

1. The zygous fissure appears as a normal radiographic variant found in which part of the lung?
A. left upper apex
B. right upper apex
C. right middle lobe
D. right lung base
2. In rheumatic arthropathies, the lateral flexion/extension views are taken to check which ligament which is the strongest:
A. transverse ligament
B. alar ligament
C. apical ligament
D. tectorial
3. What is the cause of an x-ray having a greasy appearance?
A. insufficient washing
B. problem with the (old) fixer
C. washing with warm water
D. low quality emulsion problem
4. What component of x-ray equipment is primarily used to prevent film fog?
A. radiographic grid
B. half-wave rectifier
C. line voltage compensator
D. collimator and filters
5. What is eburnation?
A. the process of bone hardening to almost ivory like
B.
C.
6. Which of the following imaging methods use the interaction of radio waves with hydrogen nuclei or protons;
A. CT
B. x-ray
C. MRI
D. scintigraphy
7. An x-ray taken with a 15° cephalad tilt through the sagittal plane between the ASIS and the symphysis pubis is used to view;
A. oblique S1
B. PA sacral foramen
C. AP sacrum coccygeal region
D. lateral sacrum and surrounding structures
8. In taking an A-P lumbo-pelvic view, both feet are internally rotated 15° "toes in". Why?
A. to reduce femoral anteversion
B. to visualize the greater trochanter
C. minimize patient motion/ sway
D. compensate for pelvic obliquity
E. reduce pelvic distortion
9. An increased teardrop distance on a radiograph would be most likely caused by which of the following?
A. protruded acetabulum
B. slipped femoral capital epiphysis
C. diastasis of the symphysis pubis
D. Legg-Calvé-Perthes
10. The most common cause of spondylolisthesis in patients under 40 years of age is:
A. congenital
B. repetitive microtrauma
C. massive trauma
D.
11. During which part of the physical examination would a bleb be noticed?
A. bony palpation
B. auscultation
C. inspection
D. x-ray
12. An old patient has a compression fracture. Which is least likely to occur as a sequela?
A. compression gets worse
B. bone expansion
C. spurting
D. premature fusion of segments
13. Which is not present on an x-ray of a patient with chronic emphysema?
A. prominent retrosternal air space
B. high or increased right diaphragm level on lateral radiograph
C. enlarged pulmonary artery
D. increased radiolucency of lungs
14. What may cause scalloping of the posterior margins of the body?
A. fibrous dysplasia
B. Paget's
C. Hodgkin's
D. von Recklinghausen's/ neurofibromatosis
15. The following tumor develops in the lung apex, causes lytic destruction of a rib and may be associated with Homer's syndrome
A. azygous
B.
C. Pancoast
D.
16. Which bone disease has Schmorl's nodes?
A. Hodgkin's
B. osteoarthritis
C. rheumatoid arthritis
D.
17. A patient with a sacral base angle of 75° is predisposed to:
A. spondylolisthesis
B. tight hamstrings
C. ilium listing of posterior and inferior
D. hypolordosis
18. When measuring from the posterior mid-vertebral body of C5 to the spino-laminar junction of the same segment, canal stenosis will occur when the measurement is less than;
A. 8 mm
B. 12 mm
C. 17 mm
D. 21 mm
19. A child presents with ankle injury. On x-ray there is an increase in the tibio-fibular space but no fracture. What do you do next?
A. MRI
B. weight bearing x-ray
C. bone scan
D. linear tomography
20. An average 150 pound male will burn how many calories after walking one mile?
A. 50
B. 100
C. 200
D. 400
21. When treating a 30 year old obese male who wants to lose weight, what is the best way to change the set point for long term effect?
A. psychological counseling
B. reduce to 1000 calorie a day intake
C. 3 day water fast then lower caloric intake
D. aerobic exercise
22. Best to maintain long term weight loss:
A. decreased protein, decreased carbohydrate, decreased fat
B. decreased protein, increased carbohydrate, decreased fat
C. increased protein, increased carbohydrate, decreased fat
D. increased protein, decreased carbohydrate, decreased fat
E. decrease protein, decreased carbohydrates, increased fats
23. A patient presenting with glossitis, cheilosis, diarrhea, weight loss, flatulence shows signs of what deficiency?
A. vitamin A
B. vitamin C
C. folic acid
D. potassium
24. A male patient complains of headaches which begin immediately upon standing, and does not go away with time until he lies down again. What type is it?
