

Diabetes: Through the Eyes of a 9th Grader

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Overview

Diabetes is a disease that affects children, teens and adults. This is a disease with which the majority of students are not familiar. Some students have heard of the disease but do not know anything about it. The average ninth grader views diabetes as a sickness that some people have, but not teens. Others think that diabetes is just as common as the common cold. They do not understand the restrictions and triggers of the disease.

My primary goal with this curriculum unit is to develop a more direct and realistic approach to understanding the disease, both from the scientific aspect as well as the changes adolescents need to make to their lifestyle to live comfortably with the disease. Students will also be able to identify and understand the indicators of the disease and why it is necessary to follow a prescribed diet and/ or medication regime. We will delve into triggers for Type 2 and understand the seriousness of obesity and the role it plays. Students will be able to evaluate the results of health conditions that will appear if they do not take the necessary medical steps to treat the disease. We will also analyze the role that proper nutrition plays in the prevention of the disease.

Another goal of this unit is a personal one. I have had very little exposure to diabetics. I feel that many teachers may be in the same position in which I fall: they have book knowledge concerning the disease, they do not personally know anyone that is affected by the disease and they now have students that are diabetic in their classes. I have also been identified as the contact person for our ninth graders when the nurse is out of the building. This put me in a position that is challenging, as I do not have any of the diabetic students in my classes, so I do not have an opportunity to develop a relationship with them and begin to understand their needs or constraints associated with being diabetic. I also did not know how they felt about "others" knowing they were diabetic. Fortunately, as the year progressed, I was able develop a comfortable relationship with these students. The school nurse told them that I always have

candy for them if she was not in the building. This presented an opportunity that allowed me to get to know these students.

Another area of concern for me was wondering if these students had a more difficult time adjusting to high school than the average student. We are all aware of the many challenges that our ninth graders encounter as they start the new school year: adjusting to a new school, new teachers, new students, new classes and new expectations for academics and behavior. Our diabetic students can be out of his/her comfort zone because they now are with students that they do not know and who may not have any knowledge about diabetes. They are faced with the stress of deciding whether or not they should disclose this, and if so, to whom and when. In my research, I did find a study that I will be referring to later that addresses this issue specifically. We have discussed the various types of studies and methods in our sessions, and Dr. Waldron helped us to weigh the validity of studies taking into consideration factors such as methods and study sizes. This study is definitely limited in the number of participants, but I felt that it provided valuable information on how students view themselves and their relationship to the disease. This is something that as teachers, we need to understand.

Rationale

Students do not take their health seriously. For many of them, visits to the doctor are few and far in between. At this age, the typical 9th grader is more focused on social concerns than health conditions. This unit will provide general information on diabetes as a disease. This will include basic biology information, causes of the disease, whether it is inherited or acquired, lifestyle limitations and diet.

Diabetes is a disease that is becoming more prevalent in our society. One reason for the increase is due to the rising number of children who are obese or who are on the path towards obesity. Lack of daily exercise, limited participation in sports and an increase of time spent in front of the television and computer are factors that are contributing to childhood obesity. This then leads to an increase of diabetes during childhood and young adulthood. If the child is overweight and continues to lead a sedentary lifestyle and does not follow a proper diet as they grow older, the possibility of being overweight remains high. The chance of developing diabetes consequently increases.

A diabetic faces daily challenges that include physical limitations as well as dietary ones. These limitations are not restricted to the individual, but reach out and encompass family members, especially those that are involved with care and nutrition.

There are three types of diabetes: Type 1, Type 2 and Gestational diabetes. Each type has its own audience of individuals, with each displaying the same type of biological conditions relating to the amount of glucose and insulin in the body. All individuals face similar limitations, based on the severity of their condition. Students will be able to understand the modifications diabetics must make in their daily routine as well as nutritional needs.

At the end of this unit, students will be able to understand the disease, testing methods to identify it as well as symptoms and treatment. They will also be able to understand the reason for changes in diet and eating patterns. Having this knowledge, one goal is to cultivate students with the tools and information to avoid this disease. A second goal is to develop an awareness of the special accommodations that are needed so they can, when necessary, care and support family or friends that have this disease. This will develop a better social awareness and appreciation for those that are suffering with diabetes.

