sugar. Do you remember which risk factors you all have some control over?

- **ANSWER:** Weight, blood pressure, physical activity habits, and eating habits

Great work. So let's dive into what choices you can make in your daily lives that will help support a healthy blood sugar level and prevent diabetes.



## SLIDE 12 — PREVENTING DIABETES EVERY DAY

The 5210 tool is a simple tool you can use daily to help stay on track with healthy habits. Each number stands for a different lifestyle factor that you can control. Has anyone seen the 5210 tool before?

Let's run through what each number means:

- **Everyone hold up five fingers in the air.** You should try to eat five or more servings of fruits and vegetables per day. When you see me hold up a "5", you think fruits and veggies
- **Everyone hold up two fingers in the air.** You should try to spend no more than 2 hours using screens for recreational use per day, i.e. TV, tablets, phones. When you see me hold up a "2", you think screen time
- **Everyone hold up your pointer finger in the air.** You should try to get 1 hour or more of physical activity per day. So when you see me hold up a "1", you think physical activity
- **Everyone make a "0" with your hands.** You should have zero sugary drinks per day. Water is best. When you see me make a "0" with my hands, you think zero sugary drinks.

I'm going to hold up my hand with different numbers and you all shout out what the number stands for. Ready?

**HOLD UP 5,2,1, OR 0 FINGERS, IN A RANDOM ORDER, SEVERAL TIMES, FOR THE STUDENTS TO SHOUT THE CORRECT ANSWERS.**



## SLIDE 13 — 5 OR MORE SERVINGS OF FRUIT AND VEGETABLES EVERY DAY

Now that you all know what 5210 stands for, let's learn more about each number. We'll start with "5", which stands for? **ALLOW STUDENTS TO ANSWER** — 5 servings of fruits and vegetables per day. One serving of vegetables can look like a half cup of fresh or frozen vegetables, and one serving of fruit looks like a half cup of fresh or frozen fruit.

This is a picture of how to create a balanced plate or meal. How much of the plate are fruits and vegetables in this picture? **ALLOW STUDENTS TO ANSWER**

At each meal about half of our plate or meal should be fruits and vegetables. We may not always eat on a plate, or sometimes we can't separate out each food group into their own areas. Can someone give me examples of meals that may not look like the plate here?

- Examples:
  - Eating out of a bowl — even if eating out of a bowl, you want half of the contents of that bowl to be fruits and veggies, OR you want to have fruit and veggies on the side
  - Eating a wrap, burrito, or sandwich. It is probably unlikely, but not impossible, to be eating mostly fruits and veggies if you are eating one of these items. Try including fruits and veggies on the side of your wrap, burrito, or sandwich if it's limited on the fruits and veggies

And when it comes to filling half our plate (or bowls or burritos) with fruits and vegetables, eat the rainbow. Our bodies need fruits and vegetables because they help us to keep moving, thinking, and growing. Fruits and vegetables of different colors have different vitamins and minerals that work together to help our body be strong. Each color represents a nutrient that supports different parts of your body. For example — red food gives you a strong heart, yellow foods help your body heal cuts, green food helps you fight off sickness, and blue/purple foods give you a strong brain.

What food groups are on the other half of the plate? **ALLOW STUDENTS TO ANSWER**

**ANSWER:** Grains and protein. What types of grains do you all like? **ALLOW STUDENTS TO ANSWER**

- Examples: bread, rice, tortillas, pasta, bagels, mac and cheese. When it comes to grains we want to try to replace white, processed grain with whole grains. For example, think about foods that have a white or brown variety. Think tortillas, bagels, pasta, cereal, muffins, pancakes/waffles, pizza, and rice. Choosing whole wheat bread instead of white bread or brown rice instead of white rice. Whole grains are the way to go.

Notice that protein is only a small portion of the plate. A balanced meal has a quarter of the plate with a source of protein. Protein builds our muscles, bones, and tissues, and helps us grow. It also helps keep us feeling full. What types of proteins do you all like? **ALLOW STUDENTS TO ANSWER**

- Examples: chicken, pork, beef, tofu, eggs, nuts/nut butters, and beans. It's important to try to choose lean proteins most of the time, meaning protein that does not contain a lot of fat. For example, choosing to have grilled chicken instead of fried chicken, or ham instead of bacon

Fruit, vegetables, whole grains, and lean protein are foods we often want to EAT MORE of and foods we get to enjoy EVERY DAY.



## SLIDE 14 – KNOW YOUR “SOMETIMES” FOODS

There are some foods that are best to limit. Remember the types of foods The (type 2 diabetes) Beast enjoyed in the video? Hint: French fries, pizza, donuts, soda, cookies, etc.

We can call these foods, SOMETIMES foods, because while it’s OK to eat them sometimes or once in a while, it would be unhealthy to eat them every day. These foods tend to have a lot of fat and sugar, two things that can make your body more susceptible to high blood sugar.



## SLIDE 15 – LESS SCREEN TIME

Now let’s talk about the “2.” Two hours OR LESS of recreational screen time every day. This does not include the screen time that is required for school or work.

