DIABETES TRAINING

1. Introduction of Training and Sign-in
2. Tennessee Laws: “Diabetes in the school setting” America Diabetes Association
3. DVD/PowerPoint/Worksheet “America Diabetes Association”
4. State of Tennessee “Diabetes Training Quiz”
5. Diabetes Care Plan and worksheets
6. Skills Checkoff

**DIABETES WORKSHEET #1**

**Steps in Determining Insulin Dose**

1. What is your current blood sugar: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Subtract target blood sugar from current blood sugar:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(actual blood sugar) (target blood sugar)

1. Determine units of insulin to correct your blood sugar. Divide answer from step 2 by correction factor:

\_\_\_\_\_\_\_\_\_\_\_\_\_- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(actual blood sugar) (target blood sugar)

1. How many grams of carbs are in your meal: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*always ask student “how much did you eat?”**

1. Determine the number of units to cover the grams of carbs in meal: Divide answer from step 4 by insulin to carb ratio:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ÷ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_ units

(step 4 answer) (insulin to carb ratio)

1. Determine total amount of units:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_ units

(step 3 answer) (step 5 answer)

**DIABETES WORKSHEET #2**

**Steps in Determining Insulin Dose**

1. What is your current blood sugar: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Check sliding scale for correction dose, as needed, based on blood sugar result: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ units
3. How many grams of carbs are in your meal: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*\*\*always ask student “how much did you eat?”**

1. Determine the number of units to cover the grams of carbs in meal: Divide answer from step 3 by insulin to carb ratio:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ÷ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_ units

(step 3 answer) (insulin to carb ratio)

1. Determine total amount of units:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_ units

(step 2 answer) (step 4 answer)

**DIABETES WORKSHEET #3**

**Steps for Insulin Pumps**

1. What is your current blood sugar: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many grams of carbs are in your meal: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*\*\*always ask student “how much did you eat?”**

1. Follow directions on the pump to enter Blood Sugar and total amount of carbs eaten. The insulin pump already have settings programmed for that particular student and will calculate and infuse the amount of insulin needed.

**STATE OF TENNESSEE**

**DIABETES TRAINING TEST**

**Name of individual being tested: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructions: Check only one answer for each question. Must obtain a passing score of 80%**

**Diabetes Basics**

1. Diabetes is:
   1. \_\_\_\_\_ an endocrine disorder in which either the pancreas no longer secrets insulin or the body does not use insulin properly.
   2. \_\_\_\_\_ a disease of the liver
   3. \_\_\_\_\_ a disease of the gall bladder
2. The three main types of diabetes are:
   1. \_\_\_\_\_ type 1, type 2, and metabolic syndrome
   2. \_\_\_\_\_ type 1, type 2, type A
   3. \_\_\_\_\_ type 1, type 2, and gestational diabetes
   4. \_\_\_\_\_ none of the above
3. The main function of the pancreas is to:
   1. \_\_\_\_\_ produce enough insulin to allow glucose to enter the body’s cells
   2. \_\_\_\_\_ produce enough insulin to keep glucose values within a normal range
   3. \_\_\_\_\_ a and b
4. You can tell if a student has diabetes just by looking at him/her.

\_\_\_\_\_True \_\_\_\_\_False

1. Students with type 1 diabetes must take insulin

\_\_\_\_\_ True \_\_\_\_\_False

1. Students with type 1 diabetes are
   1. \_\_\_\_\_ usually in the first grade
   2. \_\_\_\_\_ usually in middle school
   3. \_\_\_\_\_ any age
2. Students with type 2 diabetes may or may not take insulin

\_\_\_\_\_ True \_\_\_\_\_False

1. Students with diabetes must check their blood glucose
   1. \_\_\_\_\_three times a day
   2. \_\_\_\_\_five times a day
   3. \_\_\_\_\_four times at school and four times at home
   4. \_\_\_\_\_as outlined in their physician’s orders and care plan
2. Diabetes is managed by
   1. \_\_\_\_\_following a recommended eating plan
   2. \_\_\_\_\_taking mediation as prescribed
   3. \_\_\_\_\_getting physical activity
   4. \_\_\_\_\_seeing a healthcare provider routinely
   5. \_\_\_\_\_all of the above
3. The goal of good diabetes management is to:
   1. \_\_\_\_\_be as healthy as possible
   2. \_\_\_\_\_avoid the complications associated with diabetes
   3. \_\_\_\_\_fully participate in all academic and extracurricular activities
   4. \_\_\_\_\_keep blood glucose levels within an acceptable range
   5. \_\_\_\_\_all of the above
4. Physical activity can help to:
   1. \_\_\_\_\_control weight
   2. \_\_\_\_\_maintain cardiovascular fitness
   3. \_\_\_\_\_lower blood glucose levels
   4. \_\_\_\_\_increase insulin sensitivity
   5. \_\_\_\_\_all of the above

