NURS 6512, Week 6 Midterm Exam

This exam is a test of your knowledge in preparation for your certification exam. **No outside resources** including books, notes, websites, or any other type of resource are to be used to complete this exam. You are expected to **comply with Walden University's Code of Conduct**.

This exam will be on topics covered in weeks 1, 2, 3, 4, 5, and 6. Prior to starting the exam, you should review all of your materials. This exam is timed with a limit of two hours for completion. When time is up, your exam will automatically submit.

Submission and Grading Information

Submit Your Midterm Exam by Day 7

QUESTIONS

1. Before performing an abdominal examination, the examiner should:
Have the patient empty their bladder

2. During an interview, tears appear in the patient's eyes and his voice becomes shaky. Initially, you should:
Keep the interview moving to distract the patient

3. Which of the following is the most accurate reflection of an individual's food intake?
Food Diary

4. Percussing at the right midclavicular line, below the umbilicus, and continuing upward is the correct technique for locating the:
Lower liver border

5. A fixed image of any group that rejects its potential for originality or individuality is known as a:
Stereotype

6. Peritonitis produces bowel sounds that are
Decreased/Hypoactive

7. Brittle nails are typical findings in:
Older adults

8. Which of the following is an expected change in the assessment of the thyroid during pregnancy?
A Bruit is auscultated d/t increased vascularity

9. You are planning to palpate the abdomen of your patient. Which part of the examiner's hand is best for palpating vibration?
Ulnar Surface

10. A 5-year-old child presents with nasal congestion and a headache to assess for sinus tenderness you should palpate over the:
Maxillary sinuses only

11. During physical examination of a 30-year-old Chinese man you notice a slight asymmetry of his face. the cranial nerve examination is normal. Your best action is to
Ask the patient if this characteristic runs in his family

12. Unusual white areas on the skin may be due to
Vitiligo

13. You are using an ophthalmoscope to examine a patient's inner eye. You rotate the lens selector clockwise, then counterclockwise to compensate for:
Myopia

14. Mrs. Webb is a 38-year old patient who has been changing her lifestyle to eat in a healthy way and lose weight: during your health promotion education regarding her nutritional status, you explain the function of dietary protein as:
Building and maintaining tissues

15. Mr. Akins is a 78-y/o patient who presents to the clinic with complaints of hearing loss. Which of the following are changes in hearing that occur in the elderly? Select all that apply.
c. Loss of high frequency
e. Sounds may be garbled, difficult to localize
f. Unable to hear in a crowded room

16. The most superior part of the stomach is the
Fundus

17. Mrs. Grace is a 58-year-old patient who has a diagnosis of pernicious anemia. Which B vitamin is deficient in patients with pernicious anemia?
B12

18. A 51-y/o woman calls with complaints of weight loss and constipation. She reports enlarged hemorrhoids and rectal bleeding. You advise her to:
Come to the laboratory for a stool guaiac test.

19. Placing the base of a vibrating tuning fork on the midline vertex of the patient's head is a test for:
Lateralization of Sound

20. Which technique is most likely to result in the patients understanding of questions?
Use the patient's own terms if possible.

21. Mr. Williams, age 25, has recovered recently from an upper and lower respiratory infection. He describes a long-standing nasal dripping. He is seeking treatment for a mild hearing loss that has not gone away. Information concerning his chronic postnasal drip should be documented within which section of the history?
Past medical data

22. Nasal symptoms that imply an allergic response include:

Bluish gray turbinates. ("Turbinates that appear bluish gray or pale pink with a swollen, boggy consistency may indicate allergies"-Seidel p.243)

23. Mr. Franklin is speaking with you the health care provider, about his respiratory problem. Mr. Franklin says, “I’ve had this cough for 3 days and it’s getting worse.” You reply, “Tell me more about your cough.” Mr. Franklin states, “I wish I could tell you more, that’s why I am here! You tell me what’s wrong.” Which caregiver response would be the most appropriate for enhancing communication?
After 3 days, you're tired of coughing. Have you had a fever?"

24. When taking a history, you should:
Use a chronologic and sequential framework.

25. Which of the following formats would be used for visits that address problems not yet identified in the problem-oriented medical record (POMR)?
Brief SOAP note

26. Mr. and Mrs. Johnson have presented to the office with their infant son with complaints of ear drainage. When examining an infant’s middle ear, the nurse should use one hand to stabilize the otoscope against the head while using the other hand to:
Pull the auricle down and back in an effort to straighten the upward curvature of the canal

27. Which question would be considered a leading question?
You don't get headaches often, do you?"

28. Mr. Black is a 44y/o patient who presents to the clinic with complaints of neck pain that he thinks is from his job involving computer data entry. As the examiner, you are checking the range of motion in his neck and note the greatest degree of cervical mobility is at?
C 4 to C 5: C4 and C5 or C5 and C 6 provide the greatest horizontal mobility in adults

29. The term denoting the caregiver’s need to do no harm to the patient is:
Deontologic imperatives.

30. A tool used to screen adolescents for alcoholism is the:
CRAFFT

31. Under normal circumstances, how much water is lost daily by the body?
Under normal circumstances, approximately 2 to 2.5 liters of water is lost daily

32. You have just completed a skin assessment on Mr. Baker. During your assessment, you have transilluminated a skin lesion. During the physical examination, you know that skin lesions are transilluminated to distinguish:
Transillumination is used to determine the presence of fluid in cysts and masses. Fluid-filled lesions will transilluminate with a red glow, and solid masses will not transilluminate.

33. Mr. Mills is a 55/y/o patient who presents to the office for an initial visit for health promotion. A survey of mobility and activities of activities of daily living is part of a(n):
Functional assessment.

34. Sweat glands, hair, and nails are all formed from?
Invagination of epidermis into dermis

35. A brief statement of the reason the patient is seeking health care is called the?
Chief concern

36. Which part of the information contained in the patient's record may be used in court?
Anything that is entered into a patient's record in paper or electronic form, is a legal document and can be used

37. Which cranial nerves innervate the face?
5 and 7

38. In counseling a client regarding nutrition education, you explain that linoleic acid, a major fatty acid, is thought to be essential for?
Linoleic acid, found abundantly in milk and dairy fat, is required for normal growth and development, it has been suggested that it can reduce body fat in overweight patient

39. When are open-ended questions generally most useful?
During the initial part of the interview

40. Knowledge of the culture or cultures represented by the patient should be used to?
Help make interview questions more pertinent

41. Mrs. Berger is a 39-year-old woman who presents with a complaint of epigastric abdominal pain. You have completed the inspection of the abdomen. What is your next step in the assessment process?
Auscultation

42. A guideline for history taking is for caregivers to?
Make notes sparingly so that patients can be observed during the history taking

43. Which type of speculum should be used to examine a patient's tympanic membrane?
The largest speculum that will fit comfortably in ear

44. You are palpating a patient's thyroid and find that its broadest dimension measures 4cm. the right lobe is 25% larger than the left. These data would indicate?
The description is most likely a normal finding

45. Mr. L. presents to the clinic with severe groin pain and a history of kidney stones. Mr. L.'s son tells you that, for religious reasons, his father wishes to keep any stone that is passed into the urine filter that he has been using. What is your most appropriate response?
Healthcare provider should be willing to modify delivery and respectful of wishes/culture background

46. Before performing an abdominal examination, the examiner should?
Have the patient empty his or her bladder
47. You are examining a pregnant patient and have noted a vascular lesion. When you Blanche over the vascular lesion, the site blanches and refills evenly from the center outward. The nurse documents this lesion as a?
Telangiectasia

48. As you explain your patient's condition to her husband, you notice that he is leaning toward you and pointedly blinking his eyes. Knowing that he is from England, your most appropriate response to this behavior is to?

The English worry about being overheard and tend to speak in a modulated voice, so when they lean toward you, they probably have a question

49. When palpating the abdomen, you should note whether the liver is enlarged in the?
The liver is located in the right upper quadrant of the abdomen

50. Expected normal percussion tones include?
Normal lings produce renaissance percussion tones

51. Mr. Abdul is a 40-year-old Middle Eastern man who presents to the office for a first visit with the complaint of new abdominal pain. You ate concerned about violating a cultural prohibition when you prepare to do his rectal examination. The best tactic would be to?
Inform the patient of the reason for the exam and ask if it is acceptable to him

52. Fluorescing lesions are best distinguished using a(n)?
Wood's lamp

53. Mrs. Hartzell is a 34-year-old patient who has presented for nutritional counseling because she is a vegetarian. Deficiency of which of the following is a concern in the vegetarian diet?
Proteins, calcium, iron, B12, and vitamin D

54. Underestimation of blood pressure will occur if the blood pressure cuff's width covers?
Cuff that are too wide will underestimate blood pressure, which would happen with a cuff that is more than one third of the upper arm

55. Mrs. Britton is a 34-year-old patient who presents to the office with complaints of skin rashes. You have noted a 4'3cm, rough, elevated area of psoriasis. This is an example of a?
Plaque

56. Penicillin is considered a?
Miracle drug for all the reasons except. It was not the first antibiotic.

57. Small, minute bruises are called?
Petechiae

58. After thorough inspection of the abdomen, the next assessment step is?
Auscultation

59. When you are questioning a patient regarding alcohol intake, she tells you that she is only a social drinker. Which initial response is appropriate?
What amount and what kind of alcohol do you drink in a week?

60. Regardless of the origin, discharge is described by noting?
Color and consistency

61. Recommended carbohydrate content of total dietary intake (% total calories) is?
50%

62. Tuning forks with a frequency of 500 to 1000 Hz are most commonly used to measure?
Hearing range of normal speech

63. Auscultation should be carried out last, except when examining the?
The abdomen

64. Mr. Kevin Marks is a new health care provider. What is the best method to develop cultural competence?
Realize the cultural values are difficult to change and must be respected

65. Which of the following is an “ABCD” characteristic of malignant melanoma?
Asymmetric borders

66. Tracheal tug suggests the presence of a(n)?
Aortic aneurysm

67. Your patient presents with symptoms that lead you to suspect acute appendicitis. Which assessment finding is least likely to be associated with this condition early in its course?
Consistent right lower quadrant pain

68. The review of systems is a component of the:
Personal and social history

69. Cherry angiomas are a common finding in:
Adults older than 30 years

70. Mr. Donalds is a 45-year-old roofer. Your inspection to determine color variations of the skin is best conducted:
with illumination provided by daylight.

71. To correctly document absent bowel sounds, one must listen continuously for:
5 minutes

72. The adult recommended dietary fat intake should be ____g/day.
20 to 35

73. Mr. Jones is a 45-year-old patient who presents for a physical examination. On examination, you note costochondral beading, enlarged skull, and bowed legs and diagnose him with rickets. A deficiency of which fat-soluble micronutrient can result in rickets?
Vitamin D

74. A flat, non-palpable lesion is described as a macule if the diameter is:
Less than 1 cm

75. Mrs. Raymonds is a 24-year-old patient who has presented for a routine concern over her current weight. In your patient teaching with her, you explain the importance of macronutrients. Which of the following is a macronutrient?
Fat

76. Which of the following organs is part of the alimentary tract?
continuous tract from the mouth to the esophagus, stomach, small intestine, large intestine, and anus

77. Mr. Sanchez is a 45-year-old gentleman who has presented to the office for a physical examination to establish a new primary care health care provider. Which of the following describes a physical, not a cultural, differentiator?
Race

78. To approximate vocal frequencies, which tuning fork should be used to assess hearing?
500 to 1000 Hz

79. During percussion, a dull tone is expected to be heard over:
The liver

80. The attitudes of the health care professional:
Culturally derived/are largely irrelevant to the success of relationships with the patient

81. When recording physical findings, which data are recorded first for all systems?
Inspection

82. Spasmodic muscular contractions of the head, face, or neck are called:
tics

83. Which of the following occurs when firm pressure is used to apply the stethoscope's bell end-piece to the skin?
It functionally converts to a diaphragm end-piece.

