Acute Kidney Injury NCLEX Practice Questions

This quiz will test your knowledge on Acute Kidney Injury (also called Acute Renal Failure) in preparation for NCLEX.

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1. ___B_____ is solely filtered from the bloodstream via the glomerulus and is NOT reabsorbed back into the bloodstream but is excreted through the urine.*

A. Urea

B. Creatinine

C. Potassium

D. Magnesium

2. A patient with acute renal injury has a GFR (glomerular filtration rate) of 40 mL/min. Which signs and symptoms below may this patient present with? Select all that apply:*

A. Hypervolemia

B. Hypokalemia

C. Increased BUN level

D. Decreased Creatinine level

3. You're assessing morning lab values on a female patient who is recovering from a myocardial infraction. Which lab value below requires you to notify the physician?*

A. Potassium level 4.2 mEq/L

B. Creatinine clearance 35 mL/min.

C. BUN 20 mg/dL

D. Blood pH 7.40

4. A 55-year-old male patient is admitted with a massive GI bleed. The patient is at risk for what type of acute kidney injury?*

A. Post-renal

B. Intra-renal

C. Pre-renal

D. Intrinsic renal

5. Select all the patients below that are at risk for acute intra-renal injury?*

A. A 45 year old male with a renal calculus.

B. A 65 year old male with benign prostatic hyperplasia.

C. A 25 year old female receiving chemotherapy.

D. A 36 year old female with renal artery stenosis.

E. A 6 year old male with acute glomerulonephritis.

F. An 87 year old male who is taking an aminoglycoside medication for an infection.

6. A patient with acute kidney injury has the following labs: GFR 92 mL/min, BUN 17 mg/dL, potassium 4.9 mEq/L, and creatinine 1 mg/dL. The patient's 24 hour urinary output is 1.75 Liters. Based on these findings, what stage of AKI is this patient in?*

A. Initiation

B. Diuresis

C. Oliguric

D. Recovery

7. A 36-year-old male patient is diagnosed with acute kidney injury. The patient is voiding 4 L/day of urine. What complication can arise based on the stage of AKI this patient is in? Select all that apply:*

A. Water intoxication

B. Hypotension

C. Low urine specific gravity

D. Hypokalemia

E. Normal GFR

8. True or False: All patients with acute renal injury will progress through the oliguric stage of AKI but not all patients will progress through the diuresis stage.*

True

False

9. Which patient below with acute kidney injury is in the oliguric stage of AKI:*

A. A 56 year old male who has metabolic acidosis, decreased GFR, increased BUN/Creatinine, hyperkalemia, edema, and urinary output 350 mL/day.

B. A 45 year old female with metabolic alkalosis, hypokalemia, normal GFR, increased BUN/creatinine, edema, and urinary output 600 mL/day.

C. A 39 year old male with metabolic acidosis, hyperkalemia, improving GFR, resolving edema, and urinary output 4 L/day.

D. A 78 year old female with respiratory acidosis, increased GFR, decreased BUN/creatinine, hypokalemia, and urinary output 550 mL/day.

10. You're developing a nursing care plan for a patient in the diuresis stage of AKI. What nursing diagnosis would you include in the care plan?*

A. Excess fluid volume

B. Risk for electrolyte imbalance

C. Urinary retention

D. Acute pain

11. While educating a group of nursing students about the stages of acute kidney injury, a student asks how long the oliguric stage lasts. You explain to the student this stage can last?*

A. 1-2 weeks

B. 1-3 days

C. Few hours to 2 weeks

D. 12 months

12. A patient with AKI has a urinary output of 350 mL/day. In addition, morning labs showed an increased BUN and creatinine level along with potassium level of 6 mEq/L. What type of diet ordered by the physician is most appropriate for this patient?*

A. Low-sodium, high-protein, and low-potassium

B. High-protein, low-potassium, and low-sodium

C. Low-protein, low-potassium, and low-sodium

D. High-protein and high-potassium

Define each of the below labs, list normal values, and the impact kidney injury has on their value.

Finding	Description	Normal Value	AKI	CKD
BUN	Blood urea nitrogen: measures the amount of urea nitrogen in blood. Urea is a waste product that forms when body breaks down proteins. Indicate how well the kidneys are filtering waste products from the blood.	Normal BUN level is 7-20 mg/dL.	Kidneys struggle to filter waste products including urea nitrogen. Can lead to increase BUN levels.	The kidneys gradually lose their ability to filter waste products from blood. BUN levels may rise indicating an impaired kidney function.
Cr	A waste product that is produced by muscles during normal metabolism. Filtered out of the blood by the kidneys and excreted in urine.	Normal range is 0.5-1.1 mg/dL	Sudden decrease in kidney function, leading to a buildup of waste product in blood including creatinine. Creatinine can rise rapidly.	Kidneys lose their ability to filter waste products, creatinine may rise.
Hct	Measure of the proportion of RBC in the blood	Normal value: Men: 42-52% Women: 37-47%	Can lead to a decrease of Hct level, there will be a lower concentration of RBC in the blood. Due to fluid overload, dilution of blood, or decrease production of RBC by the kidneys.	Early stages: Hct level is normal. However when starts to decrease to the point where someone has anemia and that is due to reduce production of RBC in kidney.
Hgb	A protein found in RBC that carries oxygen throughout body. Helps remove waste product.	Normal range: Men: 14-18 g/dL Female: 12-16 g/dL	Decrease Hgb, developing anemia due to reduce production of RBC or increase destruction of RBC.	Inability to produce erythropoietin, so hemoglobin will decrease.

K+	An electrolyte that helps maintain proper fluid balance, nerve function, muscle contraction esp the heart.	Normal range: 3.5-5.0 mEq/L	Can vary depending on circumstances. Hyperkalemia: kidneys unable to properly filter and excrete potassium. Hypokalemia: decrease potassium intake or increase loss through urine.	As kidney function declines, kidneys have a difficulty in regulating potassium levels in blood. Hyperkalemia can be seen.
Ca+	Mineral important to build strong bones and teeth. Plays a role in muscle function, nerve signaling, and blood clotting.	Normal range: 8.5-10.5 mg/dL	A high or low calcium level can be predicted.	Disrupt the balance of calcium in body leading to high or low. High leves of Ca occur in late stages of CKD, low levels in earlier stages.