**Diabetes Management**

1. Students with diabetes are required to have an individual health plan (IHP)

\_\_\_\_\_True \_\_\_\_\_False

1. The IHP should include the following:
   1. \_\_\_\_\_a list of all the medicines the student is to take while at school
   2. \_\_\_\_\_a schedule of when medicines are to be administered
   3. \_\_\_\_\_doses of medicines that will be taken at school
   4. \_\_\_\_\_ranges of glucose values and steps to take when the values are out of range
   5. \_\_\_\_\_when and how often the student is to have snacks
   6. \_\_\_\_\_name and phone number of treating healthcare provider
   7. \_\_\_\_\_a, c, and d
   8. \_\_\_\_\_a, e, and f
   9. \_\_\_\_\_all of the above
2. Insulin may be administered by using
   1. \_\_\_\_\_insulin syringes
   2. \_\_\_\_\_an insulin pump
   3. \_\_\_\_\_insulin pens
   4. \_\_\_\_\_all of the above
3. Students with diabetes cannot eat foods with sugar.

\_\_\_\_\_True \_\_\_\_\_False

1. Students with diabetes may dispose of their blood testing equipment
   1. \_\_\_\_\_by taking lancets home, using safe needle disposal recommendations
   2. \_\_\_\_\_by taking lancets to the nurse’s office, using safe needle disposal recommendations
   3. \_\_\_\_\_by adhering to the district policy related to safe needle disposal
   4. \_\_\_\_\_by throwing away in the regular trash
   5. \_\_\_\_\_all of the above
   6. \_\_\_\_\_a, b, and c only
2. Symptoms of mild to moderate hypoglycemia may include:
   1. \_\_\_\_\_hunger
   2. \_\_\_\_\_headache
   3. \_\_\_\_\_dizziness
   4. \_\_\_\_\_excessive sweating
   5. \_\_\_\_\_inability to concentrate
   6. \_\_\_\_\_confusion
   7. \_\_\_\_\_all of the above
3. Mild to moderate hypoglycemia is determined by:
   1. \_\_\_\_testing the student’s blood glucose
   2. \_\_\_\_looking at the child and asking her/him how she/he feels
4. Mild to moderate hypoglycemia is treated by:
   1. \_\_\_\_\_eating
   2. \_\_\_\_\_administering insulin
   3. \_\_\_\_\_following the IHP
   4. \_\_\_\_\_a and c
5. Symptoms of severe hypoglycemia should be suspected if:
   1. \_\_\_\_\_the student collapses
   2. \_\_\_\_\_has a seizure
   3. \_\_\_\_\_a and b
6. Treating severe hypoglycemia should include:
   1. \_\_\_\_\_administering fast-acting glucose, if the student can swallow
   2. \_\_\_\_\_administering glucagon, if the student is unconscious
   3. \_\_\_\_\_a and b
7. Before and while engaging in physical activity, a student with disabilities should:
   1. \_\_\_\_\_monitor blood glucose levels before, during and after the scheduled physical activity
   2. \_\_\_\_\_adjust his/her insulin dose according to the IHP
   3. \_\_\_\_\_have a snack available as well as a source of fast-acting glucose to treat an episode of hypoglycemia
   4. \_\_\_\_\_all of the above
8. Symptoms of hyperglycemia include:
   1. \_\_\_\_\_thirst
   2. \_\_\_\_\_increased urination
   3. \_\_\_\_\_drowsiness
   4. \_\_\_\_\_irritability
   5. \_\_\_\_\_ketones in the urine
   6. \_\_\_\_\_blurred vision
   7. \_\_\_\_\_all of the above
   8. \_\_\_\_\_a, b, and c only
9. Hyperglycemia is determined by:
   1. \_\_\_\_\_the student’s appearance
   2. \_\_\_\_\_the student’s blood glucose value
10. The treatment of hyperglycemia may include:
    1. \_\_\_\_\_administering insulin
    2. \_\_\_\_\_following the IHP
    3. \_\_\_\_\_drinking water
    4. \_\_\_\_\_all of the above

**ANSWERS AND DISCUSSION POINTS FOR DIABETES WRITTEN TEST**

***NOTE: 20 questions must be answered correctly in order to obtain a passing score of 80%***

**Diabetes Basic:**

1. a

Diabetes is a chronic endocrine disorder that is either the result of having no insulin production (type 1) or limited insulin production and/or impaired use of insulin (type 2)

1. c

The three main types of diabetes are type 1 (a condition in which the pancreas no longer secretes insulin), type 2 (a condition in which the pancreas does not secrete enough insulin or the body fails to utilize the insulin properly), and gestational diabetes (diagnosed during pregnancy in a woman with no diagnosis prior to the pregnancy). There are other types of diabetes, but they account for a small percentage of cases.

1. C

The pancreas is a gland that produces insulin for glucose (sugar) absorption. Without insulin, glucose remains in the bloodstream and causes elevated glucose values; glucose values that are not in the normal range can cause damage to major organs and blood vessels.