84. Differential diagnoses belong in the:
Assessment

85. Pigmented, raised, warty lesions over the face and trunk should be assessed by an experienced practitioner who can distinguish:
seborrheic keratoses from actinic keratoses.
86. Mr. Walter's, a 32-year-old patient, tells you that his ears are "stopped up." An objective assessment of this complaint is achieved by using the:
tympanometer

87. Mrs. Leonard brings her newborn infant into the pediatrician's office for a first well-baby visit. As the health care provider, you teach her that newborns are more vulnerable to hypothermia due to:
a poorly developed subcutaneous fat layer.

88. Tympanic thermometers measure body temperature when a probe is placed:
Eardrum (in the ear)

89. A serous membrane that lines the abdominal cavity and forms a protective cover for many abdominal structures is the:
peritoneum

90. White, rounded, or oval ulcerations surrounded by a red halo and found on the oral mucosa are:
aphthous ulcers (canker sores)

91. When assessing abdominal pain in a college-age woman, one must include:
the first day of the last menstrual period.

92. Your patient is complaining of acute, intense sharp epigastric pain that radiates to the back and left scapula with nausea and vomiting. Based on this history, your prioritized physical examination should be to:
inspect for ecchymosis of the flank.

93. The infant should be placed in which position to have his or her height or length measured?
Supine on a measuring board

94. Mr. Marks is a 66-year-old patient who presents for a physical examination to the clinic. Which question has the most potential for exploring a patient's cultural beliefs related to a health problem?
"Why do you think you are having these symptoms?"

95. Which of the following is the most vital nutrient?
water

96. What finding is unique to the documentation of a physical examination of an infant?
Fontanel size

97. Mrs. G. reports an increase in her alcohol intake over the past 5 years. To screen her for problem drinking, you would use the:
CAGE questionnaire

98. Mr. D. complains of a headache. During the history he mentions his use of alcohol and illicit drugs. This information would most likely belong in the:
personal and social history

99. You are completing a general physical examination on Mr. Rock, a 39-year-old man with complaints of constipation. When examining a patient with tense abdominal musculature, a helpful technique is to have the patient:
flex his or her knees

100. When communicating with older children and teenagers, you should be sensitive to their:
typical reluctance to talk
101**.** Periods of silence during the interview can serve important purposes, such as: Providing time for reflection.

- ## Question 1

1 out of 1 points

Mr. Franklin is speaking with you, the health care provider, about his respiratory problem. Mr. Franklin says, "I've had this cough for 3 days, and it's getting worse." You reply, "Tell me more about your cough." Mr. Franklin states, "I wish I could tell you more. That's why I'm here. You tell me what's wrong!" Which caregiver response would be most appropriate for enhancing communication?

- ## Question 2

1 out of 1 points

Before performing an abdominal examination, the examiner should:

- ## Question 3

  1 out of 1 points

  Periods of silence during the interview can serve important purposes, such as:

- ## Question 4

  1 out of 1 points

  Your patient presents with symptoms that lead you to suspect acute appendicitis. Which assessment finding is least likely to be associated with this condition early in its course?

- ## Question 5

  1 out of 1 points

  To perform the Rinne test, place the tuning fork on the:

- ## Question 6

  1 out of 1 points

  As part of your health promotion education for a new patient, you explain that the risk factors for skin cancer include:

- ## Question 7

  1 out of 1 points

  A brief statement of the reason the patient is seeking health care is called the:

- ## Question 8

  1 out of 1 points

  When assessing abdominal pain in a college-age woman, one must include:

- ## Question 9

  1 out of 1 points

  Peritonitis produces bowel sounds that are:

- ## Question 10

  1 out of 1 points

  The most superior part of the stomach is the:

- ## Question 11

  1 out of 1 points

  To approximate vocal frequencies, which tuning fork should be used to assess hearing?

- ## Question 12

  1 out of 1 points

  Which of the following is the most vital nutrient?

- ## Question 13

  1 out of 1 points

  Which of the following is an expected change in the assessment of the thyroid during pregnancy?

- ## Question 14

  1 out of 1 points

  Mr. Donalds is a 45-year-old roofer. Your inspection to determine color variations of the skin is best conducted:

- ## Question 15

  1 out of 1 points

  Peritonitis produces bowel sounds that are:

- ## Question 16

  1 out of 1 points

  Macronutrients are so named because they:

- ## Question 17

  1 out of 1 points

  In examining the neck of a 34-year-old female patient, you note that the uppermost ridge of the tracheal cartilage is at the:

- ## Question 18

  1 out of 1 points

  Which of the following occurs when firm pressure is used to apply the stethoscope's bell end-piece to the skin?

- ## Question 19

  1 out of 1 points

  You have just completed a skin assessment on Mr. Baker. During your assessment, you have transilluminated a skin lesion. During the physical examination, you know that skin lesions are transilluminated to distinguish:

- ## Question 20

1 out of 1 points

The position on a clock, topographic notations, and anatomic landmarks:

- ## Question 21

1 out of 1 points

Mrs. Kinder is a 39-year-old patient who presents to the office with complaints of an earache. In explaining to the patient about the function of her ears, which ear structure would you tell her is responsible for equalizing atmospheric pressure when swallowing, sneezing, or yawning?

- ## Question 22

1 out of 1 points

Ms. Jones is a 31-year-old female patient who presents for a routine physical examination. Which examination technique will be used first?

- ## Question 23

1 out of 1 points

When recording physical findings, which data are recorded first for all systems?

- ## Question 24

1 out of 1 points

Percussing at the right midclavicular line, below the umbilicus, and continuing upward is the correct technique for locating the:

- ## Question 25

1 out of 1 points

Ms. G. is being seen for her routine physical examination. She is a college graduate and president of a research firm. Although her exact salary is unknown, she has adequate health insurance. Most of the above information is part of Ms. G.'s _____ history.

- ## Question 26

1 out of 1 points

You are planning to palpate the abdomen of your patient. Which part of the examiner's hand is best for palpating vibration?

- ## Question 27

1 out of 1 points

Which of the following is an "ABCD" characteristic of malignant melanoma?

- **Question 28**

1 out of 1 points

Mrs. Webb is a 38-year-old patient who has been changing her lifestyle to eat in a healthy way and lose weight. During your health promotion education regarding her nutritional status, you explain the function of dietary protein as:

- **Question 29**

0 out of 1 points

George Michaels, a 22-year-old patient, tells the nurse that he is here today to "check his allergies." He has been having "green nasal discharge" for the last 72 hours. How would the nurse document his reason for seeking care?

- **Question 30**

1 out of 1 points

Sweat glands, hair, and nails are all formed from:

- **Question 31**

0 out of 1 points

Your patient returns for a blood pressure check 2 weeks after a visit during which you performed a complete history and physical. This visit would be documented by creating a(n):

- **Question 32**

1 out of 1 points

Your patient is complaining of acute, intense sharp epigastric pain that radiates to the back and left scapula with nausea and vomiting. Based on this history, your prioritized physical examination should be to:

- **Question 33**

1 out of 1 points

Expected normal percussion tones include:

- **Question 34**

0 out of 1 points

Recommended carbohydrate content of total dietary intake (% total calories) is ____ %.

- **Question 35**

1 out of 1 points

Underestimation of blood pressure will occur if the blood pressure cuff's width covers:

- ## Question 36

1 out of 1 points

Which technique is most likely to result in the patient's understanding of questions?

- ## Question 37

1 out of 1 points

Which question would be considered a leading question?

- ## Question 38

1 out of 1 points

Spasmodic muscular contractions of the head, face, or neck are called:

- ## Question 39

1 out of 1 points

Tangential lighting is best used for inspecting skin:

- ## Question 40

1 out of 1 points

Small, minute bruises are called:

- ## Question 41

1 out of 1 points

When examining the skull of a 4-month-old baby, you should normally find:

- ## Question 42

1 out of 1 points

Mr. L. presents to the clinic with severe groin pain and a history of kidney stones. Mr. L.'s son tells you that, for religious reasons, his father wishes to keep any stone that is passed into the urine filter that he has been using. What is your most appropriate response?

- ## Question 43

1 out of 1 points

What finding is unique to the documentation of a physical examination of an infant?

- **Question 44**

0 out of 1 points

The recommended minimum daily protein requirement for the normal adult is _____.

- **Question 45**

1 out of 1 points

Ms. Davis is a 27-year-old patient with a BMI of 33. Based on her BMI, your diagnosis would be:

- **Question 46**

1 out of 1 points

As you explain your patient's condition to her husband, you notice that he is leaning toward you and pointedly blinking his eyes. Knowing that he is from England, your most appropriate response to this behavior is to:

- **Question 47**

1 out of 1 points

Which of the following organs is part of the alimentary tract?

- **Question 48**

1 out of 1 points

Mr. Abdul is a 40-year-old Middle Eastern man who presents to the office for a first visit with the complaint of new abdominal pain. You are concerned about violating a cultural prohibition when you prepare to do his rectal examination. The best tactic would be to:

- **Question 49**

1 out of 1 points

Tuning forks with a frequency of 500 to 1000 Hz are most commonly used to measure:

- **Question 50**

1 out of 1 points

During an interview, tears appear in the patient's eyes and his voice becomes shaky. Initially, you should:

- **Question 51**

1 out of 1 points

Tympanic thermometers measure body temperature when a probe is placed:

- ## Question 52

  1 out of 1 points

  Under normal circumstances, how much water is lost daily by the body?

- ## Question 53

  1 out of 1 points

  After thorough inspection of the abdomen, the next assessment step is:

- ## Question 54

  1 out of 1 points

  Mrs. Britton is a 34-year-old patient who presents to the office with complaints of skin rashes. You have noted a 4' 3-cm, rough, elevated area of psoriasis. This is an example of a:

- ## Question 55

  1 out of 1 points

  Which cranial nerves innervate the face?

- ## Question 56

  1 out of 1 points

  Which technique is most likely to result in the patient's understanding of questions?

- ## Question 57

  1 out of 1 points

  Which of the following is the most accurate reflection of an individual's food intake?

- ## Question 58

  1 out of 1 points

  When assessing abdominal pain in a college-age woman, one must include:

- ## Question 59

  1 out of 1 points

  The infant should be placed in which position to have his or her height or length measured?

- ## Question 60

1 out of 1 points

A 17-year-old girl presents to the clinic for a sports physical. Physical examination findings reveal bradycardia, multiple erosions of tooth enamel, and scars on her knuckles. She appears healthy otherwise. You should ask her if she:

- ## Question 61

1 out of 1 points

A 5-year-old child presents with nasal congestion and a headache. To assess for sinus tenderness you should palpate over the:

- ## Question 62

1 out of 1 points

Coarse, dry, and brittle hair is associated with which metabolic disorder?

- ## Question 63

1 out of 1 points

A detailed description of the symptoms related to the chief complaint is presented in the:

- ## Question 64

1 out of 1 points

Mr. Sanchez is a 45-year-old gentleman who has presented to the office for a physical examination to establish a new primary care health care provider. Which of the following describes a physical, not a cultural, differentiator?

