NEURO QUIZ

1. Correct Answer: 3
Rationale: Warning signs of stroke include sudden weakness, paralysis, loss of speech, confusion, dizziness, unsteadiness, and loss of balance the key word is sudden. Family history and past medical history can be indicators for risk, but they are not warning signs of stroke. Gradual onset of symptoms is not indicative of a stroke.

2. Correct Answer: 3,4,5
Rationale: Maintaining fluids at KVO is inappropriate since this patient will be placed on NPO (nothing by mouth) status while ventilated. It is important that the patient receive adequate fluids for hydration and nutrition since nothing will be consumed by mouth. The patient's bowel sounds need to be assessed more often than once a shift (everyone to two hours while in the ICU) since the patient is at risk for a paralytic ileus. Physical therapy will be beneficial for maintaining ROM (range of motion) while the patient is immobile from ventilation and sedation. The nurse must closely monitor the patient's calorie intake to determine nutritional needs while NPO. Any time a patient is on maintenance intravenous fluids urinary output must be monitored closely. Additionally, this particular patient is at risk for urinary retention.

3. Correct Answer: 3
Rationale: Ineffective Airway Clearance is the priority nursing diagnosis for this patient. The nurse utilizes the ABCs (airway, breathing, circulation) to determine priority. With Ineffective Airway Clearance, the patient is at risk for aspiration and therefore, impaired gas exchange. Fluid Volume Deficit is the nurse's next priority (circulation), and then Altered Tissue Perfusion. If the patient does not have enough volume to circulate, then tissue perfusion cannot be adequately addressed. The last priority for this patient is Impaired Physical Mobility.

4. Correct Answer: 1,2,5
Rationale: The left cerebral hemisphere is responsible for the language center, calculation skills, and thinking/reasoning abilities. Reading and speaking could be compromised if there is left-sided brain damage. The patient also might display overcautious behavior and might be slow to respond or complete activities. Transfer techniques would apply regardless of the side involved. Impulse control problems can arise with right-sided involvement.

5. Correct Answer: 1
Rationale: Keeping the patient upright for a time after the meal will help prevent food from being regurgitated back into the esophagus. The position of the patient during the meals as well as teaching the "chin tuck" technique will assist with the swallowing mechanism, but will not help with regurgitation. Pocketing food does not cause regurgitation.

6. Correct Answer: 2
Rationale: Autonomic dysreflexia occurs in patients with injury at level T6 or higher, and is a life-threatening situation that will require immediate intervention or the patient will die. The most common cause is an overextended bladder or bowel. Symptoms include hypertension, headache, diaphoresis, bradycardia, visual changes, anxiety, and nausea. A calm, soothing environment is fine, though not what the patient needs in this case. The nurse should recognize this as an emergency and proceed accordingly. Once the assessment has been completed, the findings will need to be communicated to the healthcare provider.

7. Correct Answer: 3
Rationale: An AV malformation is a cluster of vessels, usually located in the midline cerebral artery, that, if ruptured, becomes a surgical emergency to cut the blood flow to the vessels or the patient will bleed out into the brain. Symptoms of rupture include headache, change in level of consciousness,, nausea and vomiting, and neurological deficits symptoms that mimic any brain bleed. Giving medication to affect coagulation will only make the bleeding worse. Recommending long-term care and merely documenting the changes are not appropriate interventions for a medical emergency.

8. Correct Answer: 3
Rationale: Guidelines for emergency care are avoiding flexing, extending, or rotating the neck; immobilizing the neck; securing the head; maintaining the patient in the supine position; and transferring from the stretcher with backboard in place to the hospital bed. This patient is unconscious, and the nurse must protect the neck from any (or any further) damage. If the patient vomits, the nurse should utilize the log-roll technique to turn the patient while keeping the head, neck, and spine in alignment. Rousing the patient by shaking could cause damage to the spinal cord.

9. Correct Answer: 4
Rationale: Spinal shock is a condition almost half the people with acute spinal injury experience. It is characterized by a temporary loss of reflex function below level of injury, and includes the following symptomatology: flaccid paralysis of skeletal muscles, loss of sensation below the injury, and possibly bowel and bladder dysfunction and loss of ability to perspire below the injury level. In this case, the nurse should explain to the patient what is happening.

10. Correct Answer: 2,4,5
Rationale: The healthcare provider is responsible for initial applying of the traction device. The weights on the traction device must not be changed without the order of a healthcare provider. When caring for a patient in traction, the nurse is responsible for assessment and care of the skin due to the increased risk of skin breakdown. The patient in traction is likely to experience pain and the nurse is responsible for assessing this pain and administering the appropriate analgesic as ordered. Passive range of motion helps prevent contractures; this is often performed by a physical therapist or a nurse.

