



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

1. The functions of the kidney includes (choose all that apply):
  - a. The production of erythropoietin
  - b. The production of estrogen and testosterone
  - c. The activation of Vitamin D
  - d. Regulates blood pressure through the production of renin
2. Patients do not experience symptoms of kidney failure until the disease is far advanced.
  - a. True
  - b. False
3. Almost all patients with kidney failure experience anemia. Which of the following factors does not contribute to anemia.
  - a. Deficiencies of certain vitamins and iron
  - b. Deficiency of erythropoietin production in the kidney
  - c. Continuing blood losses and accompany dialysis
  - d. Insufficient dietary intake of calcium
4. During dialysis you would expect the levels of waste and excess fluid in the blood to:
  - a. Remain the same, osmosis will equalize these solutes by pulling fluid from both sides of the membrane
  - b. Decrease, solutes will move across the membrane by diffusion
  - c. Increase, as normal byproducts of metabolism are expected to do
  - d. Remain unchanged by the dialysis process
5. After a patient has an AV graft placed for dialysis is must heal before use. What is the usual period of time to wait for use?
  - a. 2 days
  - b. 2 weeks
  - c. 2 months
  - d. 3 months
6. Ideally, how far apart should the fistula needle tips be in the AV fistula or AV graft?
  - a.  $\frac{1}{4}$  inch
  - b.  $\frac{1}{2}$  inch
  - c. 1 inches
  - d. 2 inches
7. What is the maximum level of hardness that can exit a water softener?
  - a. 17.0 ppm
  - b. 10.0 ppm
  - c. 50.0 ppm
  - d. 25.0ppm



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Name: \_\_\_\_\_

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

8. If you notice air in the venous blood line below the air detector clamp, the patient should immediately be placed in the following position:
  - a. Do not move patient
  - b. Keep patient flat
  - c. Left side in Trendelenburg position
  - d. Right side with head lowered
  
9. Elevated potassium is a problem because it can cause:
  - a. Fatal cardiac arrhythmia
  - b. Weakness and lightheadedness
  - c. Nausea and vomiting
  - d. Headache
  
10. Why is water purified before it is used for dialysis?
  - a. Water does not need to be purified for dialysis
  - b. Untreated water would damage the dialysis machine
  - c. Untreated tap water is too acidic for use by dialysis machines
  - d. Patients are exposed to very large volumes of water weekly and contaminates from water can cross the semi-permeable membrane
  
11. The water used for dialysis must be tested for chlorine:
  - a. Daily
  - b. Weekly
  - c. Before the first treatment of the day
  - d. Before the first treatment on every patient shift
  
12. How many staff must verify the dialyzer before starting treatment?
  - a. One
  - b. Two
  - c. Three
  
13. Determining the patient's Kt/V is important because it tells us:
  - a. If the patient is receiving adequate dialysis
  - b. The patient's dry weight
  - c. What type of diet the patient should eat
  - d. If the patient is taking blood pressure medications as prescribed
  
14. You notice that the venous pressure begins to rise during the treatment. Please circle all that could be responsible.
  - a. Venous infiltration
  - b. Blood leak
  - c. Clotting in the venous bloodline
  - d. Arterial infiltration



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

15. The most common causes for kidney failure are:
  - a. Glomerulonephritis, Polycystic Kidney Disease
  - b. Lupus, Hypertension
  - c. Diabetes, Hypertension
  - d. Diabetes, Glomerulonephritis
  
16. A definition of uremia is:
  - a. A build up of waste in the blood that occurs in the last stages of kidney failure.
  - b. A life threatening infection in the blood caused by bacteria in the blood stream
  - c. A fluid build up in the lungs
  - d. A lack of sufficient oxygen to the kidneys due to decreased blood flow.
  