Objectives

This unit is intended for students in Grade 9. The intent is to expose students to the disease, types, biological indicators and treatment. We will also study the connection to diet and lifestyle restrictions.

The Objectives of the unit will include:

- Students will be able to distinguish the difference between Type 1, Type 2 and Gestational Diabetes.
- Students will analyze the role diet, especially carbohydrates, play in this disease.
- Students will be able to analyze diet restrictions as they create meals that are appropriate for a diabetic.
- Students will explore lifestyle restrictions that are experienced by a diabetic.
- Students will gain an appreciation for exercise, especially with diabetes.
- Students will study obesity in children and its relationship to diabetes.

Background

It is a known fact that the number of children diagnosed with diabetes has been on the rise. According to the National Diabetes Fact Sheet, approximately 186,300 youth in the U.S. under the age of 20 years had diabetes in 2007. Based on data from 2002-2003, the SEARCH for Diabetes in Youth study reported that approximately 15,000 U.S. youth under 20 years of age are diagnosed annually with Type 1 diabetes, and 3,700 are newly diagnosed with Type 2 diabetes each year. Type 2 diabetes is rare in children younger than 10 years of age, regardless of race or ethnicity. After 10 years of age, however, Type 2 diabetes becomes increasingly common, especially in minority populations, representing 14.9% of newly diagnosed cases of diabetes in non-Hispanic whites, 46.1% in Hispanic youth, 57.8% in African Americans, 69.7% in Asian/Pacific Islanders, and 86.2% in American Indian youth. Overweight and obesity in youth contribute to increasing numbers of young people who have Type 2 diabetes. Most cases of diagnosed diabetes in children are Type 1, but there are also instances of newly identified cases of Type 2, especially after the age of 10. One main cause is the increase of children that are obese or are leaning toward obesity. (1)

In a consensual qualitative research study of six fourteen and fifteen-year old adolescents (five females, one male) by Fleischman, Smothers, Christianson, Carter, Hains and Davies from the University of Wisconsin- Milwaukee, students were asked open-ended questions that included changes experienced from middle to high school, demands associated with living with diabetes, coping with diabetes, the role of support from peers and family, disclosure of diabetes status and the experiences of performing diabetes self-care.

It is noted that this type of research is difficult to report completely and accurately because of the possibility of personal interpretation of the responses. In this study, to limit the amount of personal interpretation, there were instances that the responses were used verbatim to ensure as unbiased results as possible. This study showed that the students that have Type 1 diabetes had the same concerns and anxieties as any other typical teen that is entering the ninth grade. When they described themselves, they included the fact that they are diabetic as one of their concerning characteristics. They shared their health condition when they felt that they needed to do so. The one factor that was shared by these teens that differs from the students that I have contact with is an important one. The teens that were surveyed self-cared for themselves and were not hiding their condition. (2) My students do not self-care; instead, they go to the nurse everyday at approximately 1:00 pm, 30 minutes before lunch time. Their peers accept that they leave the classroom daily at the same time, but many students may not have any idea why they are leaving or what the diabetic student needs to do.

Diabetes Mellitus is a group of disease characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. It can be associated with serious complications and premature death. People with diabetes can take steps to control the disease and lower the risk of complications. (3) As previously stated, there are three types of diabetes: Type 1, Type 2 and Gestational Diabetes. There is also a condition called a pre-diabetic phase. Type 1, T1DM, or Juvenile diabetes is found mainly in children under the age of 12. Even though the process of breaking down the insulin producing beta cells by the immune system usually starts years before it is diagnosed, it is normally possible to determine when the symptoms started. It is a disease of the autoimmune system that destroys the insulin-producing beta cells of the pancreas that help regulate blood glucose levels. The age of 12 seems to be the age where this type of diabetes is diagnosed. Typical symptoms due to high levels of blood glucose include excessive thirst and urination, constant hunger, weight loss and sometimes fatigue. As the insulin deficiency increases, ketoacids build up in the blood. This can cause shortness of breath, abdominal pain, vomiting and dehydration. If the condition is not diagnosed and treated, it could lead to a life threatening coma. (1)