11. Correct Answer: 2
Rationale: A halo device will allow the patient to be mobile since it does not require weights like the Gardner-Wells tongs. The patient's pain level is not dependant on the type of stabilization device used. The patient does not have a great risk of infection with the Garnder-Wells tongs; both devices require pins to be inserted into the skull. The time required for stabilization is not dependant on the type of stabilization device used.

12. Correct Answer: 2
Rationale: Warfarin is a vitamin K antagonist. Green, leafy vegetables contain vitamin K, and will therefore interfere with the therapeutic effects of the drug. Bruising is a common side effect, and the drug should not be stopped unless by prescriber order. Low-fat foods do not interfere with warfarin therapy, which is not prescribed to affect the blood pressure.

13. Correct Answer: 2
Rationale: A common side effect of corticosteroids is hyperglycemia. Stress as well as the medication could cause this person to have periods of elevated blood sugars.

14. Correct Answer: 4
Rationale: A patient who has undergone a laminectomy needs to be turned by log rolling to prevent pressure on the area of surgery. An air mattress will help prevent skin breakdown but the patient still needs to be turned frequently. Placing pillows under the patient can help take pressure off of one side but the patient still needs to change positions often. Teaching the patient to grasp the side rail will cause the spine to twist, which needs to be avoided.

15. Correct Answer: 2
Rationale: The priority nursing diagnosis for a patient who has undergone a spinal fusion is Impaired Mobility, due to the assessment of the ABCs (airway, circulation, breathing). Impaired mobility can affect the patient's circulation, therefore affecting tissue perfusion and causing a risk for skin breakdown. Acute Pain is the next priority since it is an active diagnosis. Diagnoses with "risk for" do not take priority over active diagnoses.

16. Correct Answer: 4
Rationale: Rising systolic blood pressure, falling pulse, and a pupil that has become sluggish suggest increasing intracranial pressure (IICP). This is an emergency situation that requires notification of the physician. This is an emergency situation that requires intervention as the patient's condition is becoming more unstable. Brain death is diagnosed by lack of brain waves and inability to maintain vital function.

17. Correct Answer: 3
Rationale: In any unconscious patient, the airway must be protected. Assessment of the current airway and breathing status is of highest priority and will continue to be. Blood pressure and output monitoring as well as ensuring appropriate level of care are important interventions, but assessment of the patient's ability to maintain an airway is the most vital.

18. Correct Answer: 1
Rationale: Proper use of the cane is essential to fall prevention. The patient should hold the cane in the left hand. The patient should move the cane forward first, then the right leg, and then the left leg.

19. Correct Answer: 2
Rationale: Therapeutic communication is needed. It is important to allow hope but

be honest by not promising progress, since no one knows how much the patient will improve. Progress may depend on the extent and the areas affected. The nurse does not know that speech will return in time. It is not therapeutic to tell the family to ask the physician, and it does not display a professional, caring attitude.

20. Correct Answer: 4
Rationale: Hypertension is the greatest risk factor for stroke, and should be controlled. Diabetes, heart disease, and renal insufficiency can all lead to stroke, however hypertension is the greatest risk.

21. Correct Answer: 1
Rationale: Eighty percent of all strokes are caused by ischemia. Hemorrhagic strokes are less common than ischemic strokes. Headache and vomiting may be symptoms associated with CVA, but not common causes.

22. Correct Answer: 1
Rationale: The side-lying position is the safest position to allow adequate drainage of fluids without aspiration.

23. Correct Answer: 2,3,4
Rationale: Headache is a sign of a probable rebleed. Hydrocephalus, rebleeding, and vasospasm are the three major complications that a nurse must anticipate following a ruptured intracranial aneurysm. Stiff neck is a manifestation of intracranial aneurysm, not a complication.

24. Correct Answer: 3
Rationale: Suctioning further increases intracranial pressure; therefore, suctioning should be done to maintain a patent airway but not as a matter of routine. Maintaining patient comfort by frequent repositioning as well as keeping the head elevated 30 degrees will help to prevent (or even reduce) IICP. Keeping the patient properly oxygenated may also help to control ICP.

25. Correct Answer: 1,2,4
Rationale: Often intracranial aneurysms are asymptomatic until rupture but patients can complain of headache and eye pain, and have visual deficits and a dilated pupil. Nausea and vomiting and stiff neck are not usually associated with the prodromal manifestations of an intracranial aneurysm, but may occur with leaking or rupture.