- ## Question 65

1 out of 1 points

You are using an ophthalmoscope to examine a patient's inner eye. You rotate the lens selector clockwise, then counterclockwise to compensate for:

- ## Question 66

1 out of 1 points

Tracheal tug suggests the presence of a(n):

- ## Question 67

1 out of 1 points

Auscultation should be carried out last, except when examining the:

- ## Question 68

  1 out of 1 points

  Unusual white areas on the skin may be due to:

- ## Question 69

  1 out of 1 points

  A serous membrane that lines the abdominal cavity and forms a protective cover for many abdominal structures is the:

- ## Question 70

  1 out of 1 points

  A blood pressure cuff bladder should be long enough to:

- ## Question 71

  1 out of 1 points

  Mr. Walters, a 32-year-old patient, tells you that his ears are "stopped up." An objective assessment of this complaint is achieved by using the:

- ## Question 72

  1 out of 1 points

  Mrs. Raymonds is a 24-year-old patient who has presented for a routine concern over her current weight. In your patient teaching with her, you explain the importance of macronutrients. Which of the following is a macronutrient?

- ## Question 73

  1 out of 1 points

  Knowledge of the culture or cultures represented by the patient should be used to:

- ## Question 74

  1 out of 1 points

  During percussion, a dull tone is expected to be heard over:

- ## Question 75

  1 out of 1 points

  You are palpating a patient's thyroid and find that its broadest dimension measures 4 cm. The right lobe is 25% larger than the left. These data would indicate:

- ## Question 76

1 out of 1 points

The adult recommended dietary fat intake should be _____ g/day.

- **Question 77**

1 out of 1 points

Before performing an abdominal examination, the examiner should:

- **Question 78**

0 out of 1 points

A college student comes to the student health center complaining of difficulty in concentrating during class and while studying. The diet that would contribute to this problem is one that consumes mostly:

- **Question 79**

1 out of 1 points

A flat, nonpalpable lesion is described as a macule if the diameter is:

- **Question 80**

1 out of 1 points

When are open-ended questions generally most useful?

- **Question 81**

1 out of 1 points

When communicating with older children and teenagers, you should be sensitive to their:

- **Question 82**

1 out of 1 points

Pigmented, raised, warty lesions over the face and trunk should be assessed by an experienced practitioner who can distinguish:

- **Question 83**

1 out of 1 points

Ms. Otten is a 45-year-old patient who presents with a complaint of weight gain. Which medication is frequently associated with weight gain?

- **Question 84**

1 out of 1 points

The most common form of birth trauma of the scalp is:

- ## Question 85

1 out of 1 points

Mr. and Mrs. Johnson have presented to the office with their infant son with complaints of ear drainage. When examining an infant's middle ear, the nurse should use one hand to stabilize the otoscope against the head while using the other hand to:

- ## Question 86

1 out of 1 points

Mr. Black is a 44-year-old patient who presents to the clinic with complaints of neck pain that he thinks is from his job involving computer data entry. As the examiner, you are checking the range of motion in his neck and note the greatest degree of cervical mobility is at:

- ## Question 87

1 out of 1 points

Brittle nails are typical findings in:

- ## Question 88

1 out of 1 points

White, rounded, or oval ulcerations surrounded by a red halo and found on the oral mucosa are:

- ## Question 89

1 out of 1 points

Which type of speculum should be used to examine a patient's tympanic membrane?

- ## Question 90

1 out of 1 points

The examiner's evaluation of a patient's mental status belongs in the:

- ## Question 91

1 out of 1 points

Bulging of an amber tympanic membrane without mobility is most often associated with:

- ## Question 92

1 out of 1 points

When you are questioning a patient regarding alcohol intake, she tells you that she is

only a social drinker. Which initial response is appropriate?

- **Question 93**

1 out of 1 points

Mrs. Hartzell is a 34-year-old patient who has presented for nutritional counseling because she is a vegetarian. Deficiency of which of the following is a concern in the vegetarian diet?

- **Question 94**

1 out of 1 points

Mr. Kevin Marks is a new health care provider. What is the best method to develop cultural competence?

- **Question 95**

1 out of 1 points

Mrs. Grace is a 58-year-old patient who has a diagnosis of pernicious anemia. Which B vitamin is deficient in patients with pernicious anemia?

- **Question 96**

1 out of 1 points

The term denoting the caregiver's need to do no harm to the patient is:

- **Question 97**

1 out of 1 points

Penicillin is considered a

- **Question 98**

1 out of 1 points

Mrs. Leonard brings her newborn infant into the pediatrician's office for a first well-baby visit. As the health care provider, you teach her that newborns are more vulnerable to hypothermia due to:

- **Question 99**

1 out of 1 points

Mr. Mills is a 55-year-old patient who presents to the office for an initial visit for health promotion. A survey of mobility and activities of daily living (ADLs) is part of a(an):

- **Question 100**

1 out of 1 points

Mrs. Berger is a 39-year-old woman who presents with a complaint of epigastric abdominal pain. You have completed the inspection of the

abdomen. What is your next step in the assessment process?

ANOTHER

When completing this exam, did you comply with Walden University's Code of Conduct including the expectations for academic integrity?

- Question 2 1 out of 1 points
When hearing is evaluated, which cranial nerve is being tested?

- Question 3 1 out of 1 points
Bulging of an amber tympanic membrane without mobility is most often associated with:

- Question 4 1 out of 1 points
The examiner's evaluation of a patient's mental status belongs in the:

- Question 5 1 out of 1 points
Mrs. Grace is a 58-year-old patient who has a diagnosis of pernicious anemia. Which B vitamin is deficient in patients with pernicious anemia?

- Question 6 1 out of 1 points
Which of the following organs is part of the alimentary tract?

- Question 7 1 out of 1 points
Mrs. Berger is a 39-year-old woman who presents with a complaint of epigastric abdominal pain. You have completed the inspection of the abdomen. What is your next step in the assessment process?

- Question 8 1 out of 1 points
Mrs. Tuber is a 36-year-old patient who comes into the health center with complaints that her fingernails are not growing. Which structure is the site of new nail growth?

- Question 9 1 out of 1 points
Mr. L. presents to the clinic with severe groin pain and a history of kidney stones. Mr. L.'s son tells you that, for religious reasons, his father wishes to keep any stone that is passed into the urine filter that he has been using. What is your most appropriate response?

- Question 10 1 out of 1 points The most superior part of the stomach is the:

- Question 11 1 out of 1 points
Before performing an abdominal examination, the examiner should:

- Question 12 1 out of 1 points

You are collecting a history from an 11-year-old girl. Her mother is sitting next to her in the examination room. When collecting history from older children or adolescents, they should be:

• Question 13 1 out of 1 points
Mr. Donalds is a 45-year-old roofer. Your inspection to determine color variations of the skin is best conducted:

• Question 14 0 out of 1 points
The review of systems is a component of the:

• Question 15 1 out of 1 points
Expected hair distribution changes in older adults include:

• Question 16 1 out of 1 points
During percussion, a dull tone is expected to be heard over:

• Question 17 1 out of 1 points
Mr. Akins is a 78-year-old patient who presents to the clinic with complaints of hearing loss. Which of the following are changes in hearing that occur in the elderly? Select all that apply.

•Question 18 1 out of 1 points
You are using an ophthalmoscope to examine a patient's inner eye. You rotate the lens selector clockwise, then counterclockwise to compensate for:

• Question 19 1 out of 1 points
Nuchal rigidity is most commonly associated with:

• Question 20 1 out of 1 points
Tympanic thermometers measure body temperature when a probe is placed:

• Question 21 1 out of 1 points
During an interview, you have the impression that a patient may be considering suicide.

ANOTHER

Question 56 0 out of 1 points
A tool used to screen adolescents for alcoholism is the:

• Question 57 1 out of 1 points
You are examining a pregnant patient and have noted a vascular lesion. When you blanche over the vascular lesion, the site blanches and refills evenly from the center outward. The nurse documents this lesion as a:

• Question 58 1 out of 1 points
Which question would be considered a leading question?

• Question 59 1 out of 1 points

Your patient presents with symptoms that lead you to suspect acute appendicitis. Which assessment finding is least likely to be associated with this condition early in its course?

- Question 60 1 out of 1 points

Before performing an abdominal examination, the examiner should:

- Question 61 1 out of 1 points

Which of the following formats would be used for visits that address problems not yet identified in the problem-oriented medical record (POMR)?

- Question 62 1 out of 1 points

Which statement is true regarding the relationship of physical characteristics and culture?

- Question 63 1 out of 1 points

Your patient is complaining of acute, intense sharp epigastric pain that radiates to the back and left scapula with nausea and vomiting. Based on this history, your prioritized physical examination should be to:

- Question 64 1 out of 1 points

Mrs. Raymonds is a 24-year-old patient who has presented for a routine concern over her current weight. In your patient teaching with her, you explain the importance of macronutrients. Which of the following is a macronutrient?

- Question 65 1 out of 1 points

Tangential lighting is best used for inspecting skin:

- Question 66 1 out of 1 points

Mr. Abdul is a 40-year-old Middle Eastern man who presents to the office for a first visit with the complaint of new abdominal pain. You are concerned about violating a cultural prohibition when you prepare to do his rectal examination. The best tactic would be to:

- Question 67 1 out of 1 points

When are open-ended questions generally most useful?

- Question 68 1 out of 1 points

Pigmented, raised, warty lesions over the face and trunk should be assessed by an experienced practitioner who can distinguish:

- Question 69 1 out of 1 points

Regardless of the origin, discharge is described by noting:

- Question 70 1 out of 1 points

When assessing abdominal pain in a college-age woman, one must include:

- Question 71 1 out of 1 points

A detailed description of the symptoms related to the chief complaint is presented in the:

• Question 72 1 out of 1 points
Mr. Mathews is a 47-year-old patient who presents for a routine physical examination. On examination, you have noted a bruit heard over the thyroid. This is suggestive of:

• Question 73 1 out of 1 points
Expected hair distribution changes in older adults include:

• Question 74 1 out of 1 points
To perform the Rinne test, place the tuning fork on the:

•Question 75 1 out of 1 points
Bulging of an amber tympanic membrane without mobility is most often associated with: •

Question 76 1 out of 1 points

ANOTHER

Question 11 2 out of 2 points
Which technique is commonly used to elicit tenderness arising from the liver, gallbladder, or kidneys?
Response Feedback: The fist percussion is a direct percussion technique used to elicit tenderness over organs such as the liver, gallbladder, or kidneys.

• Question 12 2 out of 2 points
A rubber or plastic ring should be around the bell end-piece of a stethoscope to:
Response Feedback: The ring around the bell portion of the stethoscope functions to secure contact with body surfaces when placed lightly on the skin.

• Question 13 2 out of 2 points
In terms of cultural communication differences, Americans are more likely to _____ than are other groups of patients.
Response Feedback: In the United States, individuals are very direct in conversation and come to the point quickly. They also tend to talk more loudly and to worry less about being overheard.

• Question 14 2 out of 2 points
For a woman with a small vaginal opening, the examiner should use a _____ speculum.
Response Feedback: The Pederson speculum has blades that are as long as those of the Graves speculum but are both narrower and flatter and therefore more comfortable for women with small vaginal openings. Pediatric or nasal speculums would be too small for adult use. Plastic speculums are similar in uses to the metal counterparts.

• Question 15 2 out of 2 points
During percussion, the downward snap of the striking fingers should originate from the:
Response Feedback: The dominant hand s middle finger strikes the stationary finger with a wrist motion and is lifted quickly off the striking surface.

