Due Tuesday - 11.10

1. Classic clinical manifestations of diabetes include polyuria, polydipsia, and

   _____**polyphagia**_____.

2. The three main clinical features of diabetic ketoacidosis are hyperglycemia, dehydration with

   electrolyte loss, and ___**Metabolic Acidosis**____.

3. What are the different types of insulins? Please give examples for each category.

   **Rapid Acting Insulin:**

   - Insulin Lispro (Humalog)
   - Aspart (Novolog)
   - Apidra or Glulisine

   **Short Acting Insulin:**

   - Regular (R) Insulin
   - Humulin, Actrapid (Novolin)
   - Velosulin

   **Intermediate Acting Insulin:**

   - NPH (N)
   - Lente (L)

   **Very Long Acting Insulin:**

   - Ultralente (U)
   - Lantus, Glargine
   - Levemir, Detemir

   **Pre-Mixed Insulins:** (combo of intermediate and short-acting insulin)

   - Humulin 70/30
   - Novolin 70/30
   - Novolog 70/30
   - Humulin 50/50
   - Humalog 75/25

4. What type of insulin can be given via intravenously?

   **Regular (R) insulin**

5. A nurse is caring for a client who has syndrome of inappropriate antidiuretic hormone (SIADH).

   Which of the following findings should the nurse expect? (Select all that apply)

a. Decreased blood sodium
b. Urine specific gravity 1.001 (
c. Blood osmolarity 230 mOsm/L
d. Polyuria
e. Increased thirst

6. What is the difference between DKA and HHS?

**DKA = (seen more commonly in type 1 diabetes) It occurs when the body starts breaking down fat at a rate that is too fast. The liver processes the fat into a fuel called ketones, which causes the blood to become acidic. When the blood sugar is very high, acidic substances called ketones build up to dangerous levels in the body.**

**HHS= (seen in type 2 diabetes) a metabolic complication of diabetes mellitus characterized by severe hyperglycemia, extreme dehydration, hyperosmolar plasma, and altered consciousness.**

7. A nurse is reviewing laboratory results for a client who has Addison's disease. Which of the following laboratory results should the nurse expect for this client? (Select all that apply)

a. Sodium 130 mEq/L
b. Potassium 6.1 mEq/L
c. Calcium 11.6 mg/dL
d. Blood urea nitrogen (BUN) 28 mg/dL
e. Fasting blood glucose 148 mg/dL

8. What are treatments utilized in hypoglycemia (for both conscious and unconscious patients)?

Conscious=

- **Eat or drink 15 to 20 grams of fast-acting carbohydrates**
- **Recheck blood sugar levels 15 minutes after treatment**

- **Have a snack or meal**

Unconscious=

- **Intravenous administration of 75-80 ml 20% glucose or 150-160 ml of 10% glucose**
- **Glucagon 1 mg should be given by intramuscular (IM), or subcutaneous (SC) injection**

9. Describe in your own words what Pheochromocytoma is.

   **Pheochromocytoma is a rare condition caused by a tumor in the adrenal medulla. It results in excess production of catecholamines. Pheochromocytoma often causes the adrenal gland to produce too many hormones. This increase can lead to hypertension, headache, hyperhidrosis, hypermetabolism, and hyperglycemia.**

10. For the following disorders, please describe the hormone affected and indicate if it is increased or decreased. Then describe what those hormones are responsible for.

    a. Cushing's Disease/Syndrome

       i. **Cortisol= increased**

       ii. **Cortisol can help control blood sugar levels, regulate metabolism, help reduce inflammation, and assist with memory formulation. It has a controlling effect on salt and water balance and helps control blood pressure.**

    b. Addison Disease/Addisonian Crisis

       i. **Cortisol= decreased**

       ii. **Cortisol can help control blood sugar levels, regulate metabolism, help reduce inflammation, and assist with memory formulation. It has a controlling effect on salt and water balance and helps control blood pressure.**

    c. SIADH

       i. **ADH= increased**

ii. **Regulates and balances the amount of water in the blood. Its most important role is to conserve the fluid volume of the body by reducing the amount of water passed out in the urine.**

d. Diabetes Insipidus

i. **ADH=decreased**

ii. **Regulates and balances the amount of water in the blood. Its most important role is to conserve the fluid volume of the body by reducing the amount of water passed out in the urine.**

e. Thyroid Storm/Crisis

i. **Thyroid hormones (triiodothyronine (T3) and thyroxine (T4)= increased**

ii. **Thyroid hormones T3 and T4 regulate the body's temperature, metabolism, and heart rate.**

f. Myxedema Coma

i. **Thyroid hormones (triiodothyronine (T3) and thyroxine (T4) =decreased**

ii. **Thyroid hormones T3 and T4 regulate the body's temperature, metabolism, and heart rate.**