1. False

It is not possible to look at a person with diabetes and tell that they have the disease. The disease is diagnosed by a blood test.

1. True

A person with type 1 diabetes (formerly called insulin-dependent diabetes) must take insulin, as their pancreas does not produce insulin.

1. C

A person with type 1 diabetes can be any age; while most persons with type 1 diabetes are diagnosed before the age of 19, type 1 diabetes can be diagnosed at any age.

1. True

A person with type 2 diabetes may be diet-controlled, may be taking oral medication, or may be on insulin.

1. D

How often a person with diabetes checks his/her blood glucose (sugar) will vary depending on many factors: age, number of episodes of hypoglycemia, stability of blood glucose values during the day, as well as other considerations. A student with diabetes will have an order from a provider that will let school staff know the frequency with which the student will check his/her blood glucose levels while at school. The number of times and the time frames (e.g., before lunch, after lunch, before physical activity, during physical activity, and after physical activity) should be outlined in the IPA

1. E

Managing diabetes is accomplished by following a meal plan, knowing which foods elevate blood sugar, taking medications (both oral and injectable) as prescribed, getting physical activity, and seeing a healthcare provider routinely.

1. E

The goal of diabetes management is to have acceptable glucose values (usually expressed as a range) during the day; other goals include being healthy overall, and avoiding the co-morbid conditions with not being in control. Students with optimal management should participate fully in academic programs and extra-curricular activities.

1. E

Students with diabetes involved in physical activity during the school day benefit from the same advantages as anyone that participates in physical activity, such as weight control and cardiovascular fitness. A student with diabetes that exercises may have a decreased need for, or better utilization of insulin. Further, the most common problem encountered during physical activity is hypoglycemia.

**Diabetes Management:**

1. True

Students with diabetes are expected to have an IHP so that school staff can know how to best mange the student during the school day.

1. I

The IHP should include a list of all medications the student is taking, including a schedule for when the medications are to be administered, and doses of medications; ranges of acceptable glucose values during the day and what to do when the glucose values are not in that range; when and how often the student will have snacks; and the name and phone number of the treating healthcare provider.

1. D

Insulin is available in vials (for which insulin syringes must be used), in pens, and in cartridges (used in pumps and must be pre-loaded)

1. False

A person with diabetes can have foods that contain sugar, such as cookies, some breakfast cereals and most desserts; a student that consumes sugar-containing foods should know how to count the carbohydrates in those foods and then adjust his/her insulin accordingly.

1. F

A student with diabetes must dispose of his/her sharps (including lancets, syringes empty pens, insulin vials, insulin cartridges, and pump infusion sets) by following the school or district policy related to safe needle disposal and adhering to universal precautions. Some schools will allow a student to take supplies home and dispose of them, with the caveat that he/she must carry sharps in a safe container (such as a little glass jar with a lid or a plastic container with a lid). Some schools may require that a student dispose of sharps daily by taking sharps to the nurse’s office or clinic or campus.

1. G

Mild to moderate hypoglycemia (low blood sugar) will cause a student to be hungry, dizzy, sweat, tremble, unable to concentrate, confused, and/or have a headache. During mild to moderate episodes of hypoglycemia a student will be able to speak; however, the speech may be slurred.

1. A

While there are physical symptoms of hypoglycemia (trembling, sweating, confusion), the only way to definitively know if a student has mild to moderate hypoglycemia is to test the blood glucose. Students that can recognize hypoglycemia will probably have a snack. If the IHP requires that if this occurs a student must report this to the school nurse.

1. D

Mild to moderate hypoglycemia is treated by eating or having a snack.

1. C

Severe hypoglycemia is usually suspected if a student collapses and/or has a seizure.

1. C

The goal of reversing severe hypoglycemia is to raise the blood sugar immediately; this is accomplished by administering a fast-acting glucose source (if the student can swallow) or by administering glucagon (if the student cannot swallow or is unconscious)

1. D

A student with diabetes that participates in physical activity should monitor his/her blood glucose prior to, during, and after exercising. Should the student have an episode of hypoglycemia the student should have snacks available for moderate hypoglycemia as well as sources of fast-acting glucose in the event of severe hypoglycemia. Insulin does prior to exercising would need to e adjusted according to the student’s IHP.

1. G

Symptoms of hyperglycemia include being thirsty, urinating more often, being drowsy, being irritable, having ketones in the urine, and having blurred vision.

1. B

Hyperglycemia, just like hypoglycemia, cannot be ascertained by physical symptoms alone; to determine if blood glucose is elevated, the only way to know is to assess the blood glucose value

1. D

A treatment option to lower blood sugar is by drinking a lot of water. This helps dilute the glucose in the blood. Administering insulin as outlined in the IHP is also a treatment option.

**DIABETES TRAINING**

**DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INSTRUCTOR: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PRINT NAME SIGNATURE SCHOOL**

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