- Question 16 2 out of 2 points

You are auscultating a patient s chest. The sounds are not clear, and you are having difficulty distinguishing between respirations and heartbeats. What technique can you use to facilitate your assessment?

Response Feedback If you are hearing everything at once, it is more difficult to distinguish different sounds. Try isolating each segment and: listen to that segment intently, then move on to another segment. For example, listen only to breath sounds, then only to inspiratory breath sounds, then only expiratory breath sounds.

- Question 17 2 out of 2 points

Expected normal percussion tones include:

Response Feedback: A normal lung produces resonance percussion tones while an empty stomach is expected to produce tympany. Dull percussion tones are heard over the liver.

- Question 18 2 out of 2 points

During auscultation, you can limit your perceptual field best by:

Response Feedback: By closing your eyes, your sense of hearing becomes more acute and it increases your ability to isolate sounds.

- Question 19 2 out of 2 points

Standard Precautions apply to all patients:

Response Feedback: Although all of the statements are true, the best answer is 4.

Want

ANOTHER

Question 84 1 out of 1 points

Fluorescing lesions are best distinguished using a(n):

- Question 85 1 out of 1 points

Mr. D. complains of a headache. During the history, he mentions his use of alcohol and illicit drugs. This information would most likely belong in the:

- Question 86 1 out of 1 points

You are using an ophthalmoscope to examine a patient's inner eye. You rotate the lens selector clockwise, then counterclockwise to compensate for:

- Question 87 1 out of 1 points Expected hair distribution changes in older adults include:

- Question 88 1 out of 1 points

Mr. Mathews is a 47-year-old patient who presents for a routine physical examination. On examination, you have noted a bruit heard over the thyroid. This is suggestive of:

- Question 89 1 out of 1 points

George Michaels, a 22-year-old patient, tells the nurse that he is here today to "check his allergies." He has been having "green nasal discharge" for the last 72 hours. How would the nurse document his reason for seeking care?

- Question 90 1 out of 1 points

Under normal circumstances, how much water is lost daily by the body?

- Question 91 1 out of 1 points

Mrs. Britton brings her 16-year-old son in with a complaint that he is not developing correctly into adolescence. Which structures disproportionately enlarge in the male during adolescence?

- Question 92 1 out of 1 points

When assessing abdominal pain in a college-age woman, one must include:

- Question 93 1 out of 1 points

During an interview, you have the impression that a patient may be considering suicide. Which action is essential?

- Question 94 1 out of 1 points

Nuchal rigidity is most commonly associated with:

- Question 95 1 out of 1 points

Placing the base of a vibrating tuning fork on the midline vertex of the patient's head is a test for:

- Question 96 1 out of 1 points

In counseling a client regarding nutrition education, you explain that linoleic acid, a major fatty acid, is thought to be essential for:

- Question 97 1 out of 1 points

Periods of silence during the interview can serve important purposes, such as:

- Question 98 1 out of 1 points

A 51-year-old woman calls with complaints of weight loss and constipation. She reports enlarged hemorrhoids and rectal bleeding. You advise her to:

- Question 99 1 out of 1 points

Mrs. Kinder is a 39-year-old patient who presents to the office with complaints of an earache. In explaining to the patient about the function of her ears, which ear structure would you tell her is responsible for equalizing atmospheric pressure when swallowing, sneezing, or yawning?

- Question 100 1 out of 1 points

Which of the following is the most accurate reflection of an individual's food intake?

- Question 101 1 out of 1 points

You are examining a pregnant patient and have noted a vascular lesion. When you blanche over the vascular lesion, the site blanches and refills evenly from the center outward. The nurse documents this lesion as a:

NURS 6512

Midterm Exam Review (Weeks 1-6)

Building A Complete Health History

1. Communication techniques used to obtain a patient's health history
    - Courtesy
        - Knock before entering a room
        - Address (first time) the patient formerly, such as Miss, Ms., Mrs. Mr. – can shake their hand(s)

        - Meet and acknowledge others in the room. Establish their role and degree of participation
        - Learn their names
        - Ensure confidentiality
        - Give them your undivided attention – take some time – don't rush out
        - Take minimal notes – use keywords. Observe and listen
        - Respect the need for modesty
        - Allow the patient time to change back into street clothes before resuming conversation
    - Comfort
        - Ensure everyone is comfortable (including yourself)
        - Maintain close, but comfortable proximity with patient
        - Maintain privacy. Pull curtains and shades as applicable
        - Ensure comfortable room temperature. Provide blanket if needed
        - Ensure good lighting
        - Ensure quiet surrounding
        - Pace interview. If necessary, prioritize and complete at another visit
    - Connection
        - Look at patient, maintain good eye contact (if culture allows)
        - Watch your language (don't use technical jargon & don't patronize)
        - Don't dominate the discussion (listen closely & allow patient to prioritize issues)
        - Keep an open mind – don't accept previous diagnosis as a chief complaint
        - Inquire if patient turned away from another provider to come to you
        - Take history and complete physical exam before looking at previous tests
            - Consider first what the patient has to say
        - Avoid leading or direct questions in the beginning
            - Use open-ended questions.
            - Let the specifics evolve
        - Avoid being judgmental
        - Respect silence – pauses can be productive

        - Be flexible
        - Assess the patient's potential as a partner in their care
        - Seek clues to problems from patient's verbal behavior and body language (talking too fast or too little)
        - Look for hidden concerns underlying chief concern
        - Never trivialize any finding or clue
        - Problems can have multiple causes – do not leap to one cause too quickly
        - Define any concern completely: LOCATES, OLDCARTS
    - Confirmation
        - Ask patient to summarize the discussion (should be a clear understanding)
        - Allow the possibility of more discussion with another open-ended question ("Anything else you would like to bring up?")
        - If there is a question that you cannot immediately answer – say so & follow up later if possible
        - If you have made a mistake, make every effort to repair it.
            - Candor is important for the development of a trusting partnership.
        - Most patients respect it.
2. Recording and documenting patient information
    - Illustrations – sometimes can be a better description
    - POMR – problem oriented medical record
        - Comprehensive health history
            - Chronological order
            - HPI - OLDCARTS
        - Complete physical examination
        - Problem list
        - Assessment/plan
        - Baseline & problem directed labs/radiology
        - Progress notes

3. SOAP note documentation
    - Subjective data
        - Told to you by patient
    - Objective data
        - What you see
    - Assessment
        - Interpretations/conclusion – rational
        - Diagnostic strategy
        - Present and anticipated problems
        - Ongoing and future care

- Plan
  - What you intend to do
  - Specific for each problem
  - Includes: diagnostics/therapeutics/patient education

4. Subjective vs objective information when documenting
   - Subjective – information from the individual's point of view (symptoms); may include feelings, perceptions, and concerns
   - Objective – observable and measurable information obtained through observation, physical examination, and laboratory and diagnostic testing
5. Ethical decision making and beneficence
   - Beneficence – promoting/doing good

Diversity and Health Assessments

6. Cultural awareness and diversity
   - Culture – reflects the whole of human behavior, including ideas and attitudes; ways of relating to one another; manners of speaking; and the material products of physical effort, ingenuity, and imagination
   - Physical characteristics – gender, race, phenotypic traits
   - Minimize stereotyping and prejudice to achieve cultural competence
   - Cultural competence – Knowledge of cultural encounters, desire, awareness, knowledge, and skill
   - For ethnic minorities, assess social context through inquiry of stressors, support networks, sense of life control, and literacy
   - Be sensitive to a patient's heritage, sexual orientation, socioeconomic status, ethnicity, and cultural background
7. Socioeconomic, spiritual, and lifestyle factors affecting diverse populations
   - Disease is shaped by illness and illness is shaped by the totality of the patient's experience
   - Definition of ill or sick is based on the patient's belief system and is determined by their enculturation
8. Functional assessments
   - Beliefs and behaviors that will have an impact on patient assessment include:
     - Mode of communication – speech, body language, space
       - In the US, people talk more loudly while the English worry about being overheard and are more modulated
       - In US – people are direct in conversation and prefer to avoid the subject and to come to the point quickly while the Japanese do the opposite, using indirection and talking around points, and emphasizing attitudes and feelings

        - Silence allows those who are Native American to think and a response should not be forced; allow for quiet time
        - Firm eye contact is evident in the Spanish and French while Asian and Middle Eastern cultures believe it is a sign of disrespect.
    - Health beliefs and practices that may vary from your own
        - Naturalistic or holistic approach believes that external factors must be kept in balance to remain well
        - Balance of hot and cold is a belief of Asians, Middle Eastern, Hispanics, and Native Americans
        - Treat condition with the opposite to restore balance
    - Diet and nutritional practices
        - Orthodox Jewish will not take some medicines, particularly during holiday period like Passover
        - Muslims must respect Halal
        - Chinese patient with HTN and salt-restricted diet may need to limit MSG and soy sauce
        - Dietary supplements containing ephedra alkaloids mat increase risk of stroke, whereas other herbal preparations interact with prescribed medicines
    - The nature of relationships within a family
        - Be aware of the sequence of related behaviors because it may be unrelated to the integrity of the family structure, gender, or background
        - Parenting style of child-rearing practices like setting boundaries and expectations may be culturally driven

Assessment Tools and Diagnostic Tests in Adults and Children

9. Growth, Development, and Measurements in children and adults
   General
    - Growth Hormone: stimulates the pituitary to release the growth hormone.
    - Somatostatin inhibits the secretions of the growth hormone and thyroid stimulating hormone.
    - Growth hormone promotes growth, increase in organ size, regulates car, protein and lipid metabolism.
    - Thyroid hormone stimulates growth hormone secretion and production of insulin like growth factor-plays an important role in bone formation and resorption.
    - 70% of growth occurs during sleep.
    - At 34 weeks gestation, 65% of the weight of the newborns brain is present.
    - By 3 years old, most brain growth is complete.

- Lymphatic tissues: reach adult size at age 6, double at 10-12 years of age, then decrease back to adult size during adolescence.

Infants and Children

- Legs are the fastest growing body part during childhood.
- Fat tissue increases slowly until 7 years old, then pre-pubertal fat spurt occurs before the true growth spurt.
- In adolescence, 50% of the individual weight is gain, and skeletal mass and organ sytm double in size.
- Sexual Maturation in girls: early 7, late 12
- Sexual Maturation in boys: early 9, late 14

Older adults

- Physical stature declines beginning at age 50.
- Age 60 and over will have a decrease in weight for height and BMI, and approximately 5% body weight loss over several years.
- Older adults will see an increase in body fat, and skeletal muscle loss due to decrease in exercise.
- May see a decrease in size and weight of organs such as liver, kidney, lung.
- In the last 15 years, there has been an increase in obese older adults.

Pregnant Adults

- Fetus accounts for 6-8 pounds of total weight gained, the other is due to an increase in maternal tissues.
    - Fluid volume: 2-3 pounds
    - Blood volume: 3-4 pounds
    - Breast enlargement: 1-2 pounds
    - Uterine enlargement: 2 pounds
    - Amniotic fluid: 2 pounds
    - Maternal fat and protein stores: 4-6 pounds
- Weight gain slow during first trimester, rapid during second and third, fetal growth accounts for most weight gained during third trimester
- Inadequate weight gain=increased risk for low birth weight infant

BMI

- Most common method used to assess nutritional status and total body fat.
    - Undernutrition: less than 18.5
    - Appropriate: 18.5-24.9
    - Overweight: 25-29.9
    - Obese: 30-39.9
    - Extreme obesity: 40 and higher

Infant Measurements

- Health baby length: 18-22 inches
- Weigh the baby to the nearest 10 g
- Average variations in birth weight (5lbs 8oz to 8lbs 13oz) =2500-4000g
- Infants double their birth weight by 4-5months and triple by 12 months
- Head circumference: measure nearest 0.5cm or ¼ inch; wrap tape around occipital protuberance and the supraorbital prominence
- Normal newborn head circumference: 32.5-37.5 cm

- Chest circumference: used when problem is suspected; measure midway between inspiration and expiration to the nearest 0.5cm or ¼ inch; wrap at nipple line; at 5mths-2 years the chest and head are close to same size, and after 2 years, the chest exceeds the head circumference.

