

Diabetes Training
Pre-Post Test **KEY**

To achieve 80% score and passage of this exam, the learner may answer no more than 15 questions incorrectly. If the learner misses all questions in one category, that section of training should be reviewed.

Diabetes in Ohio Schools

1. Ohio law ensures a student with diabetes receives appropriate care at school including:
 - a. Providing care according to prescribers orders
 - b. Administering diabetes medication
 - c. Provides training to employees who volunteer to provide diabetes care
 - d. **All of the above**

2. The trained employee is immune from liability.
 - a. **True**
 - b. False

3. A student with diabetes must go to an area designated by the school to attend to his/her diabetes care needs.
 - a. True
 - b. **False**

Diabetes Medical Management Plan

4. Another term for the Diabetes Medical Management Plan (DMMP) is **medical orders.**

5. The following people are responsible for developing and signing the DMMP except:
 - a. The parent
 - b. The prescriber
 - c. **The school nurse**
 - d. The student's personal health care team

6. DMMP should include:
 - a. Emergency contact information
 - b. Blood glucose and ketone monitoring
 - c. Insulin or medication administration
 - d. **All of the above**

Diabetes Basics

7. "blood sugar"=blood glucose.
8. This type of diabetes is caused when insulin producing cells are destroyed. It is the most common type of diabetes in children.
- Type 1
 - Type 2
9. This type of diabetes is when the body does not use insulin properly or does not make enough insulin. Usually starts in adulthood.
- Type 1
 - Type 2
10. Diabetes management includes:
- monitoring glucose levels
 - insulin/medication
 - physical activity
 - food and beverage intake
 - all of the above

Universal Precautions

11. The single most important way to prevent the spread of infectious disease is handwashing.
12. Used needles and lancets should be disposed of in:
- trash can
 - sharps container
13. _____ should be worn when assisting student with diabetes care.
- mask
 - goggles
 - gloves

Individualized Healthcare Plans

14. The document, written by the school nurse, which combines all the student's healthcare needs for managing their health needs at school.

- a. 504 plan
- b. IEP
- c. IHP
- d. EAP

15. Joe is a third grade student with diabetes that you help daily. The fifth grade teacher said to you that she heard Joe has diabetes and began asking you questions about his diabetes. Should you give her this information?

- a. No
- b. Yes

16. If a student has signs of hypoglycemia, hyperglycemia or DKA which plan should you look at for symptoms and treatment?

- a. IEP
- b. EAP
- c. DMMP

Blood Glucose (BG) Monitoring

17. Blood Glucose monitoring is also known as:

- a. Checking blood sugars
- b. Glucometer checks
- c. Both a & b

18. Blood glucose should be checked before and possibly 2 hours after meals.

- a. True
- b. False

19. BG meter must always remain in the clinic office.

- a. True
- b. False

Carbohydrate Counting

20. Students with diabetes need a special diet.

- a. True
- b. False

21. Which of the following foods WOULD NOT contain carbohydrates?

- a. Bread
- b. Carrots
- c. Chicken
- d. Apple juice

22. What 3 things are important to look at when reading a nutrition label when counting carbohydrates?

- a. Serving size, Total Fat and Protein
- b. Serving size, Calories, and Carbohydrates
- c. Serving size, Servings per container and Carbohydrates

23. When carb counting without a food label what are resources for finding out the number of carbs in a food item?

- a. Food service provider
- b. Parents for food brought from home
- c. Calorie King book
- d. All of the above

24. Refer to the Nutritional label below. If a student ate 10 crackers how many grams of carbohydrates did they eat?

Nutrition Facts	
Serving Size 1/2 oz. (15 g) 5 Crackers	
Servings Per Container 12	
Amount per serving	
Calories 60	Calories from fat 10
% Daily Value *	
Total Fat 1 g	2%
Saturated Fat 0 g	0%
Trans Fat 0 g	
Cholesterol 0 mg	0%
Sodium 40 mg	1%
Total Carbohydrate 12 g	4%
Dietary Fiber 0 g 0%	
Sugar 3 g	
Protein 1 g	

- a. 5 g
- b. 12 g
- c. 24 g
- d. 6 g

25. Susan, a student with diabetes ate the following lunch. How many carbs did she eat?

Turkey sandwich (2 slices of bread) 30

Apple (small) 15

Carrots (1 cup raw) 5

Carton of 2% milk 12

Total= 62

Insulin Dose Calculation

26. All the following information is needed to calculate a student's insulin dose, except:

- a. How many carbs the student is eating
- b. Blood glucose (BG) taken before eating
- c. Student's weight**
- d. Carb ratio, Correction Target, and Correction Factor

27. Carbohydrate ratio is how many grams of carbohydrates will be covered by one unit of insulin.

- a. True**
- b. False

28. Correction Target is the target BG value used for insulin dose calculations when blood glucose is too low.

- a. True
- b. False**

29. Correction Factor is how many points (mg/dl) one unit of insulin will lower the BG over several hours.

- a. True**
- b. False

30. Joe, a student with diabetes, blood sugar before lunch was 220mg/dl. He is about to eat 62 grams of carbohydrates for lunch. He uses whole unit insulin syringes.