Type 2 diabetes is becoming a concern with youth that are 12 years and older. There is a strong correlation between Type 2 diabetes and obesity in children. The first stage in the development of Type 2 diabetes is often insulin resistance, causing an inadequate response to insulin, and requires increasing amounts of insulin to control blood glucose. (2) Obesity is partially a result of the unhealthy diet that children are following. Children, especially teens, are choosing unhealthy snack foods, to include what they are eating for breakfast and lunch, instead of eating well balanced meals. This is evident when you observe teens arriving at school with several bags of chips, snacks and soda for breakfast instead of eating breakfast foods and school lunches. The lack of exercise that is becoming the accepted norm for our youngsters is also an important

factor. Moreover, as we are facing monetary cutbacks in education budgets, the first subjects that are being considered for elimination are typically the arts and physical education. This reduces the opportunities that students have to be active in school and to learn active lifestyle activities that can include sports such as swimming, tennis, bowling, badminton and team sports.

Exercise is a key component in the control of the disease because the body burns sugar for energy which causes the blood glucose level to drop. Exercise also burns up food that might otherwise be stored in the body as fat. In addition to exercise, a healthy diet is also important to help control diabetes. This diet is no different than the healthy diets recommended for everyone: a wide variety of foods including vegetables, whole grains, fruits, low-fat dairy products, beans, nuts and lean meat, poultry and fish. (3)

Gestational Diabetes is a condition that develops during pregnancy and must be treated to maintain fetal growth and development. Even though this is not a typical condition for teen pregnancies, it will be included as a condition that can occur during pregnancy even if the mother is not obese.

It is important for our students to be able to recognize the symptoms of this disease because often, they are responsible for their health and well being. If they are unaware of the symptoms, they will not be able to alert their parent/guardian or health care provider of the possibility of the disease. Many symptoms are typical “sick” feeling symptoms. What does that mean to a teenager? Frequent urination is another symptom. We need to define exactly what that means. We may need to define what it does NOT mean, so that teens are better able to evaluate their patterns.

Life styles can change when you are diagnosed. Students will delve into the physical and dietary restrictions and what modifications they may need to make to control the disease. This will include restrictions, medication and suggested diets. It is also necessary to consider the permanent damage that can result if the disease is not diagnosed and treated. It is important to stress to students that Type 2 diabetes can be controlled and does not necessarily require insulin shots.

Strategies

Students will be exposed to a variety of strategies that fall under current best practices. Activating prior knowledge will be used in each lesson so that the teacher will have knowledge of where her students are and can proceed from that point. In Lesson One, prior knowledge is being activated by using a chart walk with headings. Students will write down what they know or questions that they may have. This will take the place of a pretest, which is another strategy that can be used to activate prior knowledge. After the students write their comments or questions, the teacher then will use that information to guide her lesson. This will be supplemented with the appropriate vocabulary words for each chart. For example, for chart 1, this is where the definition of “diabetes” would be included.

Utilizing short video or YouTube clips can enhance the lesson. This will appeal to those students that are visual and auditory learners. This can be a valuable strategy, but one that should not be over used, even if they are short (one-two minutes). The YouTube clip that I have inserted in Lesson Two works well because the rapper addresses ways that diabetes has affected his life, needing to use a pump and insulin, the fact that his body does not produce insulin and that glucose cannot enter his cells. Most importantly, he will be dependent on insulin for the rest of his life. Another reason for choosing this clip is because of the popularity of rappers with my student population.

Jigsaw reading of articles is another strategy that will be implemented in this unit. Jigsaw reading is when you divide an article up into chunks and either have individuals or groups read sections. The group then discusses the article as each person summarizes his section. This requires everyone's participation. If you choose to have groups responsible for sections rather than individuals, you then have the option to have those students that are not good readers take notes or present the reviews.

Another strategy that will be implemented is engaging all students by use of popsicle sticks for random chance questioning. This will ensure that all students will have the opportunity to share thoughts and answers. To further encourage students, the sticks will be color coded to indicate to the teacher the level of the student. For example, advanced student sticks are blue, average (proficient) students are yellow and basic and below are purple. The teacher then has formulated questions for each level.

Classroom Activities

Class activities will include the use of graphic organizers, creating menus that are appropriate for diabetics, and analyzing the impact of exercise and obesity and their effects on the disease.

Lesson One

Objective: Students will be able to identify diabetes as a lifestyle disease, identify the symptoms of the three types of diabetes and identify their target population.

Objective: Students will be able to analyze the relationship of glucose and insulin, including the relationships of glucose and insulin to diabetes.