10. Nutritional assessment to include recommended water intake and energy requirements
    - Assess the patient's nutritional status including:
        - Recent growth, weight loss, weight gain
        - Chronic illnesses
        - Medication and supplement
        - Nutrition screen
        - Assessment of nutrition intake
    - **Water**: most vital nutrient, body is approximately 55-65% water
        - Functions as: providing turgor, altering dissolved substances, transporting dissolved nutrients and waste, maintaining stable temperature.
        - Approximately 2-2.5 liters are lost daily.
    - **Energy requirements**: includes used at rest, energy used in physical activity, and energy used as a result of thermogenesis. Affecting these are: age, gender, body size, composition, genetics and physiologic state, disease and temperature.

11. Macronutrients vs Micronutrients

Macronutrients

- Includes: carbohydrates, protein and fat
    - Carbohydrate: main source of energy (4 calories/ gram)
        - Serve major functions in vital organs: liver, heart, central nervous system
        - Recommended daily intake: 45-65% of total calories (130g = adults)
    - Protein major functions: build and maintain tissue, regulate water and acid base balance, precursor for enzymes, antibodies and hormones (4 calories/gram)
        - Recommended protein intake of diet 10-35% of total calories (46g women, 56 g men)
    - Fat: memory storage, energy metabolism, absorption of fat-soluble vitamins. (9 calories/gram)
        - Recommended fat intake of diet 20-35% of total calories

Micronutrients

- Vitamins, minerals, electrolytes

12. Significance of a food diary
    - Provides a retrospective view of an individual's eating habits and dietary intake, recorded as it happened
    - Collects relevant data that may aid in identifying problem areas
13. BMI measurements for normal, overweight, obesity, morbid obesity
    - Normal – 18.5 to 24.9
    - Overweight – 25 to 29.9
    - Obesity – 30 to 39.9
    - Morbid obesity – 40 and higher
14. Pernicious Anemia
    - B12 deficiency is usually the result of impaired B12 uptake caused by lack of intrinsic factor that is caused by a loss of parietal cells in the stomach lining.
    - The loss of these cells can be caused by partial or full gastrectomy, Crohn's disease, autoimmune disorders such as DMI and immunocompromised disease such as HIV.
    - A smooth red tongue with a slick appearance may indicate NIACIN or Vitamin B12 deficiency.
15. Examination techniques and equipment
    - **Inspection** – used throughout physical exam and interview process
    - **Palpation** – gathering information through touch
    - **Auscultation** – carried out last except when examining kidney or abdomen. Used to listen to sounds produced by the body
    - **Fist –** use for indirect finger percussion by striking the middle finger of the nondominant hand
    - **Deep abdominal palpation** of the kidney used to assess tenderness over the kidney.
    - **Ulnar surface of the hand** used to palpate mass in the skin
    - **Dorsal surface of the hand** – sensitive to vibration
    - Percussion Tone expected
        - Stomach – tympanic
        - Sternum – flat
        - Liver – dull
        - Lung of a patient with pneumonia – dull

        - Abdomen with lung tumor – Dull
16. Diagnostic Assessment tools and tests to include tuning forks, BP monitoring, use of stethoscope, otoscope, ophthalmoscope
    - Weight scales and height measurement devices – always observe what patient is wearing and calibrate the scale each time to ensure accuracy
    - Thermometer – tympanic thermometers are best in children ages 2 months to 16 years; infrared axillary thermometers for neonates
    - Stethoscope – for auscultation; three basic types are acoustic (most common), magnetic, and electronic
    - Sphygmomanometer – manual BP requires stethoscope and sphygmomanometer; electronic sphygmomanometer also available (no stethoscope required) and works by sensing vibrations and converting them into electric impulses
    - Pulse oximeter – measures the percentage of hemoglobin saturated with oxygen (oxyhemoglobin); adult/pediatric sites are finger, toes, pinna (top) or lobe of the ear; infant sites are the foot, palm of the hand, big toe, or thumb
    - Doppler – should be used when there is difficulty auscultating with regular stethoscope; they are ultrasonic stethoscopes that detect blood flow; used to detect systolic BPs, auscultate fetal heart activity, locate vessels, take weak pulses, assess vessel patency, localize acute and chronic arterial occlusions, assess DVTs and valvular incompetency, and assess testicular torsion and varicocele
    - Portable ultrasound – ultrasound waves pass through fluids and soft tissue; helpful in assessing fluid-filled organs (bladder) and soft organs (gallbladder and liver); shows the structure and movement of organs, blood flow through vessels, and abnormalities (cysts, tumors, and infections); aids in clinical procedures (pleural effusions, abscesses, and biopsies)
    - Fetal monitoring equipment – fetal heart rate determined by using fetoscope and Leff scope, a stethoscope, or an electronic instrument that uses doppler
    - Ophthalmoscope – enables visualization of the interior structures of the eye; numbers on the instrument correspond to the magnification power
    - PanOptic Ophthalmoscope – uses and optical design that allows a large field of view
    - StrabismoScope – used for detecting strabismus (eye misalignment) and can be used as part of eye testing in children
    - Photoscreening – used to detect amblyopia (lazy eye) and strabismus in children through the use of camera or video to obtain images of pupillary reflexes and red reflexes
    - Visual acuity charts – Snellen Alphabet (screening exam of far vision for literate, verbal, and English-speaking adults and school-aged children), Tumbling E (nonalphabet version of Snellen chart; has the letter “E” facing in different

directions), HOTV (wall chart composed only of H's, O's, T's, and V's; child must match the letter on the wall chart to the testing board), LEA Symbols (consists of four optotypes – circle, square, apple, house – that blur equally and child must match), and lastly Broken Wheel Cards (picture cards where child must identify the cards with broken wheels on the car)

- Near vision charts – can use a designed chart (Rosenbaum or Jaeger) or simply newsprint
- Amsler grid – used to test those at risk for macular degeneration
- Otoscope – provides illumination for examining the external auditory canal and tympanic membrane; can also be used for nasal examination
- Tympanometer – simple and reliable way of assessing the functions of the ossiscular chain, eustachian tube, and tympanic membrane
- Nasal speculum – used with a penlight to visualize the lower and middle turbinates of the nose
- Tuning fork – used in screening tests for auditory function and for vibratory sensation as part of the neuro exam
- Percussion (reflex hammer) – used to test deep tendon reflexes
- Neurologic hammer – variant of the reflex hammer; also used for testing deep tendon reflexes
- Tape measure – used for determining circumference, length, and diameter
- Transilluminator – consists of a strong light source with a narrow beam; beam is directed to a body cavity to determine media present in the cavity (fluid in the sinuses or blood in the scrotum)
- Vaginal speculum – two blades and a handle; three types (Graves, Pederson, and Pediatric/Virginal)
- Goniometer – used to determine the degree of joint flexion and extensions
- Wood's Lamp – contains a light source that aids in determining the presence of fungi on skin lesions
- Dermatoscope – a skin surface microscope that uses epiluminescence microscopy (ELM) to illuminate and magnify a skin lesion to allow for a more detailed inspection
- Calipers for Skinfold Thickness – measure the thickness of subcutaneous tissue at certain points of the body
- Monofilament – designed to test for loss of protective sensation, particularly on the plantar surface of the foot
- Scoliometer – measures the degree of rotation of the spine to screen for scoliosis

Assessment of the Skin, Hair, and Nails

17. Skin lesion characteristics
    - Skin lesion – general term that collectively describes any pathologic skin change or occurrence
        - May be primary or secondary
    - Lesions should be described according to characteristics, exudates, configuration, and location and distribution
        - Macule – flat, circumscribed area that is a change in the color of the skin; <1 cm in diameter (freckles, measles, petechiae, flat moles)
        - Papule – elevated, firm, circumscribed area; <1 cm in diameter (wart, elevate mole)
        - Patch – flat, nonpalpable, irregularly-shaped macule >1 cm in diameter (vitiligo, Mongolian spots, port-wine stains)
        - Plaque – elevated, firm, and rough lesion with flat top surface >1 cm in diameter (psoriasis, actinic keratoses)
        - Wheat – elevated, irregular-shaped area of cutaneous edema; solid, transient, variable diameter (insect bites, urticaria, allergic reaction)
        - Nodule – elevated, firm, circumscribed lesion; deeper in dermis than a papule; 1-2 cm in diameter (erythema nodosum, lipoma)
        - Tumor – elevated and solid lesion; may or may not be clearly demarcated; deeper in dermis; >2 cm in diameter (neoplasms, benign tumor, lipoma)
        - Vesicle – elevated, circumscribed, superficial, not into dermis; filled with serous fluid; <1 cm in diameter (varicella, herpes zoster)
        - Bulla – vesicle >1 cm in diameter (blister)
        - Pustule – elevated, superficial lesion; similar to a vesicle but filled with purulent fluid (impetigo, acne)
        - Cyst – elevated, circumscribed, encapsulated lesion; in dermis or subcutaneous layer; filled with liquid or semisolid material (sebaceous cyst, cystic acne)
        - Telangiectasia – fine, irregular, red line produced by capillary dilation (rosacea)
        - Scale – heaped-up, keratinized cells; flaky skin; irregular; thick or thin; dry or oily; variation in size (flaking of skin from dermatitis or drug reaction; dry skin)
        - Lichenification – rough, thicken epidermis secondary to persistent rubbing, itching, or skin irritation; often involves flexor surfaces of extremity (chronic dermatitis)
        - Keloid – irregularly shaped, elevated, progressively enlarging scar; grows beyond the boundaries of the wound; caused by excessive collagen formation during healing (keloid formation following surgery)
        - Scar – thin to thick fibrous tissue that replaces normal skin following injury or laceration to the dermis (heated wound or surgical incision)
        - Excoriation – loss of the epidermis; linear hollowed-out, crusted area (abrasion or scratch, scabies)
        - Fissure – linear crack or break from the epidermis to the dermis; may be moist or dry (athlete’s foot, cracks at the corner of mouth)

        - Erosion – loss of part of the epidermis; depressed, moist, glistening; follows rupture of a vesicle or bulla (varicella, variola after rupture)
        - Ulcer – loss of epidermis and dermis; concave; varies in size (decubiti, stasis ulcers)
        - Crust – dried serum, blood, or purulent exudates; slightly elevated; size varies; brown, red, black, tan, or straw-colored (scab on abrasion, eczema)
        - Atrophy – thinning of skin surface and los of skin markings; skin translucent and paper-like (striae, aged skin)

18. Documenting skin lesions using "ABCD" rule
    - To document changes in moles
    - A – asymmetry
    - B – border
    - C – color
    - D – diameter
19. Anatomy and physiology of skin layers
    - Epidermis
        - Outermost portion of skin
        - Two layers:
            - Stratum corneum – protects body against harmful environmental substances & restricts water loss
                - Closely packed, dead squamous cells that contain keratin – form the protective barriers
            - Cellular stratum – where keratin cells are synthesized
                - Stratum germinativum (deepest layer of cellular stratum) – where keratin cells are formed; also contains melanocytes
                - Stratum lucidum – present only in thicker skin (palms & soles)
        - Avascular and depends on dermis for nutrition
    - Dermis
        - Richly vascular connective tissue layer of skin that supports and separates the epidermis from the cutaneous adipose tissue
        - Elastin, collagen, reticulum fibers, sensory nerve fibers, and autonomic motor nerves
    - Hypodermis
        - Subcutaneous layer that consists of loose connective tissue filled with fatty cells
        - Generates heat & provides insulation, shock absorption, & a reserve of calories
    - Appendages
        - Epidermis invaginates into the dermis at various points to form appendages:
            - Eccrine sweat glands, apocrine sweat glands, sebaceous glands, hair, and nails
20. Abnormal nail findings in older adults

- Nail growth slows because of decreased peripheral circulation. The nails, particularly the toenails, become thicker, brittle, hard and yellowish. They develop longitudinal ridges and are prone to splitting into layers.