What kinds of activities do you enjoy that keep you sitting for long periods of time while looking at a screen? **ALLOW STUDENTS TO ANSWER** (examples: social media, YouTube, TV, video games, movies)

These activities can be a lot of fun, and you can absolutely still do them, but doing too much of them doesn’t benefit our body. While awake, the body is not meant to stay sedentary for long periods of time. Getting up and moving your body every once in a while is essential. What reminders can you set to snap yourself out of a screen time trance?

- Examples: Wear a wearable fitness device that reminds you to get up every hour, set a timer on your phone prior to going on social media so when the timer goes off you know your time is up, get up and move around during commercial breaks or between episodes of a show

Reducing screen time can be challenging. Think of it as a two-step process:

- **Step 1.** Gain a greater awareness of your baseline. How much time do you currently spend looking at screens in your free time? Take note that your recreational screen time may look very different on a weekday vs. weekend day
- **Step 2.** Once you know your baseline, reduce screen time in small increments of time – even just by 15 or 30 minutes.

Example: You calculate that during the weekend, you spend 8 hours looking at screens in your free time. The following weekend you set up a way to track your screen time minutes and set a goal to only do 7 hours and 30 minutes. The following weekend you can try for 7 hours, and the following maybe you even try for 6 hours, until eventually, you are down to 2 hours or less of recreational screen time per day. It can take time to reach your ultimate goal, and that’s OK.



## SLIDE 16 – MORE PHYSICAL ACTIVITY

If you are trying to reduce screen time, a great replacement can be doing more physical activity.

It's recommended to do 1 hour OR MORE of physical activity every day. What are some physical activities you all enjoy? **ALLOW STUDENTS TO ANSWER.**

It is important to note that it is not required to do all 60 minutes at one time. You can break it up into smaller bouts of physical activity throughout the day. Here is an example:

- 10 a.m. – 20 minutes of activity or sport in PE/gym class
- Noon – 10-minute walk after lunch
- 3 p.m. – 20 minutes of activity after school (sports, walking, running, biking, dancing, exercise videos)
- 7 p.m. – 10-minute walk after dinner
- TOTAL – 60 minutes

**(2-3 MINUTE ACTIVITY)** Let's move our bodies a little bit right now. I'll ask everyone to stand up to run through a few stretches and exercises:

- **Arm circles.** (10 forward, 10 backward)
- **Standing sit-ups.** Alternate touching your left elbow to your right knee, and your right elbow to your left knee. (20 total)
- **Squats.** Keep your chest up and your back straight. Aim to make a 90-degree angle with your legs. (5 total)
- **Jumping Jacks.** (5 total)
- **Quad stretch.** Grab your foot toward your bottom and stand on one leg. (15 seconds on each leg)

Even this short exercise can be added toward your 60 minutes of activity today.



## SLIDE 17 – CLASS QUESTION

By show of hands, during the past 7 days, how many times did you drink a can, bottle, cup of soda, such as Coke, Pepsi, Sprite, Fanta, etc? Let's not count diet soda for this question. **ASK YOUR STUDENTS TO RAISE THEIR HAND FOR EACH ANSWER.**



## SLIDE 18 – WHAT DRINKS HAVE SUGAR?

Lastly, in order to prevent diabetes, it is incredibly important to avoid drinking sugary drinks. The recommendation is ZERO sugary drinks per day. What drinks do you think have sugar in them? **ALLOW STUDENTS TO ANSWER.**

- Examples: Soda, juice, Starbucks drinks, Gatorade, sweetened teas like Arizona Iced Tea

Some of these drinks have enough sugar in them, its like eating two candy bars. For example, a bottle of regular soda has as much sugar as eating two candy bars. And remember, we said eating candy is a sometimes food. Its better to drink other beverages instead to keep The Beast away.

While these drinks are tasty, they often have a significant amount of sugar in them. Our body has no need for added sugars. It is not a required nutrient, and it can end up hurting our bodies if we consume too much sugar over time.



### SLIDE 19 – SUGAR FACT

The American Heart Association recommends that we limit our added sugar consumption to less than 6 teaspoons a day (25 grams) to protect our heart health.

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### SLIDE 20 – THE RULE OF “4”: EXAMPLE 1

The tricky thing is that when we look at a nutrition label, the amount of sugar is usually listed in grams, which is a unit of weight, and it is very difficult to imagine what 40 grams of sugar really looks like. So, today we are going to learn about the rule of “4” to help you better visualize the amount of sugar that is in some of these drinks.

#### FOLLOW THE STEPS ON THE SLIDE.

It is easier to visualize the amount of sugar when we are able to understand it in teaspoons.

4 grams of sugar = 1 teaspoon of sugar.

Based on our calculations, one can of Coke soda has 10 teaspoons of sugar per can. That is a lot of sugar, and is more than the recommended 6 teaspoons.

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### SLIDE 21 – THE RULE OF “4”: EXAMPLE 2

How about this label? Let’s walk through the rule of 4 again.

#### WALK THROUGH THE STEPS ON THE SLIDE

This snack is 3 teaspoons of sugar, which is already half the recommended amount in this one snack.