To prepare for the lesson (Do Now), the students will describe a "lifestyle disease."

Activities:

1) Chart paper is posted on the walls. Students will do a gallery walk and write what they know about the disease on each chart: a) What is diabetes? b) Who gets diabetes? c) What are symptoms? d) What types of treatment exist? e) How is lifestyle altered? f) What types of complications can occur? Each sheet provides the teacher with the prior knowledge as that area is discussed throughout the unit.

2) Vocabulary words: After introducing the words and meanings, activities to reinforce the meaning can include crossword puzzles or word searches. Diabetes, insulin, Type 1, Type 2, Gestational Diabetes, glucose, insulin pump, beta cells, blood glucose levels, hormone, insulin resistance

3) When discussing what diabetes is, these videos simplify the role that insulin and glucose play. They are easily overwhelmed when you discuss biology because many have not been exposed to the subject. The three videos that I will use here are from TeenHealth.com. They are short, very simple and get the point across to the student. Listen to the three short animated videos at http://kidshealth.org/teen/diabetes_center/treatment/treating_type1.html (All three are accessible through the “Watch the Movie: What happens in Diabetes.”) They are also very colorful, so the student will be able to appreciate the information. Watch them in the following order: 1) Diabetes: How your body gets energy, 2) Diabetes: How insulin is made and works ending with 3) Diabetes: Type 1 and Type 2.

Lesson 2

Objective: Students will be able to identify and analyze the differences between Type 1, Type 2 and Gestational Diabetes.

To prepare for the lesson (Do Now), students will describe the roles of glucose and insulin in the body.

Teacher’s role will include assisting the students in analyzing the three types of diabetes, similarities, differences, and age groups that are affected. Rating students’ prior knowledge level can be accomplished by revisiting charts labeled: Who gets diabetes, What are the symptoms and What types of treatment exist. Focus will be on Type 1 because of their age. Discussion will include the impact of carbohydrates and diabetes.

Activities:

- 1) Activities: Rap video by a diabetic teen <http://www.youtube.com/embed/DdF54FZu17I>
- 2) Use contrast/comparison (T Chart) graphic organizer to identify similarities and differences between the three types. Using a graphic organizer, students will be able to identify those components that are similar/different between the three types. This will include symptoms, causes, and damages to the body.

Lesson Three

Objective: Students will be able to analyze dietary restrictions and the reasons for the restrictions.

Objective: Students will be able to evaluate the components of a healthy diet and the components of a healthy diet for diabetics.

To prepare for the lesson (Do Now), students will list two characteristics that are shared by all three types of diabetes.

Teacher's role will be to help the students analyze reasons for dietary restrictions using their prior knowledge of the food pyramid. Using this as a framework, teacher will review the relationship between glucose and insulin and how certain foods have a negative impact on the diabetic.

Activities:

- 1) Students will bring in food labels and in small groups analyze the ingredients and determine if it would be something that a diabetic can incorporate into a meal plan.
- 2) In small groups, students will be given a random selection of food labels. Challenge: To create a meal that is "healthy" for everyone.
- 3) Using the labels that were not incorporated in the healthy meal in activity 2, students will analyze the ingredients and share why they should not be consumed by a diabetic.
- 4) Students will research meals and adapt their favorite meal so that it will be more favorable for the diabetic.

Teacher Resources: www.diabeticlifestyle.com
www.diabetes.org/food-and-fitness/food/recipes
www.diabetes.webmd.com/diabetic-food-list-best-worst-foods
www.diabeteslinks.com

Lesson Four

Objective: Students will be able to evaluate the role that physical activity plays in maintaining a healthy lifestyle for a diabetic and for everyone else. Students will be able to evaluate types of activities and determine which activities are beneficial for diabetics as well as activities that are not as well and why they are not beneficial for the diabetic.

To prepare for the lesson (Do Now), students will list food/nutrition ingredients that are potentially harmful for a diabetic.

Teacher's role will be to facilitate a discussion on physical activity for children as well as adults. Students will be encouraged to evaluate how children play, the role activity plays with healthy students, obese students and those with diabetes. Special attention will be on teen activities to make this lesson relevant.