21. Psoriatic skin lesions
    - Multifactorial origin with genetic component and immune regulation. Characterized by increased epidermal cells turnover, increased number of epidermal stem cells, and abnormal differentiation of keratin expression leading to thickened skin with copious scale.
    - May have puritis
    - Well-circumscribed, dry silvery, scaling papules and plaques
    - Lesions commonly occur in the back, buttocks, extensor surfaces of the extremities, and the scalp.
    - Can be associated with psoriatic arthritis in up to 30% of patients.
22. Vesicular skin characteristics
    - Elevated, circumscribed, superficial, not into dermis
    - Filled with serous fluid, less than 1cm in diameter – chicken pox, shingles
    - Vesicle greater than 1cm is called a bullae – blister, pemphigus vulgaris
23. Normal vs abnormal hair distribution during aging
    - Normal:
        - Adolescent – increase in hair oiliness; hair on the extremities darkens and becomes coarser; pubic and axillary hair in both males and females develops and assumes adult characteristics; males develop facial and chest hair that varies in quantity and coarseness
        - Pregnant women – hair growth is altered during pregnancy due to circulating hormones; the growing phase of their hair is lengthened, and hair loss is decreased; 2-4 months after delivery increased hair shedding occurs; regrowth of hair occurs 6-12 months
        - Older adults – hair turns gray or white as melanocytes cease functioning; head, body, pubic, and axillary hair thins and becomes sparse and drier; men may show an increase in coarse aural, nasal, and eyebrow hair; women tend to develop coarse facial hair; symmetric balding (usually frontal or occipital) often occurs in men
    - Abnormal:
        - Bald spots in children and infants – typically ringworm of the scalp (tinea capitis, alopecia areata, or trichotillomania (compulsive hair-pulling); infants who sleep on their backs can develop areas of alopecia from pressure of occiput
        - Alopecia areata – sudden, rapid, patchy loss of hair (usually from the scalp or face); unknown cause
        - Scarring alopecia – replacement of hair follicles with scar tissue; causes by skin disorders of the scalp or follicles that result in scarring

- Traction alopecia – hair loss that is the result of prolonged, tightly pulled hairstyles; follicle is not damaged, and the loss is reversible
- Hirsutism – growth of terminal hair in women in the male distribution pattern on the face, body, and pubic areas; caused by high androgen levels or hair follicles that are more sensitive to normal androgen levels

24. Characteristics of hair distribution
    - Like much of the hair on the human body, leg, arm, chest, and back hair begin as vellus hair. As people age, the hair in these regions will often begin to grow darker and more abundantly. This will typically happen during or after puberty
        - Men – abundant, coarser hair on the arms and back
        - Women – less drastic change in hair growth in arms and back but have significant change in thickness of hairs
    - **Chest and Abdomen**
        - Vellus hair grows on the chest and abdomen of both sexes at all stages of development
        - Puberty to adulthood – males grow increasing amounts of terminal hair over the chest and abdomen areas
            - Women can grow terminal hairs around areola
    - **Arms**
        - Grows on forearms
        - Terminal arm hair – concentrated on the wrist end of the forearm, extending over the hand
            - Males – much more intense than in females (especially with dark hair)
        - Vellus arm hair – seen on elbow end of the forearm and ends on the lower part of the upper arm
            - Women **–** looks hairy but it is softer and different compared to men’s arm hair
    - **Feet**
        - Visible hair on the top surfaces of feet and toes that begins with the onset of puberty
        - More intense in adult and adolescent males than in females
    - **Legs**
        - Appears at the onset of adulthood, with legs of men more often hairier than those of women
    - **Pubic**
        - Collection of coarse hair found in the pubic region, thighs, and abdomen
        - Thick pubic hair acts as a cushion during intercourse
        - The gential area of males and females are first inhabited by shorter, lighter vellus hairs that are next to invisible and only begin to develop into darker, thicker pubic hair at puberty
    - **Armpits**
        - Underarm hair starts at the beginning of puberty and ends during the teenage years
        - Thin fine hairs

- **Facial**
  - Grows around one's face
  - Non-vellus facial hair will begin to grow around puberty
    - Men – facial hair begins to grow around the age of puberty, although some men may not grow a moustache until they reach late teens or not at all
    - Women – develop a few facial hairs under or around the chin, along the sides of the face (in the area of sideburns), or on the upper lip.

Assessment of Head, Neck, Eyes, Ears, Nose, and Throat

25. Cranial Nerves associated with the HEENT system

Nerve	Test	Abnormal Findings	Possible Causes
I: Olfactory	Identify familiar odors	Anosmia	Upper respiratory infection (temporary); tobacco or cocai

Nerve	Test	Abnormal Findings	Possible Causes
			neuse; fracture of cribriform plate or ethmoid area; frontal lobe lesion; tumor in olfactor

Nerve	Test	Abnormal Findings	Possible Causes
			y bu lb or tra ct
II: Optic	Visual acuity	Defect in or absent central vision	Congenital blindness; refractive error; acquired vision loss from numerous
	Visual fields	Defect in peripheral vision, hemianopsia	
	Shin	A	

Nerve	Test	Abnormal Findings	Possible Causes
	e light in eye	bsent light reflex	diseases (e.g., stroke, diabetes); trauma to
	Direct	Papil	Incr

Nerve	Test	Abnormal Findings	Possible Causes
	inspection	ledema Optic atrophy Retinal lesions	eased intracranial pressure; glaucoma; diabetes
III: Oculomotor	Inspection	Dilated pupil, ptosis, eye turns out an	Paralysis in CN III from internal carot

Nerve	Test	Abnormal Findings	Possible Causes
		dslightlydown	idaneurysm; tumor; inflammatory lesions; uncal herniation with increased intracranial

Nerve	Test	Abnormal Findings	Possible Causes
			pressure
	Extraocular muscle movement	Failure to move eye up, in, down	Ptosis from myasthenia gravis; oculomotor nerve palsy; Horner syndrom

Nerve	Test	Abnormal Findings	Possible Causes
			e
	Shine light in eye	Absent light reflex	Blindness; drug influence; increased intracranial pressure; CNS injury; circulatory

Nerve	Test	Abnormal Findings	Possible Causes
			arrest; CNS syphilis
IV: Trochlear	Extraocular muscle movement	Failure to turn eye down or out	Fracture of orbit; brainstem tumor
V: Trigemina	Superficial touch—three divisions	Absent touch and pain,	Trauma; tumor; pressure

Nerve	Test	Abnormal Findings	Possible Causes
l		paresthesias	from aneurysm; inflammation; sequelae of alcohol injection for trigeminal neuralgia
	Corneal reflex	No blink	

Nerve	Test	Abnormal Findings	Possible Causes
	Clench teeth	Weakness of masseter or temporalis muscles	Unilateral weakness with CNV lesion; bilateral weakness with UMN or LMN disorder
V	Extr	Fa	Br

Nerve	Test	Abnormal Findings	Possible Causes
I: Abducens	aocular muscle movement to right and left sides	ilure to move laterally, dipl opia on lateral gaze	ainst em tu mor or trau ma; fra ctur e of or bit
VII: Facial	Wrinkle forehead, close eyes tightly	Absent or asymmetric facial move	Bell palsy (LMN lesion) causes paralysis

Nerve	Test	Abnormal Findings	Possible Causes
		ment	of entire half of face
	Smile, puff cheeks Identify tastes	Loss of taste	UMN lesions (stroke, tumor, inflammatory) cause paralysis of lo

Nerve	Test	Abnormal Findings	Possible Causes
			wer half of face, leaving forehead intact; other LMN causes of paralysis: swelling from

Nerve	Test	Abnormal Findings	Possible Causes
			earormeningealinfections
VIII: Acoustic	Hearing acuity	Decrease or loss of hearing	Inflammation; occluded ear canal; otosclerosis; presby

Nerve	Test	Abnormal Findings	Possible Causes
			cusis; drug toxicity; tumor
IX: Glossopharyngeal	Gag reflex	See CNX	
X: Vagu	Phonates “ahh”	Uvula deviate	Brainstem tu

Nerve	Test	Abnormal Findings	Possible Causes
s		s to side	mor; neck injury; CN X lesion
	Gag reflex	No gag reflex	Vocal cord weakness
	Note voice quality	Hoarse or brassy Nasal twang Husky	Soft palate weakness Unilateral CN X

Nerve	Test	Abnormal Findings	Possible Causes
			lesion
	Note swallowing	Dysphagia, fluids regurgitate through nose	Bilateral CN X lesion
XI: Spinal accessor	Turn head, shrug shoulders against resistance	Absent movement of sternomastoi	Neck injury, torticollis

Nerve	Test	Abnormal Findings	Possible Causes
y		d or trapezius muscles	
XI: Spinal accessory	Turn head, shrug shoulders against resistance	Absent movement of sternomastoid or trapezius muscles	Neck injury, torticollis

Nerve	Test	Abnormal Findings	Possible Causes
XII: Hypoglossal	Protrude tongue Wiggle tongue from side to side	Deviates to side Slowed rate of movement	LMN lesion Bilateral UMN lesion

26. Normal assessment findings of an adolescent's nose and throat (Same as Adult)

- Nasal mucosa should glisten and appear deep pink
- A film of clear discharge is often apparent on the nasal septum
  - Purulent drainage may indicate: respiratory infection, sinusitis, or foreign body
- Hairs may be present in the vestibule.
- Turbinates are parallel curbed bony structures covered by vascular mucous membrane that form the lateral walls of the nose and protrude into the nasal cavity. They increase the nasal surface area to warm, humidify, and filter the air.
  - Inferior meatus drains the nasolacrimal duct, the medial meatus drains the paranasal sinus, and the superior meatus drains the posterior ethmoid sinus.