26. Correct Answer: 1
Rationale: The three major risk factors for spinal cord injuries (SCI) are age (young adults), gender (higher incidence in males), and alcohol or drug abuse. Females tend to engage in less risk-taking behavior than young men.

27. Correct Answer: 2
Rationale: Within 24 hours necrosis of both gray and white matter begins if ischemia has been prolonged and the function of nerves passing through the injured area is lost. Because the edema extends above and below the area affected, the extent of injury cannot be determined until after the edema is controlled. Neurons do not regenerate, and the edema is the factor that limits the ability to predict extent of injury.

28. Correct Answer: 1
Rationale: Take a blood pressure reading manually to check technique, compare the results to the last several blood pressures recorded, and call the physician to report this blood pressure. Physicians typically have a range for maintaining the blood pressure following carotid endarterectomy, with standing orders for higher or lower blood pressures. If the blood pressure becomes higher, it is a danger and should be reported to the physician and documented in the patient record along with orders received. Although the skill of the staff is important, it is a priority to notify the physician of the blood pressure reading so that treatment can begin. Antihypertensives may be ordered and administered p.r.n., but physician notification after verification of the reading is the priority, so that further evaluation can occur.

29. Correct Answer: 1
Rationale: Be attuned to the prevention of a distended bladder when caring for spinal cord injury (SCI) patients in order to prevent this chain of events that lead to autonomic dysreflexia. Track urinary output carefully. Routine use of bladder scanning can help prevent the occurrence. Other causes of autonomic dysreflexia are impacted stool and skin pressure. Autonomic crisis, autonomic shutdown, and autonomic failure are not terms used to describe common complications of spinal injury associated with bladder distension.

30. Correct Answer: 3
Rationale: Autonomic dysreflexia is an emergency that requires immediate assessment and intervention to prevent complications of extremely high blood

pressure. Additional nursing assistance will be needed and a colleague needs to reach the physician stat.

31. Correct Answer: 2
Rationale: Froin's syndrome is seen with spinal cord tumors. A lumbar puncture, x-rays, CT scans, MRI, and myelogram are all common tests that are used to diagnose a spinal cord tumor. Glasgow's syndrome, cord tumor syndrome, and reflex syndrome are not terms associated with the symptoms of spinal cord tumor described.

32. Correct Answer: 3
Rationale: The tumor can exert pressure on the spinal cord, which interferes with function. In the case of secondary metastatic spinal tumor (which means a second site of cancer) and the metastasis (spread of cancer) the patient outcome may be limited to preventing compression on the spinal cord and not totally removing the cancerous lesion. Complete removal along with affected spinal tissue or eradication by excision and drainage would not be likely due to the secondary nature of the tumor and the resulting disability. Biopsy can be accomplished without direct visualization.

33. Correct Answer: 4
Rationale: Quadriplegia describes complete paralysis of the upper extremities and complete paralysis of the lower part of the body. Hemiplegia describes paralysis on one side of the body. Paresthesia does not indicate paralysis. Paraplegia is paralysis of the lower body.

34. Correct Answer: 2
Rationale: Spinal shock is common in acute spinal cord injuries. In addition to the signs and symptoms mentioned, the additional sign of absence of the cremasteric reflex is associated with spinal shock. Lack of respiratory effort is generally associated with high cervical injury. The findings describe paralysis that would be associated with spinal shock in an spinal injured patient. The likely cause of these findings is not hypovolemia, but rather spinal shock.

35. Correct Answer: 1,2,5
Rationale: In the emergency setting, all patients who have sustained a trauma to the head or spine, or are unconscious should be treated as though they have a spinal cord injury. Immobilizing the neck, maintaining a supine position and securing

the patient's head to prevent movement are all basic guidelines of emergency care. Placement on the ventilator and raising the head of the bed will be considered after admittance to the hospital.

36. Correct Answer: 2,5
Rationale: Autonomic dysreflexia can be caused by kinked catheter tubing allowing the bladder to become full, triggering massive vasoconstriction below the injury site, producing the manifestations of this process. Acute symptoms of autonomic dysreflexia, including a sustained elevated blood pressure, may indicate fecal impaction. The other answers will not cause autonomic dysreflexia.

37. Correct Answer: 2,3,1,4
Rationale: In teaching prevention of back injuries the nurse would incorporate principles of proper body mechanics, which are work as close to the object as possible, spread feet apart, use large leg muscles for leverage. Sometimes rolling or pushing will enable movement of a heavy object.

38. Correct Answer: 3,4
Rationale: Military personnel living on a base and young adults living in close proximity (such as college students living in a dormitory) are at a greater risk of contracting bacterial meningitis. The other populations are at lower risk.