Activities:

- 1) In small groups, students will develop a fitness plan for the average teenager, an obese teen and a diabetic teen. This will include activities, minimum and maximum duration, and number of times a week. The groups will share their fitness plan with the class. Teacher to provide chart paper and markers. Students will act as task managers, recorders and presenters.

Teacher Resources: www.diabeticlifestyle.com , www.diabetes.org/food-and-fitness/food/recipes

Lesson Five

Objective: Teens managing Diabetes.

To prepare for lesson (Do Now), students will list differences between the social and physical activities of a student with diabetes and those that do not have the disease.

Teacher' role is to facilitate the panel discussion on how diabetes affects the lives of teenagers and adults.

Activity:

1) Panel of upper classmen and an adult on how the disease has altered their lives. Topics to be included: what changes they had to make, activities that they cannot participate in, foods that they cannot eat and how they adapt emotionally. Students will prepare questions to ask the panel.

Lesson Six

Objective: Students will read articles about famous people that have diabetes and evaluate the impact of the disease on their life and their successes or lack of success.

To prepare for the class (Do Now), students will list two activities that can be challenging to a diabetic.

Activity:

1) Students will jigsaw the articles, one per small group, and answer questions that will deal with lifestyle, occupation, challenges and obstacles that the person faced or is facing.

Examples of famous people:

1. Jay Cutler:http://www.dlife.com/diabetes/famous_people/sports/jay-cutler-biography#.T5S5QsEpwQc.email

2. Nick Boynton:
http://www.dlife.com/diabetes/information/inspiration_expert_advice/famous_people/nick_boynton_biography.html#.T5S404YESAw.email

3. Orlando Brown:
http://www.dlife.com/diabetes/famous_people/sports/orlando_brown#.T5S4V7_NUiQ.email

Other famous people can be found at the above website. (I was not able to find people that are now popular or famous.)

2) Play the game of Jeopardy. Game with categories and questions in appendix.

Lesson Seven through Nine:

These lessons will provide the opportunity to differentiate projects to accommodate students that are at various levels.

Objective: Students will show their proficiency of knowledge about the disease by completing their choice of a project.

To prepare for lesson (Do Now), students will provide information about their favorite famous person affected by diabetes.

Teacher's role is to provide rubric for projects and provide the resources for project.

Project choices:

1. Poster depicting the types of diabetes, people commonly affected, symptoms, treatment, lifestyle changes and complications.
2. Develop a book for either younger children or peers outlining the disease and including the following information: types, people commonly affected, symptoms, treatment, lifestyle changes and complications.
3. Write a rap related to diabetics.
4. Create a poster/picture of the glucose/insulin conflict present in diabetes.

Writing Exercise:

1. Write a letter to your best friend telling her/him that you have been diagnosed as a diabetic. Relate your fears, concerns, lifestyle changes, and how your plans for the future can be affected.

References

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- 2) Overview of Diabetes in Children and Adolescents. A Fact Sheet from the National Diabetes Education Program, National Diabetes Education Program (NDEP), August 2008
- 3) Silverstein, Alvin, Silverstein, Virginia, Silverstein Nunn, Laura. *The Diabetes Update*. Enslow Publishers, 2006

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Annotated Bibliography/Resources

http://forecast.diabetes.org/magazine/features/food-cravings?loc=rightrail1_forecast-food-cravings_mar2012. *This will be useful when discussing diet and recipes for diabetics.*

<http://noahnet.myweb.uga.edu/plansdb.html>: *lesson plans on diabetes for older adults. Can be used when teaching health unit on geriatrics. Useful to extend the time line for a diabetic to show how disease progresses and how lifestyles of older adults have to be modified.*

<http://www.cdc.gov/diabetes/pubs/factsheets/atwork.htm> *This website has a PowerPoint with latest information on cases diagnosed, etc. with graphs. The PowerPoint can be used to focus students on data and statistic. Can be useful as a part of a cross-curricular activity with math. You can have students analyze graphs which would then connect with Algebra. Using statistic, the students can also have an exercise with data analysis.*

http://www.cdc.gov/excite/ScienceAmbassador/ambassador_pgm/lessonplans_diabetes.htm *This site has lesson plans that can be used in how the body functions and nutrition health units. Included are detailed plans and activities. This can be used to supplement the unit. I always want to review the activities because in case what you have planned isn't effective, then you always have a back up*