        - They are firm and the same color as the surrounding area.
        - Turbinates with bluish-gray or pale pink with a swollen, boggy consistency may indicate allergies
        - Rounded, elongated masses projecting into the nasal cavity from the boggy mucosa may be a polyp
    - Nasal septum close to midline and fairly straight with the anterior septum thicker than the posterior septum
        - Deviation may be indicated by the asymmetric size of the posterior nasal cavities
    - Sense of smell (CN1) tested with different odors.
    - Sinuses: Only the maxillary and frontal sinuses are accessible for physical examination
        - Frontal sinuses: use thumbs to press up under the bony brown on each side of the nose. Press up under the zygomatic processes, use either thumbs or index and middle fingers to palpate the maxillary sinuses: Expect no tenderness or swelling over the soft tissue: if present there may indicate infection or obstruction.
        - Use transillumination if swelling or tenderness present: Glow is expected, opaque (no transillumination): secretions or never developed, dull (reduced transillumination).
    - Throat:
        - Tonsils are usually the same pink color of the pharynx and are expected to fit in within the tonsillar pillars.
        - May have crypts where cellular debris and food particles collect
        - Reddened, hypertrophied, and covered with exudate, an infection may be present.
        - Pharnyx posterior wall should be smooth, glistening, pink mucosa with some small, irregular spots of lymphatic tissue and small blood vessels.
        - A red bulge adjacent to the tonsil and extending beyond the midline may indicate a peritonsillar abscess.
        - A yellowish mucoid film in the pharynx is typical of postnasal drip
        - Gag response: touch the posterior wall of the pharynx- tests glossopharyngeal and vagus nerve (CN IX and X)

27. Normal examination findings of an infant’s fontanelles

- The seven cranial bones are soft and separated by the sagittal, coronal, and lambdoid sutures.
- The anterior and posterior fontanels are formed where the four cranial bones meet and intersect.
- Ossification of the sutures begins after completion of brain growth at about 6 years of age and finished by adulthood.
- Posterior fontanel usually closes by 2 months, and the anterior fontanel closes by 12-15 months.
- Suture lines feel ridgelike until about 6 months of age, after which they are no longer palpable.
- Anterior fontanel less than 6 months should not exceed 4-5 cm and should get progressively smaller beyond that age until closing at 12-15 months.
- Palpate anterior fontanel for bulging or depressions: it should feel slightly depressed, and some pulsation is expected. If the child is tense or crying the fontanel may protrude above the bone level.
- A bulging fontanel with marked pulsations may indicate increased intracranial pressure from a space-occupying mass or meningitis

28. Examination findings of a patient with hypothyroid and hyperthyroid
    - To assess the thyroid gland:
        - Neck swelling, pain, difficulty or pain with swallowing, redness
        - Temperature intolerance, mood and energy changes
        - Changes in hair texture, skin or nails
        - Thyroid gland should move with swallowing
    - **Hypothyroid**
        - Cold intolerance, puffiness and weight gain and swelling, coarse dry pale skin, fatigue, decreased appetite, hair loss or brittle dry hair, decreased sweating, hoarseness, goiter, bradycardia and hypotension (decrease SBP, and increased DBP), myxedema, hyporeflexia, constipation
        - **EVERYTHING IS SLOWED**
    - **Hyperthyroid**
        - Bulging eyes as if staring with eyelid lag, increased sweating, heat intolerance, skin moist hot and smooth, hand tremors, weight loss with increased appetite, increased heart rate or A fib, HTN (SBP with wide pulse pressure, oligomenorrhea, diarrhea
        - Graves disease
        - **EVERYTHING IS EXCELERATED**
29. Techniques for examining the HEENT systems
    - Palpate and inspect skull; note hair color, texture, and mount; look for lesions, bumps, and trauma
    - Palpate sinuses (frontal and maxillary) for tenderness

- Note symmetry of head, eyes, nose, and mouth
- Lymph node assessment – palpate and note pain
- Palpate thyroid gland, note size
- Listen to carotid arteries for bruits
- Note any drainage from the eyes or nose
- Note eye color and sclera color

30. Examination findings for a patient with sinus symptoms
    - Frontal and maxillary sinus tenderness
    - Headache
    - Nasal mucosal erythema and edema
    - Nasal polyps
    - Nasal drainage or congestion (note color and consistency for infection, pus, thick green or yellow drainage)
    - Postnasal drip
    - Deviated septum
    - Blockage
    - Conjunctiva color, redness
    - Eye tearing
    - Cough
    - Fever (infection)
31. Appropriate tuning fork frequencies to approximate vocal frequencies

    For vibratory sensation evaluation
    - Lower frequency fork for vibratory sensation (should occur between 100 and 400 Hz)

    For auditory evaluation
    - **Weber Test-** compares hearing by bone conduction with that by air conduction.
        - Assesses unilateral hearing loss
            - Place tuning fork midline of patient's head (ask if sound is heard equally in both ears or is better in one)
    - **Rinne Test-** distinguishes whether the patient hears better by air or bone conduction
        - Rinne Positive when Air conduction heard longer than bone conduction by 2:1 ratio
        - Rinne Negative when bone conduction heard longer than air conduction in affected ear
            - Place base of vibrating tuning fork against patient's mastoid and ask the patient to tell when the sound is no longer heard.
            - Then, quickly place the still vibrating tines 1-2cm from the auditory canal and ask the patient to tell when the sound is no longer heard.
            - Compare the number of seconds sound is heard by bone conduction versus air conduction.
32. Examining the oral mucosa

    Lips

- Mouth closed, inspect/palpate lip for symmetry, color, edema (angioedema or infection), surface abnormalities.
    - Deep fissures of the at corners of mouth (cheilosis) may indicate riboflavin deficiency or overclosure of mouth
    - Pallor could indicate anemia; cyanosis could be hypoxia.

Buccal Mucosa, Teeth, Gums

- Ask patient to smile to assess cranial nerve VII and to visualize any occlusions (overbite, cross-bite, open bite) of teeth.
- Use tongue blade inspect buccal mucosa, gums, teeth (should be pinkish red, smooth, and moist).
- Gingivae are expected to be coral pink in whites and may be hyperpigmented in other races. Should not have any inflammation or swelling.
- Palpate gums for lesions, induration, thickening, or masses.
- Inspect and count teeth

Oral Cavity

- Inspect the dorsum of the tongue (note any swelling, color change, variation in size, coating or ulcerations.
- The tongue should be red/pink, moist, and glistening
- Ask patient to touch tongue tip to palate to inspect the floor of the mouth and the ventral surface of the tongue
- Palpate tongue for lumps, nodules, or ulceration.
- Tilt patient head back to inspect palate and uvula.

Oropharynx

- Inspect oropharynx using tongue blade observe tonsillar pillars, note size of tonsils (if present), and the integrity of the retropharyngeal wall

33. Hearing loss findings when examining the elderly patient
    - Age-related hearing loss Is associated with degeneration of hair cells in the organ Corti, loss of cortical and organ of Corti neurons, degeneration of cochlear conductive membrane, and decreased vascularity in the cochlea.
    - Sensorineural hearing loss first occurs with high frequency sounds and interferes with understanding of speech and localization of sound.
    - Conductive hearing loss may result from excess deposition of bone cells along the ossicle chain.
34. Examination techniques used to examine the trachea and thyroid

Physical exam:

- Inspection of neck
- Palpation of paratracheal area
- Palpation of lateral neck
- Pulse rate
- Looking for: exophthalmos, hoarseness of voice, distant mass

Examination techniques:

- Trachea: hyoid bone, thyroid cartilage (adams apple), cricoid cartilage
    - Inspect then Palpate trachea with thumb along each side (sternocleidomastoid muscle on each side)

        - A tugging sensation, synchronous with the pulse is evidence of tracheal tug sign (Cardarelli sign or Oliver sign) suggesting an aortic aneurysm
    - Thyroid: extend neck, have the patient take a sip of water
        - *The estimation of thyroid size by lateral inspection is the most sensitive test for determining the presence of a goiter
        - FRONT: place thumb over trachea 3 cm beneath thyroid cartilage, to examine RIGTH lobe use left thumb and press trachea towards patients left with your left thumb. Place first 3 fingers of your right hand in the right thyroid bed- leave fingers still while the patient swallows. To examine LEFT lobe, move your fingers o the reverse positions
        - BEHIND: 2 fingers on each sides of the trachea- swallow (feeling for movement of the isthmus) displace trachea to left (with fingers from right hand) with fingers from left hand palpate left lobe as patient swallows.

Assessment of the Abdomen and Gastrointestinal System

35. Organs involved in the alimentary tract
    - The alimentary tract is 27 feet long and runs from the mouth to the anus including:
        - **Esophagus**
            - Collapsible 10 inches long connecting the pharynx to the stomach
        - Stomach
            - Three sections: fundus, body, and pylorus
            - Secretes hydrochloric acid and digestive enzymes that break down fats and proteins
            - Pepsin digests proteins
            - Gastric lipase emulsifies fat
            - Little absorption takes place here
        - Small intestines
            - 21 feet long
            - Coiled in the abdominal cavity
            - First 12 inches' duodenum forms a C shaped curve around the head of the pancreas
            - Next 8 feet is the jejunum that gradually becomes larger and thicker
            - Last 12 feet are the ileum
            - Ileocecal valve lies between the ileum and the large intestines to prevent backflow
            - Nutrients are absorbed through the mucosa of the small intestines
        - Large intestines
            - Begins with the cecum, a blind pouch about 2-3 inches long that hold ileal contents
            - Vermiform appendix extends from the cecum
            - Ascending colon extends from the cecum along the right posterior abdominal wall- under surface of the liver
            - Transverse colon crosses the abdominal cavity toward the spleen and down toward the splenic flexure

- Descending colon runs along the left abdominal wall to the rim of the pelvis turning medially and inferiorly
- Sigmoid colon is the S-shaped that connects to the rectum extending from the sigmoid to the pelvic floor through the anal canal and terminates at the anus

- The alimentary tract functions to digest food; absorb nutrients, electrolytes, and water; and excrete waste products

36. Correct assessment order for examining the abdomen
    - Patient remains supine. Cover chest with the patient's gown. Arrange draping to expose the abdomen from the pubis to the epigastrium.
        - Inspect skin characteristics, contour, pulsations, and movement
        - Auscultate all quadrants for bowel sounds
        - Auscultate the aorta and renal, iliac, and femoral arteries for bruits or venous hums
        - Percuss all quadrants for tones
        - Percuss liver borders and estimate span
        - Percuss left midaxillary line for splenic dullness
        - Lightly palpate all quadrants
        - Deeply palpate all quadrants
        - Palpate right costal margin for liver borders
        - Palpate left costal margin for spleen
        - Palpate laterally at the flanks or right and left kidneys
        - Palpate midline for aortic pulsation
        - Test abdominal reflexes
        - Have your patient raise their head as you inspect the abdominal muscles
37. Examination technique and findings of the liver
    - General Info:
        - Located in the right upper quadrant, below the diaphragm and above the gallbladder and right kidney
        - Heaviest organ of the body, weighs 3 lbs.
        - Made of 4 lobes, which contain lobules. Lobules are made of liver cells which radiate around a central vein
        - Branches of the portal vein, hepatic artery, and bile duct penetrate deep into the periphery of the lobules
        - The hepatic artery transports blood directly from the aorta to the liver. The portal vein carries blood from the digestive tract and spleen to the liver.
        - Metabolizes carbs, fats, and proteins. Concerts glucose into glucagon and stores for use.
        - The liver uses cholesterol to form bile salts
        - The liver also detoxifies

    - Examination Technique:

        - **Percuss for liver span** by starting at the right midclavicular line over an area of tympany. Always begin in an area of tympany and move to an area of dullness. Percuss upward along the midclavicular line to determine

lower border of liver. Dullness is usually heard at the costal margin. Mark the border with a pen.

- A **lower liver border** that is more than 2-3 cm below the costal margin may indicate organ enlargement or downward displacement of the diaphragm due to emphysema or pulmonary disease.

- **For the upper border:** begin percussion to the right of the midclavicular line at an area of lung resonance around the third intercostal space. Continue down until the percussion tone changes to dullness. This marks the upper border, mark it with a pen. It is usually at the 5th intercostal space, an upper border lower than this may indicate organ displacement or liver atrophy. Dullness above the 5th intercostal space may indicate upward displacement of the liver from abd fluid or mass.