Carb Ratio =15

Correction Target=120

Correction Factor=50

How much total insulin should he receive? (Use chart below to calculate)

Carb bolus=4.13, Correction bolus=2, Rounded total insulin dose=6

1. Calculate <u>Carbohydrate Bolus</u> :				
_____	÷	_____	=	_____
Carbohydrates to Eat		CARBOHYDRATE RATIO		Carbohydrate Bolus (Round to nearest tenth)
2. Calculate <u>Correction Bolus</u> :				
_____	-	_____	=	_____
Blood Glucose		CORRECTION TARGET		Amount to Correct
			÷	_____
				CORRECTION FACTOR
			=	Correction Bolus (Round to nearest tenth)
3. Calculate <u>Total Insulin Bolus</u> :				
_____	+	_____	=	_____
Carbohydrate Bolus		Correction Bolus		Total
			→	_____
				*Rounded Total Insulin Bolus

31. Susan, a student with diabetes, blood sugar before lunch was 100 mg/dl. She is about to eat 75gm of carbohydrates for lunch. She uses half dose insulin syringes.

Carb Ratio=10

Correction target=120

Correction factor=3

How much of insulin should she receive? (Use chart below to calculate)

Carb bolus=7.5, Correction bolus=0, Rounded Total Insulin bolus =7.5

1. Calculate <u>Carbohydrate Bolus</u> :				
_____	÷	_____	=	_____
Carbohydrates to Eat		CARBOHYDRATE RATIO		Carbohydrate Bolus (Round to nearest tenth)
2. Calculate <u>Correction Bolus</u> :				
_____	-	_____	=	_____
Blood Glucose		CORRECTION TARGET		Amount to Correct
			÷	_____
				CORRECTION FACTOR
			=	Correction Bolus (Round to nearest tenth)
3. Calculate <u>Total Insulin Bolus</u> :				
_____	+	_____	=	_____
Carbohydrate Bolus		Correction Bolus		Total
			→	_____
				*Rounded Total Insulin Bolus

Insulin Administration

32. Which insulin is sometimes called “background insulin” works steadily throughout the day?

- a. Basal
- b. Bolus

33. Which insulin is given in single doses, when carbohydrates are consumed and to correct high blood sugar readings?

- a. Basal
- b. Bolus

34. With what delivery devices can insulin be given?

- a. Syringe
- b. Pump
- c. Pen
- d. All of the above

35. Name three common sites, on the body, where insulin can be given at school?

upper arm, thigh, abdomen

36. Insulin syringes and needles can be reused.

- a. True
- b. False

37. Students can share diabetes equipment and supplies.

- a. True
- b. False

Hypoglycemia

38. Hypoglycemia means

- a. High blood sugar
- b. Normal blood sugar
- c. Low blood sugar

39. List the 5 common symptoms of low hypoglycemia:

- 1. shaky
- 2. weak
- 3. dizzy
- 4. tingling
- 5. sweaty

40. Hypoglycemia is an emergency and should be treated immediately.

- a. True
- b. False

41. The “Rule of 15” for treating hypoglycemia means:

- a. Eat 15 grams of carbohydrates, Wait 15 minutes, Retest blood glucose
- b. Eat 15 grams of carbohydrates, Wait 5 minutes, Retest blood glucose
- c. Give 15 units of insulin, wait 15 minutes, Retest blood glucose

Glucagon Administration

42. How is glucagon administered?

- a. Pill
- b. Injected
- c. Drink

43. Glucagon is an emergency drug and should be given when

- a. Student can eat or drink
- b. Student is alert and talking
- c. Student has signs of severe low blood sugar
- d. Student has signs of severe high blood sugar

44. Glucagon can be administered in all the following except
- Thigh
 - Upper Arm
 - Buttock
 - Abdomen

Hyperglycemia

45. Hyperglycemia means

- High blood sugar
- Normal blood sugar
- Low blood sugar

46. List 5 common symptoms of hyperglycemia

- thirsty
- blurred vision
- hunger
- tired
- frequent restroom breaks

47. Hyperglycemia alone is not an emergency.

- True
- False

48. The goal of treating hyperglycemia is to _____ the blood sugar.

- Increase
- Decrease

Ketones

49. When should ketones be checked?

- Daily
- When glucose remains high
- If student is ill, vomiting or fever
- b & c only

50. If ketones are high this is called diabetic ketoacidosis or DKA.

51. What two ways can ketones be tested?

urine

blood

Storage and Disposal of Medical Supplies

52. Who is responsible for providing supplies for student's with diabetes?

a. School nurse

b. Parent

c. Principal

d. Student's Healthcare Provider

53. Unopened insulin should be stored in

a. refrigerator

b. storage cabinet

c. student's locker

54. Food supplies must be available to students with diabetes

a. at meals only

b. at all times during the school day

c. during extra-curricular activities

d. b & c