A. sinus
B. migraine
C. increased intracranial pressure cluster
D.
25. What type of headache will climbing stairs and walking increase the pain?
A. migraine
B. tension
C. cervicogenic
D. cluster
26. A young girl gets a headache at 10:00 A.M. after going to school, and subsides after a few hours. What type of headache is it;
A. tension
B. hypoglycemic
C. migraine
D. cluster
27. A male presents with a headache behind his right eye. His right eyelid droops and is still affected 2-3 hours after the headache?
A. cluster
B. classic migraine
C. ophthalmologic migraine
D. tension
28. While taking a history, you ask about the patient's hobbies. What should this information not be used for?
A. developing doctor/patient rapport
B. goal setting
C. to determine the injury status
D. to determine the patient's mental status
29. Which question would you ask a 29 year old who develops dyspnea when climbing stairs?
A. do you get shortness of breath when climbing stairs
B. how steep are the stairs
C. are the stairs high
D. how many stairs till you had to stop and rest
E. do you exercise?
30. A 30 year old woman presents with constant pain in the right hand, which has become worse over the past 3 months. Nothing makes it better or worse.
A. she sits on the dorsal surface of her hands
B. she sleeps with her hand under her pillow
C. she takes 1/2 aspirin a day
D. she stands for 1 hours a day

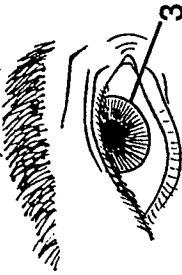
31. A male patient complains of right arm weakness and tingling of two weeks duration. What would not be an important history finding in diagnosing the etiology of his condition?
 A. always sleeps on his right side
 B. lifts weights everyday
 C. slipped and fell on an outstretched arm one week ago
 D. job required overhead work
32. A 28 year old male reports 24 hours after noticing he voided a red/purplish urine. Which question would be most valuable for determining the etiology?
 A. Ask about recent sexual history
 B. Ask about recent food and drinks
 C. Ask about family history of diabetes
 D. Ask about a history of bladder infections
33. Which of the following is a sign of a person who is depressed;
 A. woke up frequently at night
 B. slept well woke up early in morning
 C. having frequent naps during the day
 D. had trouble going to sleep and waking up
 E. easily falls a sleep at night and easily wakes up
34. Which of the following is least effective in taking a case history?
 A. asking in a understandable way to the patient
 B. asking multiple questions at once
35. Which vital sign is considered to be abnormal in an infant?
 A. 40 breaths per minute
 B. pulse of 110 BPM
 C. blood pressure of 120/80
 D. 99.4° F temperature
36. In a healthy patient, bronchovesicular sounds will be heard best at:
 A. at the level of T4 spinous process
 B. at the level of the xiphoid process
 C. suprasternal fossa
 D. at the level of the 6th intercostal space on anterior chest wall
37. The best measure of lung function;
 A. forced expiratory volume/reserve
 B. tidal volume
 C. forced inspiratory reserve
 D. vital capacity (forced)
38. The diaphragm of the stethoscope can be used to evaluate:
 A. lungs
 B. carotid artery bruit
 C. blood pressure
 D. abdominal bruit
39. What high pitched sound is heard during systole or diastole?
 A. click
 B. rales or rhonchi
 C. diastolic murmur
 D. systolic murmur
40. What will cause decreased jugular venous pressure?
 A. decreased cardiac output
 B. increased intrapleural pressure
 C.
 D.
41. Doctor places a tuning fork on patient's mastoid. When the patient stopped hearing he moved it to the front of the ear canal until patient can't hear it anymore. What test is the doctor performing?
 A. Rinne's
 B. Weber's
 C. Romberg's
42. A boy presents with an increased A-P chest diameter and his chest was pointed out like the bow of a ship. What did he have?
 A. pectus carinatum
 B. pectus excavatum
 C. barrel chest
 D.
