

NAME _____

2.3 Review

2.3 a. What are several ways the life of someone with diabetes is impacted by the disorder?

2.3 h. What are potential short and long term complications of diabetes?

List 5 complications of diabetes and the link back to diabetes.

2.3 b. How do the terms hyperglycemia and hypoglycemia relate to diabetes?

Hyperglycemia – higher than normal blood sugar

Hypoglycemia – Lower than normal blood sugar

HYPERGLYCEMIA (High Blood Glucose)

Causes: Too much food, too little insulin or diabetes pills, illness, or stress.

Onset: Often starts slowly. May lead to a medical emergency if not treated.



SYMPTOMS:

EXTREME THIRST

 NEED TO URINATE OFTEN	 DRY SKIN	 HUNGRY
 BLURRY VISION	 DROWSY	 SLOW-HEALING WOUNDS

HYPOGLYCEMIA (Low Blood Glucose)

Causes: Too little food or skip a meal; too much insulin or diabetes pills; more active than usual

Onset: Often sudden; may pass out if untreated.



SYMPTOMS:

SHAKY

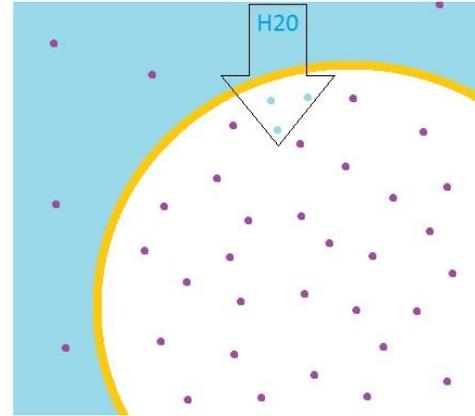
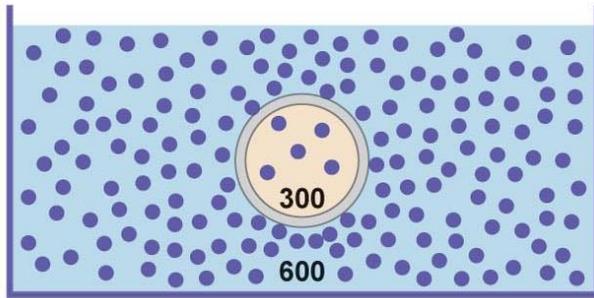
FAST HEARTBEAT

 SWEATING	 DIZZY	 ANXIOUS	 HUNGRY
 BLURRY VISION	 WEAKNESS OR FATIGUE	 HEADACHE	 IRRITABLE

2.3 c. What might happen to cells that are exposed to high concentrations of sugar?

Cells that are exposed to too much sugar will lose water in order to balance the amount of solutes (dissolved “stuff”). Cells that are exposed to solutions with not enough sugar will swell as water flows into the cell to balance the amount of solutes.

Which of the diagrams represents a hypertonic cell and which represents a hypotonic cell?



2.3 d. How do Type 1 and Type 2 diabetes differ? 2.3 e. What are the current treatments for Type 1 and Type 2 Diabetes?

Type 1	Both	Type 2
<ul style="list-style-type: none"> • Usually occurs in children • An autoimmune disorder, in which the immune system attacks the insulin-producing cells of the pancreas • Sugar can't get into the cells because the pancreas has stopped producing insulin • Only treatment is insulin injections or an insulin pump 	<ul style="list-style-type: none"> • Sugar cannot get into cells • Result in hyperglycemia and dehydration of cells • Can lead to cardiovascular problems • Can lead to blindness • Can cause need for amputation due to poor circulation 	<ul style="list-style-type: none"> • Usually occurs in adults • Endocrine disorder caused by lifestyle – cells reject insulin • Sugar can't get into cells because they've become insulin-resistant • Reversible if lifestyle changes • Treatment involves changes in diet and exercise

2.3 f. What is the importance of checking blood sugar levels for a diabetic?

2.3 g. How can an insulin pump help a diabetic?

Blood sugar levels can get too high without insulin. This requires frequent checks to avoid hyperglycemia and complications resulting from this condition. An insulin pump reduces the dependence on needles and allows for a constant supply of insulin to be released.