17. The second most common cause of death from kidney failure patients is infection.
  - a. True
  - b. False
  
18. From the following list, chose the infections for which we use Universal Precautions in the dialysis clinic.
  - a. Hepatitis B or C
  - b. HIV
  - c. Tuberculosis
  - d. MRSA and VRE
  - e. Influenza
  - f. Common Cold
  - g. All patients regardless of presence of infection
  
19. At every dialysis treatment, the blood pressure should be checked on the access arm at least once.
  - a. True
  - b. False
  
20. Which size fistula needle would you choose for a well-developed AV fistula that has been used for 2 years?
  - a. 17G
  - b. 16G
  - c. 15G
  
21. Which size fistula needle would you choose for a new fistula that is being used today for the first time?
  - a. 17G
  - b. 16G
  - c. 15G
  
22. The purpose for priming a reuse dialyzer and blood lines with saline during the set up procedure is to:
  - a. Assess the ultrafiltration capacity of the dialyzer
  - b. Check for leaks in the dialyzer
  - c. E sure the semi-permeable fibers are filled with Renalin before starting treatment
  - d. Remove Renalin and air before starting treatment



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

23. Which of the following observations should be reported to the Charge Nurse during a treatment?  
(choose all that apply)
- a. Temperature of 98.6 degrees
  - b. Clotted dialyzer and blood lines during treatment
  - c. Systolic blood pressure decrease from 150 to 80
  - d. Rapidly rising venous pressure during treatment
  - e. Pulse rate of 130
  - f. Blood pressure change of 164/90 to 150/86
24. The process of setting the ultrafiltration during dialysis treatment refers to:
- a. Waste product removal during treatment
  - b. Food digestion during treatment
  - c. Fluid removal during treatment
  - d. Water treatment
25. Before connecting a patient to a reprocessed dialyzer, the final residual test must be:
- a. Negative and documented by two staff members
  - b. Positive and documented by a licensed nurse
  - c. Negative and documented by one PCT
  - d. Negative within the last two hours
26. Which of the following patients would NOT be a good candidate for peritoneal dialysis?
- a. A child
  - b. A patient who likes to travel
  - c. A patient with cardiac problems
  - d. A patient with a physical disability and no partner
27. How much kidney function may be lost before tests indicate impairment?
- a. 25-30%
  - b. 40-50%
  - c. 70-75%
  - d. 90% or more
28. BUN is a waste product of \_\_\_\_\_ metabolism.
- a. Muscle
  - b. Protein
  - c. Sugar
  - d. Fat
29. Dialysate includes all of the following EXCEPT:
- a. Sodium
  - b. Glucose
  - c. Potassium
  - d. Phosphorus



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

30. What function does bicarbonate in the dialysate serve?
  - a. To maintain electrolytes in normal range
  - b. To correct metabolic acidosis
  - c. To measure the conductivity
  - d. To eliminate precipitate
  
31. Reuse dialyzers are discarded when the volume is less than:
  - a. 75% of original volume
  - b. 80% of original volume
  - c. 85% of original volume
  - d. 90% of original volume
  
32. What are the minimum and maximum dwell times for Renalin in reprocessed dialyzers?
  - a. No time limits as long as sterilant is present
  - b. Two days minimum and 30 days maximum
  - c. 14 hours minimum and 11 days maximum
  - d. 11 hours minimum and 14 days maximum
  
33. A blood leak alarm on one of our machines sounds. Where would you obtain a sample from to confirm that there is an actual blood leak?
  - a. From the dialysate outflow line
  - b. From the dialysate inflow line
  - c. From the venous blood line
  - d. From the arterial blood line
  
34. What water test is done at the end of each day?
  - a. % rejection
  - b. total chlorine
  - c. water hardness
  - d. chloramines
  
35. If total chlorine results from the first testing site are above acceptable limits and test results from the secondary site are within acceptable limits, additional testing must be done:
  - a. Every four hours
  - b. Every hour
  - c. Every shift
  - d. Every 30 minutes
  
36. Which of the following symptoms would indicate a need to increase a patient's dry weight?
  - a. Hypotension and cramping
  - b. Muscle weakness and anorexia
  - c. Jugular vein distension and edema
  - d. Shortness of breath and crackles in the lungs



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

37. Gross blood spills are cleaned up with:
  - a. 1:10 bleach solution
  - b. 1:100 bleach solution
  - c. Soap and water
  - d. Alcohol swabs
  