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### SLIDE 22 – THE RULE OF “4”: EXAMPLE 3

Let’s do one more. This one is a yogurt label. Sugar can hide in places, even in foods we think are healthy. Take this yogurt. The amount of sugar almost exceeds the daily recommended amount with this one container of yogurt. In this case, you can choose other flavored yogurts that are lower in sugar such as Greek yogurt. Instead of a flavored yogurt, you can try a plain Greek yogurt and add fruit of your choice.





## SLIDE 23 – ZERO SUGARY DRINKS

In summary, water is best and it is always important to choose beverages with zero added sugar.

If you are looking at a nutrition label, remember to use the rule of “4” to better visualize how much sugar is in your drink, or food. Do you remember how many teaspoons of sugar are in 1 gram of sugar?

- **ANSWER:** 1 gram of sugar = 4 teaspoons of sugar

Instead of making those drink choices, what drink choices can you make that are healthier?

Hint: there are some examples on the slide.

- Examples: WATER, low-fat milk, unsweetened iced tea, unsweetened carbonated water

Drinking water is essential to staying healthy and is the beverage we should choose most of the time.

Here are some tips to help you make healthy beverage choices:

- Add fruit or a dash of 100 percent fruit juice to your water to give it flavor
- Drink unsweetened black tea instead of energy drinks
- Carry a reusable water bottle with you to fill up throughout the day



## SLIDE 24 – BENEFITS OF DRINKING WATER

Drinking water does more than just quench thirst, it can actually improve our mental and physical performance. **REVIEW SLIDE.**

And it is important to note that foods with high water content can also be good sources of hydration. Can you guess which foods have a high water content?

- **ANSWER:** Fruits and vegetables

Do you remember how many servings of fruits and vegetables it is recommended we have every day?

- **ANSWER:** 5 servings OR MORE



## SLIDE 25 – GOAL SETTING ACTIVITY: [CLICK HERE FOR SMART GOAL WORKSHEET](#)

We’ve learned a lot today and today you’re a lot smarter about healthy activities. How will we defeat The Beast? By setting a SMART goal. The (type 2 diabetes) Beast hates healthy goals. Let’s go through this together. To be successful in reaching your goal, it should be SMART. Maybe you want to learn how to play a sport or try a new fruit. Your goal should be specific. Next, how will you know if you reach your goal? Think about how you’ll track your progress. Next, ask yourself if your goal is action-based? Make sure it is a specific action you can take. Next, think about if this goal is realistic to you? How will it benefit you? Last, how long will it take you to accomplish this goal? You want your goal to be bound by a specific time frame to complete it.

Pick one of the goals on the back of your worksheet that you want to accomplish. Write it down on the front side of your worksheet. You did it. You created a smart goal. Keep this close to you so you can refer to it and check on your progress. Great job.



### SLIDE 26 – CLASS QUESTION

Now, how many of you feel that you are confident to make healthy choices? There is no right or wrong answer. **ASK YOUR STUDENTS TO RAISE THEIR HAND FOR EACH ANSWER.**

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### SLIDE 27 – CLASS QUESTION

And lastly, do you know what type 2 diabetes is?

**ASK YOUR STUDENTS TO RAISE THEIR HAND FOR EACH ANSWER.**

Note any improvement on the amount of student that now know about type 2 diabetes.

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### SLIDE 28 – THANK YOU

Great job everybody. Thank you for being such a great class today. Visit [dontfeedthediabetes.com](http://dontfeedthediabetes.com) with your friends and family so they can learn how they can defeat The Beast, too.

# Resources

## DIABETES INFORMATION

- Don't Feed the Diabetes — [dontfeedthediabetes.com](http://dontfeedthediabetes.com)
- CDC website — [cdc.gov/diabetes](http://cdc.gov/diabetes)
- American Diabetes Association — [diabetes.org](http://diabetes.org)

## FOOD GROUPS/MYPLATE

If you are interested in more educational materials, we encourage using these engaging MyPlate lesson plans that are a part of the CalFresh Healthy Living Nutrition program that focuses on the 5 food groups and eating healthier.

- [Fruit Bitmoji lesson](#)
- [Vegetable Bitmoji lesson](#)
- [Dairy Bitmoji lesson](#)
- [Protein Bitmoji lesson](#)
- [Grains Bitmoji lesson](#)

These can be used as a lesson in several settings. The students can click on the links and follow along with the audio recordings during asynchronous learning or you can teach virtually during synchronous learning or in-class sessions. If you would prefer, the CalFresh team can connect with you to complete the lesson virtually during one of your class sessions. Embedded in the lesson plans are audiobooks, cooking demos, and physical activity sessions. Some of the lessons have worksheets attached as well.

There is also a [teacher survey linked here](#). It would be helpful if you fill this out after completing the lesson and return to the contact information provided below. As an incentive, prizes can be provided for your students to all teachers who complete a lesson and return the survey.

For questions regarding the CalFresh Healthy Living Nutrition program, please contact:

Niaomi Hrepich  
WIC Director, Health Program Coordinator  
Monterey County Health Department  
[nhrepichns@co.monterey.ca.us](mailto:nhrepichns@co.monterey.ca.us)