

Crush Diabetes Lesson Plan #2

Diabetes 101, Physical Activity or Nutrition Basics

- Target Audience:** Middle School Health Class
- Diabetes 101 Duration:** 40 minutes (80 minutes if including film)
- Physical Activity Duration:** 30 - 50 minutes (dependant upon activities)
- Nutrition Basics Duration:** 30 - 50 minutes (dependant upon activities)
- Created:** For teachers who have the class time to teach the Diabetes 101 and physical activity OR nutrition curriculum.
- Diabetes 101 Objective:** To explain the etiology, pathophysiology, and prevalence of both Type 1 and Type 2 diabetes, particularly as it relates to adolescents.
- Physical Activity Objective:** To teach students about the importance of regular physical activity. Also includes information on proper nutrition for game day and supplements.
- Nutrition Basics Objective:** To explain the basics of nutrition including reading a nutrition label, mindful eating and creating SMART goals.

Diabetes 101

1. **Teaching Tools:**

- Diabetes 101 PowerPoint Presentation
- Pancreas Appreciation Day Worksheet
- Diabetes 101 Health History Worksheet
- Diabetes 101 Worksheet for students to fill out during class presentation
- Sugar Babies Worksheet for students to fill out while watching full film
- Answer Keys to both worksheets

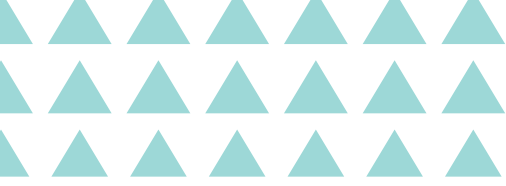
2. **Diabetes 101 PowerPoint Presentation:**

Includes video clips from Sugar Babies film. Also includes link to the entire film on the last slide and two other video clips that were not included in original Sugar Babies Film.

PowerPoint ends with discussion questions and take- home summary slide.

3. **Diabetes 101 Video Clips:**

- What is Diabetes?
- Insulin
- Type 1 Diabetes
- Type 2 Diabetes



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Diabetes

- Impact of Sugary Foods and Sedentary Lifestyles
- Managing Blood Glucose
- What is Diabetes Burn-Out?
- Optional, the full version of the documentary film Sugar Babies (slide 23)

4. **Answers to Discussion Questions:**

- Why is Type 2 referred to as the “lifestyle” disease? What are the most common steps taken to control Type 2?

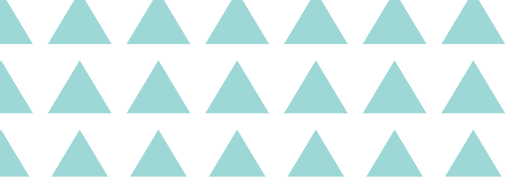
Type 2 diabetes is known as the lifestyle disease because the key factors that cause Type 2 diabetes are a poor diet and lack of exercise. If a person eats too much sugar or other unhealthy foods, it becomes increasingly more difficult for the body to do its job which is to produce enough insulin and to use the insulin that is produced correctly. The most common steps taken to control Type 2 are regular physical activity and a healthy diet.

- How does Type 1 diabetes differ from Type 2?

Type 1 diabetes is an autoimmune disorder. For unknown reasons, the immune system of a person with Type 1 diabetes mistakenly attacks and destroys the Beta cells in their pancreas that produce insulin. Type 2 diabetes is a metabolic disorder that can sometimes be controlled with a healthy diet and regular exercise. Being overweight, eating foods high in sugar and inactivity can significantly increase your risk of developing Type 2 diabetes.

- The number of cases of Type 2 diabetes is rising quickly in teenagers and even in children. What do you think is contributing to these increasing numbers in our culture?

Our increasingly sedentary lifestyles are contributing to the rise in diabetes. There is more time inside playing video games or watching television instead of playing sports and other physical activities. Also, the types of food that we eat, and portion sizes have changed over the past 50 years. Much of the food we now eat is highly processed and fast food is at our fingertips. This means that there are extra additives and sugar in many packaged foods. The combination of these two elements is leading to the increase of Type 2 diabetes.



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- What role does insulin play when it comes to Type 1 diabetes?