43. Which modality may be used on a patient with an UMNLM with spasticity?
 A. cryotherapy
 B. vibration therapy
 C. ultraviolet irradiation
 D. infrared
44. What is not a purpose of Williams exercises?
 A. to decrease spondylolisthesis
 B. strengthen abdominals
 C. decrease lumbar lordosis
 D. stretch lumbar para spinals
45. What would necessitate preliminary concern before the application of therapeutic ice? You must be cautious when applying ice to:
 A. superficial nerve
 B. muscle injury
 C. tenosynovitis (inflammation of tendon sheath)
 D. edema
46. Which of the following is contraindicated for the use of cold therapy?
 A. muscle contusion
 B. acute inflammatory bursitis
 C. compromised local circulation
 D. heat exhaustion
47. What would be contraindicated for the application of superficial heat?
 A. thrombophlebitis
 B. deep vein thrombosis
 C. high blood pressure
 D.
48. What is Phalen's test for?
 A. tarsal tunnel syndrome
 B. carpal tunnel syndrome
 C. thoracic outlet syndrome
 D. stenosing tenosynovitis
49. Mannkopf's test is negative if the radial pulse rate increases by less than:
 A. 10 beats/minute
 B. 20 beats/minute
 C. 30 beats/minute
 D. 40 beats/minute
50. A person has an ankle sprain with slight mechanical instability. What grade is it?
 A. I
 B. II
 C. III
 D. IV
51. A 16 year old female injures her knee while playing volleyball. There is immediate swelling, but she was able to walk off the court unassisted. The cause of the swelling is _____ and your management is _____.
 A. bloody accumulation within the joint; elevation and ice
 B. bloody accumulation within the joint; orthopedic consult
 C. synovial accumulation in the joint; orthopedic consult
 D. synovial accumulation in the joint; elevation and ice.
52. Rupture of what ligament results in the greatest knee instability?
 A. anterior cruciate
 B. posterior cruciate
 C. medial collateral
 D. lateral collateral
53. The exercise known as "circumduction and extension" of the leg is best used to reduce:
 A. lateral rotation malposition of tibia
 B. reduce chronic fixed knee
 C. reduce a laterally fixed knee
 D. reduce a medially fixed knee
54. What is normal position of foot?
 A. 5° eversion
 B. 8° plantar flexion and 3° inversion
 C. dorsiflexion and 8° eversion
 D. 15° toe out
55. Which disc is the most commonly herniated?
 A. C4-C5
 B. C5-C6
 C. L3-L4
 D. L5-S1
56. Which is a specific test for scalenus anticus?
 A. Adson's
 B. Wright's hyperabduction
 C. Eden's costoclavicular
 D. Allen's
57. Which of the following is the least likely to cause thoracic outlet syndrome?
 A. cervical spondylosis
 B. scalenus anticus
 C. costoclavicular syndrome
 D. hyperabduction compression
58. Which position is best for a patient with central canal stenosis?
 A. seated
 B. prone
 C. flexed
 D. extended
59. Patient presents with dizziness. What is the first step in the management of this patient?
 A. Weber
 B. Barany cold caloric
 C. Romberg
 D. Whispering voice
60. Which of the following is suggested if Bakody's test is positive:
 A. cervical nerve root compression
 B. thoracic outlet syndrome
 C. sacral neuritis
 D. lumbosacral lesion
 E. meningitis
61. The most common cause of carpal tunnel syndrome is?
 A. C6-7 radiculopathy
 B. nonspecific tenosynovitis
 C. reflex dystrophy syndrome
 D. lunare subluxation
62. Which test is used to differentiate between ligamentous and capsular dysfunction?
 A. Apley's
 B. Drawers
 C. patellar tap
 D. Screw home

63. How short of time will it take if a normal joint is immobilized to have a measurable difference in size or demonstrable degenerative changes?
 A. 1 week
 B. 6 weeks
 C. 1 month
 D. 2-3 months
64. Pressure applied on the pisiform is test for which reflex?
 A. Chaddock's
 B. Gordon's
 C. Gonda's
 D. Allen's
65. Muscular adhesions producing altered joint function is motion palpated in what zone of motion?
 A. active
 B. passive
 C. end range
 D.