<http://www.lessonplanet.com/lesson-plans/diabetes>. *This website has a wide selection of topics that are directly related to diabetes. There is a link from this site to others that are helpful. The link will give a suggest grade level that this work in related to and a review.*

<http://health.howstuffworks.com/diseases-conditions/diabetes/diabetes1.htm> Article: Diabetes Overview by Craig Freudenrich, Ph.D. *This site has great color diagrams for glucose and insulin lesson. Great tool for the scientific aspect of the disease.*

<http://schoolwalk.diabetes.org>. This website has great activities for all grades K-12. *Activities include word search, writing topics. These topics can also be used for constructed responses. Helps to promote writing and literacy.*

<http://classroom.kidshealth.org/9to12/problems/conditions/diabetes.pdf> *This website has articles that are written at age appropriate levels. You can choose articles and activities based on grade level. Also has teacher guide to follow.*

<http://classroom.kidshealth.org/9to12/problems/conditions/diabetes.pdf> *This website describes diabetes type 1 and type 2 in a kid friendly way. It also has animated video clips on Type 1, Type 2, and understanding diabetes. The articles are written in a manner that teenagers can understand and relate to. For students that are audio learners, you have the option to listen to the article. I have used this link for other lessons that I have taught including the reproductive system, drugs and STD. Highly recommend this site.*

<http://www.diabetes.org> *This is the home page site for American Diabetes Association. Great resource for information on what a diabetic can eat, fitness and information on the disease. I find that most sites for organizations are very helpful.*

www.medicinenet.com *This has a slide show that deals with symptoms.*

<http://diabetes.niddk.nih.gov/> *Good source for information. Covers everything that you may need to know.*

Appendices

State Standards

10.1.9A Concepts of health. Analyze factors that impact growth and development between adolescence and adulthood

- Understanding impact of poor nutrition and obesity during adolescence and the possibility of adult diabetes 2.
- Understanding the progression of Diabetes 1 in children into adults.

10.2.9D Analyze and apply a decision making process to adolescent health and safety issues.

Appendix:

Game: Jeopardy

Types and Symptoms	Biology of Diabetes	Treatment	Life Style Changes	Miscellaneous Facts on Diabetes
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
500	500	500	500	500

Categories: Types and symptoms, Life style changes, Treatments, Dietary restrictions and changes.

Category: Types and Symptoms

100 Q. Frequent urination and being thirsty

A. What are common symptoms of diabetes?

200 Q: A temporary condition

A. What is gestational diabetes

300 Q: This type of diabetes typically affects children and teens

A: What is Type 1 diabetes or What is juvenile diabetes.

- 400 Q. The three types of diabetes
A. What is Type 1, Type 2 and Gestational diabetes?
- 500 Q. This type of diabetes is common in overweight or obese people
A. What is Type 2 diabetes?

Category: Biology of Diabetes

- 100 Q. When the body digests food, it turns carbohydrates in to this _
A. What is glucose?
- 200 Q. This organ produces insulin
A. What is the pancreas?
- 300 Q. When you have diabetes the pancreas stop making this important Hormone
A. What is insulin?
- 400 Q. The condition that occurs when the diabetic has low blood glucose levels
A. What is hypoglycemia?
- 500 Q. The condition that occurs when the diabetic has high blood glucose levels
A. What is hyperglycemia?

Category: Treatment for diabetes

- 100 Q. Method to test for glucose levels
A. What is the finger prick method?
- 200 Q. Oral method of taking insulin
A. What are insulin pills?
- 300 Q. Method of injecting insulin into the body a prescribed number of times a day
A. What is an insulin shot?
- 400 Q. Apparatus that allows insulin to be injected directly into body as it is needed
A. What is an insulin pump?
- 500 Q. Using DNA technology to prevent, control or cure the disease
A. What is gene therapy?

Dietary restrictions and life style changes

- 100 Q. Whole grain foods, fresh fruits and vegetables
A. What are healthy carbs?
- 200 Q. Being physically active for 60 minutes a day

- A. What is the recommended amount of exercise a day?
- 300 Q. Walk the dog, run, dance, swim, play tennis
A. What are types of exercise?
- 400 Q. Depression, skin conditions, eye conditions
A. What are complications of Diabetes?
- 500 Q. Scuba Diving, joining the military
A. What are activities that are risky or not allowed for diabetics?