Type 1 diabetes is an autoimmune disease where the pancreas is unable to produce insulin.

Therefore, those with Type 1 must take insulin shots so that their bodies can use food as energy.

- What is an A1C test?

An A1C test is a blood test which tests what your blood sugar has been over the last 2-3 months.

It is often used to diagnose Type 1, Type 2 and pre-diabetes.

Nutrition Basics

1. Teaching Tools:

- Nutrition Basics PowerPoint Presentation
- Mindful Eating Activity Worksheet
- Grass Roots Initiative Activity (on slide #21)
- SMART Goal Worksheet
- The Mind Game of Marketing Worksheet
- Nutrition Basics Worksheet for students to fill out while watching the presentation
- Nutrition Basics Answer Key

2. Basic Nutrition PowerPoint Presentation:

Includes 4 life hack videos on healthy breakfasts, nutrient density, fad diets and fast food. Also includes Mindful Eating and Grass Roots Initiative activities which can be used during classroom time or for a homework assignment. PowerPoint ends with discussion questions and take-home summary slide.

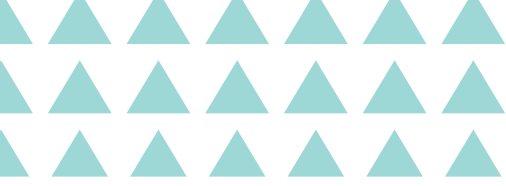
3. Answers to Discussion Questions:

- What food or drink do you have the most often? Do you think it is a healthy food or drink? What are the ingredients? Does it contain added sugar?

No right or wrong answer. Will depend on the drink that the student has most often.

- When you are reading a nutrition label, what are the ingredients that you should be paying extra attention to that may not be as nutritious?

Sugar content which can be masked by ingredients such as high fructose corn syrup, sucrose and fructose.



- Why are whole grains an important addition to your diet?
They contain more fiber, vitamins and minerals. They also decrease the risk of developing a chronic disease and weight gain.
- Why do you think it is important to make a SMART goal achievable?
If it is not achievable you will be much more likely to not be able to complete the goal. This can lead to frustration and a sense of failure. On the other hand, setting achievable goals will make it much more likely that you can attain it. Once it becomes a habit, you can always add to it.

Physical Activity

1. **Teaching Tools:**

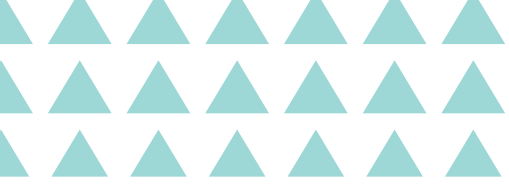
- Physical Activity PowerPoint Presentation
- SMART Goal Worksheet (if you did not go over the nutrition presentation you will need to include information on SMART goals with the physical activity presentation)
- Being an Active Family Worksheet
- Convert Activities to Steps Worksheet
- Meal Plan for Game Day Worksheet
- Meal Plan for Game Day Tip Sheet for students: To be used with worksheet
- Vitamin and Mineral Worksheet
- Vitamin and Mineral Answer Key
- More Movement-Less Screen Time Worksheet
- Physical Activity Worksheet for students to fill out while watching the presentation
- Physical Activity Answer Key

2. **Physical Activity PowerPoint Presentation:**

Includes 4 life hack videos on physical activity that will matter, importance of doing an activity that you enjoy, meal timing on game day and supplements. PowerPoint ends with discussion questions and take-home summary slide.

3. **Answers to Discussion Questions:**

- How many minutes of daily moderate to vigorous aerobic activity are recommended?
At least 60 minutes daily



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- How long before an athletic event should you consume a small snack?

30 minutes

- What are the health benefits of regular physical activity?

Improved mood and self-esteem, helps prevent chronic disease, promotes bonding with family members and friends, builds strong bones and muscles, reduces risk of weight gain and promotes life-long wellness and health

- When may it be necessary to consume a sports drink?

When a person has been exercising for more than 60 minutes

- Why is it better to consume actual food instead of a supplement?

Supplements may have ingredients in them that are not listed or may have ingredients that are not good for you such as high levels of caffeine. Therefore, it is better to get your nutrients from actual food.