66. Ligament fixation is found with motion palpation in what zone of motion?
 A. active
 B. passive
 C. end play
 D. joint play
67. A 58 year old male presents with severe shoulder pain after pruning trees for two days. The best treatment for this person is:
 A. rest for 4 weeks
 B. ice and active range of motion exercises
 C. rest for 2 weeks while doing concurrent PT and passive range of motion exercise
68. A person has leg pain that is worse with activity and that is immediately relieved by rest. Which would you not do?
 A. apply heat to leg
 B. make postural changes
 C. have patient lose weight and adjust him
 D. apply ice and do lumbar roll adjustments
69. A woman presents with low back pain and a BP of 210/180. Upon performing Nafiger's test the patient notes pain over L4 area but shortly after the test she got dizzy and confused. What would you do with this patient?
 A. recline the patient and call an ambulance
 B. adjust
 C. refer to a cardiologist
 D. tell the patient vertigo is normal following this test
 E. avoid adjusting the cervicals
70. Female presents with pain in her midfoot between her 2nd and 3rd metatarsals. It is worse with weight bearing. Pain can be reproduced with dorsiflexion and by applying pressure or "squeezing" the metatarsals together. What are your recommendations?
 A. heel lift
 B. refer to orthopedist/surgeon
 C. recommend larger, wider shoes and apply metatarsal head pad
 D. ice and adjust
71. A patient has been diagnosed with shoulder hand syndrome. What is contraindicated for a person with shoulder hand syndrome?
 A. elevate arm and flex and extend wrist
 B. referral for anesthetic injection into stellate ganglion
 C. deep shoulder massage and ice
 D. hand and wrist mobilization
72. Most common reason chiropractors get sued?
 A. rib fracture
 B. aggravating a disc condition
 C. neoplasm
 D. fracture of the posterior vertebral body
73. 62 year old male, who fell skiing. He has mid dorsal pain. X-ray findings reveal no bone fracture or pathologies. After 2 weeks of chiropractic adjustments his pain does not improve. What is the next step?
 A. send out for bone scan
 B.
 C.
 D.
74. Patient had lumbosacral fixation, negative straight leg raise. After an adjustment the fixation was better but straight leg raise produced pain. What does this mean?
 A. exacerbation of condition
 B. you performed test correctly
 C. you had incorrect findings originally
 D. PT needs to be done on leg
75. A 25 year old male presents with a painful tight red swollen right knee. Physical exam reveal erythematous swollen knee, radiographic analysis shows increased joint space. What should be done next?
 A. joint aspiration
 B. arthroscopy
 C. trial manipulation (adjustment)
 D. motion palpation
 E. CBC
 F. ice and rest
76. The use of a cane in the opposite hand from the osteoarthritis hip is to:
 A. decrease weight bearing to the joint
 B. decrease force of hip abductors on the involved side
 C. to decrease muscle contraction of the gluteus maximus of involved hip
 D. to prevent lateral sway over the involved hip
 E. muscle contractions of hip flexors (of the opposite side)
77. To restore ulnar deviation to the normal wrist joint an adjustive force would have to directly affect which joint?
 A. radio-ulnar
 B. middle carpal
 C. ulnocapitoid
 D. ulnomeniscotriquetral
78. What articulation moves on wrist extension?
 A. mid carpal
 B. radio ulnar
 C. radio carpal
 D. ulnomenisco triquetral
79. A 15 year old boy is brought into your office with an increased thoracic kyphosis presents with thoracic pain. On x-ray you note a decreased anterior vertebral body height with Schmorl's nodes at T6, T7, T8, and T9. What would be your management plan?
 A. ice and adjust thoracic spine
 B. bed rest and tens to the paraspinal muscles
 C. refer for orthopedic bracing
 D. bed rest for 2 weeks
 E. exercise and nutrition
80. A patient complains of recurrent right ankle sprains. Upon motion palpation, there is decreased eversion and dorsiflexion. There is tenderness to palpation at the anterior talofibular joint and at the distal and inferior point of the lateral malleolus. To correct this condition an adjustive thrust would best be described as:
 A. Axial traction until there was an audible click heard
 B. Adjust the talus from A-P, and the calcaneus from lateral-medial in relation to the distal tibia
 C. Adjust the talus from medial to lateral and the calcaneus from A-P
 D. Adjust the tibia from anterior to posterior and the posterior fibula
81. What is the maximum inferiorward translation the caudal portion of the flexion traction table should be allowed to travel after there has been tension attained in the lumbar spine?