38. A patient's dry weight is:
  - a. Standard for all patients
  - b. Constant once it is established
  - c. Individualized for each patient
  - d. Established based on patient height
  
39. Causes for pre-dialysis hypertension include all of the following EXCEPT:
  - a. Fluid overload
  - b. Some street drugs
  - c. Nitroglycerin patches
  - d. Non-adherence to medications
  
40. The bruit in an AV fistula or graft is detected by:
  - a. The dialysis machine pressure monitors
  - b. Feeling (palpating) the access
  - c. Listening with a stethoscope
  - d. Taking a blood pressure
  
41. Epopen is given to dialysis patients to increase:
  - a. Serum albumin
  - b. Serum iron levels
  - c. Vitamin D activation
  - d. Red blood cell production
  
42. All of the following statements are true about constant site cannulation EXCEPT:
  - a. It is done on fistulas only
  - b. It requires a physician order
  - c. One teammate should establish the tract
  - d. Sharp or blunt needles may be used after the tract is established
  
43. When cannulating an AV fistula, the angle of needle inserting should be approximately:
  - a. 15 degrees
  - b. 25 degrees
  - c. 45 degrees
  - d. 60 degrees
  
44. Stenosis within the vascular access may lead to:
  - a. Infection
  - b. Infiltration
  - c. Steal syndrome
  - d. Clotting of the access



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

45. What is the usual fluid allowance per day for dialysis patients?
  - a. ½ liter
  - b. 1-1 ½ liters
  - c. 2 – 2 ½ liters
  - d. There is no set limit
  
46. Which of the following might be an indication of inadequate dialysis?
  - a. Intradialytic weight gain of 3-5% of body weight
  - b. An increase in appetite
  - c. Hemoglobin of 12 g/dL
  - d. Pericarditis
  
47. Sodium modeling helps to move excess body fluid into the:
  - a. Intravascular space
  - b. Interstitial space
  - c. Dialyzer
  - d. Cells
  
48. Air in the extracorporeal circuit could lead to all of the following EXCEPT:
  - a. Air embolism
  - b. Clotted dialyzers
  - c. Dialyzer reactions
  - d. Disinfectant infusion
  
49. Chlorine exposure in hemodialysis may cause:
  - a. Hemolysis
  - b. Pericarditis
  - c. Hypernatremia
  - d. Excessive bleeding
  
50. Nocturnal hemodialysis treatments typically run:
  - a. 2-4 hours
  - b. 4-6 hours
  - c. 6-8 hours
  - d. 10-12 hours
  
51. What is normal serum potassium level?
  - a. 0.4 – 1.0 mEq/L
  - b. 2.0 – 3.0 mEq/L
  - c. 3.5 – 5.5 mEq/L
  - d. 4.0 – 7.5 mEq/L
  
52. Transplanted kidneys are placed:
  - a. Where the old kidney is removed
  - b. In the pelvic area
  - c. Beside the liver
  - d. In the stomach



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Name: \_\_\_\_\_

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

53. What is a common characteristic of acute renal failure?
  - a. Sudden onset
  - b. Not reversible
  - c. Lasts 6 months to a year
  - d. Leading cause of death in renal patients
  
54. All of the following factors influence the rate of diffusion EXCEPT:
  - a. Solution temperature
  - b. Hydrostatic pressure
  - c. Membrane surface area
  - d. Membrane permeability
  
55. Hyperkalemia can lead to:
  - a. Constipation
  - b. Cardiac arrest
  - c. Excessive thirst
  - d. Abdominal cramping
  
56. What are the typical signs of fluid overload?
  - a. Edema and shortness of breath
  - b. Hypotension and cramping
  - c. Nausea and vomiting
  - d. Numbness and tingling of the lips
  
57. Safe range for conductivity is:
  - a. 12.8 – 13.6
  - b. 12.5 – 14.5
  - c. 13.0 – 15.5
  - d. 13.5 – 15.0
  
58. In reuse facilities, all of the following are checked before every treatment EXCEPT:
  - a. Conductivity
  - b. Residual bleach
  - c. Residual sterilant
  - d. Pressure holding test
  