- Measure the distance between the marks to estimate the vertical span of the liver, normal span is 6-12 cm. Greater span = liver enlargement; lesser span = atrophy

- Errors in percussion for liver span can be caused by dullness from a pleural effusion. Gas in the colon can cause tympany and obscure the dullness of the liver.

- If enlargement is suspected additional percussion is needed. Percuss upward and downward on the right midaxillary line, liver dullness is detected at the 7th intercostal space.

- To assess the descent of the liver, ask the pt. to take a deep breath and hold it while you percuss upward from the abd at the right midclavicular line. The area of the lower border should move 2-3 cm down. These maneuvers assess later palpation of the liver.

- **Palpating the liver**: place your left hand under the pt. at the 11th and 12th ribs. Pressing upwards to elevate the liver toward the abdominal wall. Place your right hand on the abd, fingers pointing towards the head and extended so the tips of the fingers rest on the right midclavicular line below the level of liver dullness. Have the pt. breathe regularly a few times then take a deep breath. Feeling for the liver edge as the diaphragm pushes it downwards towards your fingertips. Normally the liver is not palpable but can sometimes be felt in thin persons. The liver edge should feel firm, smooth, even, and nontender. Feel for nodules, tenderness and irregularity. If the liver is palpable, repeat the assessment medially and laterally to assess the entire border.

- Alternate palpation: hook fingers over the right costal margin below the margin of dullness and press in and up toward the costal margin, feeling for the liver edge as they breathe.

- **Scratch Test:** Useful if the abd is distended to assess liver border. Place the diaphragm of the stethoscope over the liver and with the finger of the other hand scratch the abd surface lightly, moving towards the liver border, when you are over liver, the sound intensifies.

- Direct percussion can also check for liver tenderness.

- Findings:

  - **Hepatitis:** Inflammatory process characterized by diffuse or patchy hepatocellar necrosis

    - Patho: caused by viral infection, alcohol, drugs, or toxins

    - Subjective Data: Can be asymptomatic, other sx include: jaundice, anorexia, abd pain, clay color stool, tea color urine, and fatigue.

    - Objective Data: abnormal liver function tests, jaundice and hepatomegaly.

  - **Cirrhosis:** Diffuse hepatic process characterized by fibrosis and alteration of normal liver architecture into structurally abnormal nodules

    - Patho: progression of liver disease that can take weeks or years. S/S due to decreased liver function, decreased detoxification capabilities, or portal hypertension. Commonly caused by hepatitis C and alcohol liver disease

    - Subjective Data: may be asymptomatic, others jaundice, anorexia, abd pain, clay color stool, tea colored urine, fatigue. Prominent abdominal vasculature cutaneous spider angiomas, hematemesis, full abd.

    - Objective Data: Initially liver is enlarged, as disease progresses and liver scars, it cannot be palpated. Hepatic encephalopathy. Portal hypertension and ascites. Muscle wasting and nutritional deficiencies. Abnormal lab values.

  - **Primary Hepatocellular Carcinoma:**

    - Patho: usually s/t cirrhosis, 20-30 years after liver injury or disease onset. 25% have no prior risk for cirrhosis. Death s/t tumor

progression with median survival 6 mos. Can metastasize to lungs, portal vein, bone, and brain

- Subjective Data: jaundice, anorexia, fatigue, abd fullness, clay color stool, tea color urine.

- Objective Data: Hepatomegaly with a hard-irregular liver border. Liver nodules with tenderness.

- **Nonalcoholic Fatty Liver Disease (NAFLD):** Spectrum of hepatic disorders not associated with excessive alcohol intake including steatosis to cirrhosis

    - Patho: hepatic cell inflammation and injury s/t triglyceride accumulation in liver, genetics and environmental factors. Insulin resistance important factor. Most common cause of liver disease in US.

    - Subjective Data: upper right quadrant pain, fatigue, malaise, jaundice, or asymptomatic

    - Objective Data: Abnormal liver function tests, increased BMI, hepatomegaly, MRI and liver biopsy needed

38. Examination findings associated with appendicitis
    - General Info:
        - Most common indication for emergency abdominal surgery
        - Accurate diagnosis made on history and physical exam can facilitate rapid surgical intervention and prevent further injury.
        - Characterized by RLQ pain. Initial periumbilical pain that migrates to the RLQ, pain before vomiting.
        - Rigidity, a positive psoas sign fever, and rebound tenderness on physical exam are sx of appendicitis. Pain at McBurney's point.
        - Children may present with vomiting, rebound tenderness, rectal tenderness, and fever without the RLQ pain. Colic like symptoms common.
        - Associated s/s: guarding, tenderness, +iliopsoas sign, + obturator sign, RLQ skin hyperesthesia, anorexia, nausea, vomiting, low grade fever, +Aaron, Rovsing, Markle and McBurney signs
    - Tests:
        - Assess for rebound tenderness by holding your hand at a 90-degree angle to the abd with the fingers extended, press gently and deeply into a region remote from the area of abdominal discomfort and rapidly withdraw your hand. Pain at the site of peritoneal inflammation as the structures return to normal position indicates a positive test. This should be done at the end of the examination because a positive response can cause pain that will inhibit further examination.

- **Iliopsoas Muscle Test:** for suspected appendicitis, which can cause irritation at the lateral iliopsoas muscle
    - Ask pt. to lie supine, place hand over lower right thigh. Have pt. raise right leg flexing at the hip while you push downward. Pain with this technique is positive sign.

Table 17-5 Abdominal Signs Associated with Common Abdominal Conditions

Sign	Description	Associated Conditions
Aaron	Pain or distress occurs in area of patient's heart or stomach on palpation of McBurney's point	Appendicitis
Ballance	Fixed dullness to percussion in left flank and dullness in right flank that disappears on change of position	Peritoneal irritation
Blumberg	Rebound tenderness	Peritoneal irritation; appendicitis
Cullen	Ecchymosis around umbilicus	Hemoperitoneum; pancreatitis; ectopic pregnancy
Dance	Absence of bowel sounds in right lower quadrant	Intussusception
Grey Turner	Ecchymosis of flanks	Hemoperitoneum; pancreatitis
Kehr	Abdominal pain radiating to left shoulder	Spleen rupture; renal calculi; ectopic pregnancy
Markle (heel jar)	Patient stands with straightened knees, then raises up on toes, relaxes, and allows heels to hit floor, thus jarring body. Action will cause abdominal pain if positive.	Peritoneal irritation; appendicitis
McBurney	Rebound tenderness and sharp pain when McBurney's point is palpated	Appendicitis
Murphy	Abrupt cessation of inspiration on palpation of gallbladder	Cholecystitis
Romberg-Howship	Pain down the medial aspect of the thigh to the knees	Strangulated obturator hernia
Rovsing	Right lower quadrant pain intensified by left lower quadrant abdominal palpation	Peritoneal irritation; appendicitis

39. Examining McBurney's sign
    - Rebound Tenderness felt over McBurney's Point in the lower right quadrant suggests appendicitis and is a positive McBurney's sign.
40. Assessment of abdominal pain in women
    - **Potential threats to life in women:**
        - Ectopic pregnancy – typically presents with lower abdominal pain and vaginal bleeding, late missed period, peritoneal irritation
            - Associated internal bleeding may show shoulder tip pain
            - Female abdominal pain must be investigated – ask for sexual & menstrual history, conduct pelvic exam, & perform urine pregnancy test. Anticipate the emergency of a RUPTURE.
        - Incomplete Miscarriage
        - Genital Tract Trauma
        - Pulmonary Embolism
        - Toxic Shock Syndrome
    - **Causes of abdominal pain in women:**
        - Common: UTI, PID, Dysmenorrhea, Labor
        - Uncommon: Ectopic pregnancy, Appendicitis, Biliary Colic, Ovarian Syndromes, Miscarriage

        - Rare: Ovarian Hyperstimulation Syndrome, Curtis Fitzhugh Syndrome, Toxic Shock Syndrome
        - The menstrual history must be taken and pregnancy or its complications
    - Cystitis – frequency and dysuria
        - R/o pelvic appendicitis (abdominal pain, dysuria, frequency, and protein, blood, and WBC in UA)
    - Pyelonephritis – urinary symptoms & groin pain, fever, and nausea, and vomiting

41. Landmarks for abdominal examination
    - **RUQ** – Liver and Gallbladder, Pylorus, Duodenum. Head of Pancreas (HOP), Right Adrenal Gland (RAG), Portion of Right Kidney (PORK), Hepatic Flexure of Colon (HFC), Portions of Ascending and Transverse Colon (PAT-C)
    - **LUQ**- Left Lobe of Liver (3L), Spleen, Stomach, Body of Pancreas (BOP), Left Adrenal Gland (LAG), Portion of Left Kidney (POLK), Splenic flexure of Colon (SFC), Portions of Ascending and Transverse Colon (PAT-C)
    - **RLQ** – Lower Pole of Right Kidney (L-PoRK), Cecum and Appendix, Portion of Ascending Colon (PAC), Bladder (if distended), Ovary and Salpinx, Uterus, Rt. Spermatic Cord, Right ureter
    - **LLQ**- Lower pole of Left Kidney (L-Polk), Sigmoid Colon, Portion of Descending Colon, Bladder (if Distended), Ovary and Salpinx, Uterus (if enlarged), Left Spermatic Cord, Left ureter
    - **Right Hypochondriac** – Right Lobe of Liver, Gallbladder, Portion of Duodenum, Hepatic Flexure of Colon, Portion of Rt. Kidney, Right Adrenal Gland
    - **Epigastric** – Pylorus, Duodenum, Pancreas, Portion of Liver
    - **Left Hypochondriac**- Stomach, Spleen, Tail of pancreas, Splenic flexure of Colon, Upper Pole of Left Kidney, Left Adrenal Gland
    - **Right Lumbar** – Ascending Colon, Lower Half of Right Kidney, Portion of Duodenum and Jejunum
    - **Umbilical** – Omentum, Mesentery, Lower Part of Duodenum, Jejunum, and Ileum
    - **Right Iliac** – Cecum, Appendix, Lower end of Ileum, Right ureter, Right Spermatic Cord, Right Ovary
    - **Hypogastric (Pubic)** – Ileum, Bladder, Uterus
    - **Left Inguinal** – Sigmoid Colon, Left Ureter, Left Spermatic Cord, Left Ovary

42. Characteristics of bowel sounds heard during auscultation
    - **Normal** – Clicks and gurgle sounds heard irregularly from 5-35 minutes.
    - **Borborygmi** -growling, loud prolonged gurgles.
        - Heard in gastroenteritis, early intestinal obstructions, or hunger
    - **High-Pitched tinkling sound** – heard in early obstruction
    - **Decreased Bowel Sounds** – heard in peritonitis and paralytic ileus
    - **Absent Bowel Sounds** – no bowel sounds after 5 minutes of auscultation.
    - **Friction Rub –** high-pitched, heard in auscultation with respiration
        - Indicates inflammation of the peritoneal surface of the organ from tumor, infection, or infarct.
    - **Bruit**- Harsh or musical intermittent auscultatory sound
        - Indicates blood flow turbulence and indicate vascular disease

- **Use bell of the stethoscope** in listening for the aortic, renal, iliac, and femoral artery bruits. Also in epigastric region and umbilical region for “venous hum” – soft, low pitched, and continuous which indicates increased collateral circulation between portal and systemic venous systems.