 A. 2"
 B. 3"
 C. 4"
 D. 5"
82. A right thoracic spine scoliosis is present with the spinouses rotated into the concavity. To correctly perform a double transverse adjustment of a right posterior with T7:
 A. contact the left spinous
 B. use a right hand contact
 C. use a pisiform contact on the spinous
 D. use a left hand contact
 E. his or her left pisiform contact
83. 63 year old male presents with headaches and dizziness. His wife states he gives a blank stare for one second when asked questions. What should be done with this patient?
 A. exercise program
 B. MRI
 C. full spine x-rays
 D. exam and manipulate
84. Which is a movement that occurs in the coronal plane around the sagittal axis?
 A. wrist flexion and extension
 B. wrist internal/external rotation
 C. hip abduction/adduction
 D. foot dorsiflexion/plantar flexion
85. The primary muscle responsible for rotation of the cervicals
 A. SCM
 B. scalenus anticus
 C. trapezius
 D. splenius capitis
86. Which is an indicator of tissue destruction and inflammation?
 A. C reactive protein
 B. Bradykinin
 C. substance P
 D. alkaline phosphatase
 E. interleukin 2
87. Which is the best way to diagnose lymphogranuloma venereum?
 A. Mantoux test
 B. observation
 C. Frei test
 D. VDRL

88. What test to confirm primary syphilis?
 A. dark field microscope
 B. Dick
 C. VDRL
 D. Coombs
89. When a patient is asked to bring the tip of thumb to the tip of the little finger, he is testing which nerve?
 A. radial
 B. ulnar
 C. median
 D. musculocutaneous
90. Person presents with numbness of the fingertips and paresthesia on the palmar surface lateral 1/3 of hand. What nerve is involved?
 A. median
 B. radial
 C. ulnar
 D. musculocutaneous
91. A lesion to which single nerve would be responsible for weakened shoulder abduction and external rotation?
 A. long thoracic
 B. axillary
 C. dorsal scapular
 D. anterior thoracic
92. In which dermatome is found the lateral forearm?
 A. C5
 B. C6
 C. C8
 D. T1
93. Innervation to the axillary area is via which nerve?
 A. T1
 B. C7
 C. T4
 D. T2
94. A patient presents with weakness of external rotation and abduction of his shoulder. Which disc level is involved?
 A. C3-4
 B. C4-5
 C. C5-6
 D. C6-7
95. A patient presents with posterior neck numbness with pain radiating down the levator scapula and occasionally to the pectoralis major. What disc level is indicative of this condition?
 A. C2-C3
 B. C3-C4
 C. C4-C5
 D. C5-C6
96. T4 syndrome is characterized by?
 A. Cape like distribution (?across nipple line?)
 B. C
 C. D
97. Which is a demyelinating disorder?
 A. MS
 B. C
 C. myasthenia gravis
 D. D
98. What disease affects the anterior horn of the spinal cord?
 A. MS
 B. myasthenia gravis
 C. tabes dorsalis
 D. poliomyelitis
 E. ALS
99. Which of the following is a UMNLL?
 A. brain tumor
 B. myasthenia gravis
 C. poliomyelitis
 D. cerebral palsy
100. Vertical nystagmus seen in:
 A. brain stem
 B. cerebellum
 C. cerebrum hemisphere
 D. corpus collosum
101. Intermittent sharp shooting pain with paresthesia suggests;
 A. muscle strain
 B. neuralgia
 C. muscle spasm
 D. metastatic carcinoma
102. An obese 14 year old male presents with pain on walking and with legs turned out in external rotation. What is the diagnosis?
 A. slipped capital femoral epiphysis
 B. transient synovitis
 C. Legg-Calvé-Perthes
 D. Pellegrini-Stieda disease
103. A 50 year old female with headaches, visual problems and red, painful eyes, nausea and vomiting. She is extremely exhausted. Palpation of the eye with the lid closed reveals a smooth surface that is firm and would not indent with pressure. If left untreated, a future consequence would be:
 A. cataracts
 B. blindness
 C. exophthalmos
 D. stroke
104. A 12 year old child presents with neck pain and headaches. On exam you notice a hematoma over the quadratus lumborum but he denies pain or trauma to this area. What do you do?