59. The purpose of using counter-current flow is to:
  - a. Increase the rate of fluid removal
  - b. Increase the rate of waste removal
  - c. Decrease the amount of dialysate used
  - d. Decrease the surface area of the membrane
  
60. Where do you get the water sample for routine testing for total chlorines?
  - a. After the primary carbon tank
  - b. After the secondary carbon tank
  - c. After the water softener
  - d. After the RO





# Dialysis Skills Exam

Name: \_\_\_\_\_

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

61. We dialyze patients at an isolation station if they have:
  - a. Hepatitis B antibodies
  - b. Hepatitis B antigen
  - c. Positive HIV
  - d. MRSA
  
62. Your patient comes in 1 kg below dry weight. What suggestion would you make to your charge nurse regarding the plan for treatment?
  - a. Turn the UF off in the last hour of treatment
  - b. Replace fluid for that treatment
  - c. Set the machine to remove 1 kg
  - d. Increase their dry weight
  
63. Which of the following is true about site preparation for an AV fistula or graft?
  - a. Betadine is only effective when it is wet
  - b. When using alcohol only, it is necessary to clean for 30 seconds
  - c. Clean the access with Betadine and then remove the Betadine with alcohol
  - d. The access should be cleaned using concentric circles from inside to out
  
64. Patients at greatest risk for Dialysis Disequilibrium Syndrome include:
  - a. Those with diabetes
  - b. Fluid overloaded patients
  - c. Those with Polycystic Kidney Disease
  - d. First time patients or those who have skipped treatments
  
65. One of the best measures we can take to prevent accidental blood loss for our patients is to:
  - a. Tape blood lines to the chair
  - b. Make sure access is clearly visible
  - c. Give the patient less heparin during treatment
  - d. Document venous pressures hourly during treatment
  
66. What is the principle operation of a Carbon tank?
  - a. Deionization
  - b. Adsorption
  - c. Diffusion
  - d. Ion Exchange
  
67. The patient and caregiver must wear a facemask with a dialysis catheter when initiating and terminating a treatment and when the dressing change is performed.
  - a. True
  - b. False
  
68. The bruit is:
  - a. The sound you hear while listening to the access with a stethoscope
  - b. The vibration feeling you get when palpating the access



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

69. The thrill is:
- The sound you hear while listening to the access with a stethoscope
  - The vibration feeling you get when palpating the access
70. What is the principle operation of a Water Softener tank?
- Deionization
  - Adsorption
  - Diffusion
  - Ion Exchange
71. All of the following are advantages of peritoneal dialysis EXCEPT:
- Storage space needed
  - More flexible lifestyle
  - Fewer dietary restrictions
  - Constant BP and fluid control
72. All of the following substances are produced by the kidney EXCEPT:
- Renin
  - Aldosterone
  - Erythropoietin
  - Calcitriol
73. The most likely cause of post-renal failure is:
- Severe dehydration
  - Nephrotoxic drug
  - Glomerulonephritis
  - Benign prostatic hypertrophy
74. Uremia may cause which of the following conditions?
- Itching
  - Edema (swelling) of the extremities
  - Anemia
  - All of the above
75. Peritoneal dialysis (PD) differs from hemodialysis in which of the following ways?
- PD requires both vascular access and abdominal access
  - PD cannot be done at home
  - PD access is by an intra-abdominal catheter
  - Sterile dialysate is not required for PD
76. The main difference between an arteriovenous shunt (AVS) and an arteriovenous fistula (AVF) is an:
- AVS is entirely within the arm
  - AVF is entirely within the arm
  - AVF is more likely to become clotted or infected
  - AVF requires an external tube