 A. adjust the cervical area of complaint
 B. immediately report possible child abuse
 C. take a radionuclide bone scan
 D. pin wheel check over area
105. In a patient with acute tracheobronchitis, how long does the cough last have a cough?
 A. 1-3 weeks
 B. 3-6 weeks
 C. 6-9 weeks
 D. 9-12 weeks
106. How would you distinguish between congenital and pathological clubbing of the fingers?
 A. compare long axis with short axis of involved nails
 B. check for splinter hemorrhages
 C. press on fingers and look for blanching
 D. press on fingers and feel for boggy under the nail bed
 E. feel for longitudinal ridges
107. Patient presents with clubbing of the digits, arthritis, perioritis, hypertrophic arthropathy suggests,
 A. bronchogenic carcinoma
 B. gout
 C. multiple myeloma
 D. fibrosarcoma
108. Which is not typical of testicular masses?
 A. most are benign
 B. most are malignant
 C. most are found on males ages 15-30
 D. usually non-tender masses attached to the testes
109. White curdy exudate on tongue and the inside of his mouth that is easily removed with scraping with a Q-tip. The tongue is red underneath.
 A. candidiasis
 B. C
110. A patient presents with eye pain that is increased with movement of the eye. Evaluation reveals reduced vision in the eye. Ophthalmic examination indicates an optic disc that is elevated with blurred edges. The likely diagnosis is;
 A. papilledema
 B. papillitis
 C. retrobulbar optic atrophy of Leber
111. A man has very "scary" retrosternal pain during and for ten minutes after climbing a flight of stairs. You can rule out
 A. myocardial infarct
 B. angina pectoris
 C. cholecystitis
 D. peptic ulcer
112. A 34 year old female complains of diarrhea. She notes her stool has been large, light gray colored stools, frothy, foul smelling, greasy. This may be due to:
 A. malabsorption
 B. over hydration
 C. irritable bowel syndrome
 D. paralytic ileus
113. 14 year old boy presents with a "pinching" sensation in the right inguinal region. There is a sausage-like mass on palpation that disappears into the abdomen. What is the most likely worse complication?
 A. ischemic necrosis
 B. systemic infection
 C. appendicitis
 D. internal hemorrhage
114. A 4 year old child presents with his right arm in a sling. The child holds the humerus flexed against his body with the forearm is pronated. During the history the child says that his dad was swinging him by his arms just prior. What is the likely diagnosis?
 A. dislocated radial head
 B. Salter-Harris IV of distal humerus
 C. florus fracture of distal radius
 D. rupture of the supraspinatus muscle
 E. shoulder dislocation
115. Which of the following skin variations will be seen in a Caucasian male with Addison's disease?
 A. yellow
 B. red
 C. brown
 D. blue
 B. reddish blue
116. Which of the following does NOT occur in the area between the P wave and the QRS complex?
 A. atrial contraction
 B. ventricular filling
 C. ventricular contraction
 D. transmission of electrical fibers along Purkinje fibers

117. A 42 year old male is awakened at 2 AM with chills, shivers, and pain in big toe. The bed sheets irritate the pain. What does he have?
 A. gout
 B. SLE
 C. AS
 D. pseudogout
118. Patient has shoulder pain and atrophy of infraspinatus and supraspinatus muscles. Passive range of motion elicits no pain. This suggests:
 A. thoracic outlet syndrome
 B. rotator cuff tear
 C. frozen shoulder
 D. acromioclavicular separation/dislocation
119. Which of the following has the poorest prognosis and is a "red flag" indicator of possible metastatic bone cancer?
 A. sudden onset
 B. superficial location
 C. worse at night
 D. worse in the morning
120. A 30 year old multiparous female presents with nausea, vomiting, fleeting RLQ pain and a 2 day history of vaginal bleeding. She has not had her menstrual period in last ten weeks. She has a history of Pelvic inflammatory disease 5 years ago and has used an IUD for the last two years. Examination reveals engorged breasts, and hyperchromic areola. There is a palpable, freely movable adnexal mass in the RLQ which is 3 cm in diameter and sausage shaped. Soft cyanotic cervix. CBC reveals neutrophilic leukocytosis with a shift to left. Urine HCG is negative. What is the most likely working diagnosis?