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

77. Which of the following dialyzers is used currently?
- Kiil
  - Flat plate
  - Coil
  - Hollow tube
78. Which of the following kidney structures connects with and delivers urine directly to the ureter?
- Pelvis
  - Calyx
  - Glomerulus
  - Cortex
79. The glomerular filtration rate is an important index of renal function and in the normal adult is approximately:
- 50 mL/min/1.73 m<sup>2</sup>
  - 75 mL/min/1.73 m<sup>2</sup>
  - 125 mL/min/1.73 m<sup>2</sup>
  - 200 mL/min/1.73 m<sup>2</sup>
80. The conductivity solution once dated and opened has a shelf-life of \_\_\_\_\_.
- 15 Days
  - 14.0 Omhos.
  - 1 Day
  - 30 Days
81. A female patient's predialysis weight is 149.6 lb (68 kg) and the prescribed target weight is 138.6 lb (63 kg). For her four-hour treatment, the priming saline amount is 240 ml and the rinseback amount is 200 ml. She is not allowed any oral fluids during her treatment. The patient's hourly ultrafiltration rate should be how many mL per hour?
- 2720
  - 2040
  - 1360
  - 680
82. A male patient who has diabetes and receives hemodialysis treatments sometimes drinks juice when his blood sugar is low. Which of the following types of juice would be best for this patient, since it is lowest in potassium?
- Prune juice
  - Grapefruit juice
  - Vegetable juice cocktail (V-8)
  - Cranberry juice cocktail



# Dialysis Skills Exam

Name: \_\_\_\_\_

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

83. On a Monday morning, a female patient arrives at the hemodialysis unit 8.8 lb (4 kg) above her target weight. Near the end of her treatment, the patient complains of severe muscle cramping in her lower extremities. Which of these actions should the technician take?
- Discontinue the dialysis treatment
  - Elevate the patient's legs
  - Administer a bolus of normal saline per protocol
  - Increase the patient's ultrafiltration rate
84. Medications are sometimes administered into the bubble trap. One contraindication to administering medication in this way is:
- Excessive turbulence of the blood
  - Low blood flow rate
  - Visible blood clots
  - Large volume of medication
85. The most common adverse effect with the administration of intravenous iron medication is:
- Anaphylaxis
  - Hypotension
  - Headache
  - Constipation
86. A bottle of standard pH solution once dated and opened has a shelf-life of \_\_\_\_\_.
- 90 Days
  - 14.0 Omhos.
  - 1 Day
  - 30 Days
87. When do red needle containers need to be replaced?
- Full to the top
  - One half full
  - Three quarters full
  - Once a week
88. - 95. Match the following medications with their function.
- |                         |  |
|-------------------------|--|
| _____ Epopen            | 1. Vitamin D to prevent bone disease       |
| _____ Vancomycin        | 2. Anticoagulant to prevent blood clotting |
| _____ Heparin           | 3. Phosphate binder                        |
| _____ Zemplar           | 4. Sugar solution that increases BP        |
| _____ Venofer           | 5 Salt solution that increases BP          |
| _____ Calcium Carbonate | 6. Antibiotic to treat infection           |
| _____ Mannitol          | 7. Iron medication                         |
| _____ Hypertonic Saline | 8. Hormone to treat anemia                 |



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

96. Who is the most important member of the renal team?
- a. Nephrologist, Nurse
  - b. Nurse, Renal Dietitian, Renal Social Worker
  - c. Nurse, Patient Care Technician, Reuse Technician
  - d. All members of the team
97. Chloramines are derived from two chemical elements that are \_\_\_\_\_ & \_\_\_\_\_.
- a. Chloride and Aluminum
  - b. Chlorine and Ammonia
  - c. Fluoride and Sodium
  - d. Nitrates and Mercury
98. Adverse Occurrence Reports (AOR's) should be completed:
- a. No later than at the end of shift when adverse occurrence happened
  - b. No later than 30 days after the occurrence
  - c. Within 24 hours of the adverse occurrence
  - d. Within 72 hours of the adverse occurrence
99. Choose the most appropriate charting example.
- a. The exit site is inflamed
  - b. The patient has an infection
  - c. The patient is having pyrogenic reaction
  - d. The exit site is red and tender to touch
100. Which of the following statements is true about documentation?
- a. It is okay to have blank spaces between entries
  - b. Titles should be included with each signature on the record
  - c. It is acceptable practice to share your password with other teammates
  - d. You should make a note in the record that an AOR has been completed