 A. uterine leiomyomata
 B. uterine adenocarcinoma
 C. tubal pregnancy
 D. acute appendicitis
121. What diagnostic procedure would be the most appropriate to find etiology of symptoms?
 A. culture vaginal discharge
 B. barium enema
 C. abdominal ultrasonography
 D. pap smear of cervix
122. If two days later the patient presents with pain, sudden anemia, increased reticulocytes, periumbilical cyanosis, and a swelling in the retrotroutine pouch. What's diagnosis?
 A. pelvic inflammatory disease
 B. endometriosis
 C. ruptured ectopic pregnancy
 D. torsioned ovarian cyst
123. An 18 year old male has vague pain, swelling and joint locking of left knee. He presents with the leg in external rotation. There is no history of trauma. This is probably due to:
 A. biceps femoris tendonitis torn biceps tendon
 B. lateral meniscus tear
 C. iliotibial band friction syndrome
 D. contraction of iliotibial band
124. What diagnostic tests would be utilized to distinguish Crohn's disease and ulcerative colitis without using symptoms?
 A. HLAB-27
 B. check stool for ova and parasites
 C. sigmoidoscopy and air contrast barium
 D. ESR, and Schilling test
125. A black lesion on the skin characterized by a rough surface, rough edge contour, irregular border and raised uneven surface is:
 A. squamous cell
 B. basal cell
 C. melanoma
 D. café au lait spots
126. Increased heart rate of 100 beats per minute with normal rhythm:
 A. sinus bradycardia
 B. sinus tachycardia
 C. atrial fibrillation
 D. bundle branch block
127. Patient presents with RLQ pain, hepatomegaly, lower extremity pitting edema. He is tired and has a fever;
 A. hepatitis
 B. coronary diagnosis
 C. refer to internist
 D. ?
128. A 24 year old female back from a recent vacation to the northeast is convinced she has Lyme's disease. Which of the following is not a presentation of Lyme disease?
 A. enteric fever
 B. cardiac dysfunction
 C. neuritis
 D. arthralgia
129. Patient supine hand flexed to chest with shock like sensation down spine and feet. Car accident stiff neck and decreased ROM. Pain in legs. Came in a few weeks later pain aggravated on neck flexion.
 A. spinal cord rupture
 B. MS
 C. posterolateral disc lesion
 D. lateral canal stenosis
130. A patient presents with wheezing, respiration. Subsequent examination reveals diffuse sibilant rales. Chiropractic management of the patient abolished the wheezing respiration, but the rales were still unremitting. The patient's condition indicates:
 A. fluid in the bronchial tree
 B. consolidation of the lungs
 C. diffuse bronchospasm
 D. diffuse bronchodilation
131. A 57 year old male smoker presents with a chief complaint of swelling of the right calf. He was able to fully flex forward with no pain. What is the most likely explanation?
 A. deep vein thrombosis
 B. thromboangiitis
 C. saphenous nerve entrapment
 D. ?
132. A 46 year old male presents with leg paralysis which began as foot paralysis then leg paralysis then hip paralysis. He received vaccination for a flu two weeks ago and is otherwise healthy. What is the diagnosis?
 A. Guillain Barre syndrome
 B. stroke
 C. Adam-Stokes
 D. asthenia
133. A male patient presents to your office with multiple bruises and hematomas. He reports that it takes only minor trauma to cause a bruise. What problem would you expect to find?
 A. Insufficient clotting factor
 B. decreased platelets
 C. muscle problem
 D. neurological problem
134. A 24 year old male patient presents with knee pain and on x-ray examination there is noted erosion of the opposing surfaces of the tibia and the femur's joint surfaces. What history finding would indicate a possible etiology?
 A. recent arthroscopic surgery
 B. ?
 C. ?
 D. ?
135. A small round, mobile, tender nodule in the breast?
 A. cyst
 B. fibroadenoma
 C. carcinoma
 D. ?
136. Which is not indicative of breast carcinoma?
 A. inverted nipple
 B. firm, non-tender fixed mass
 C. mobile tender mass
 D. dimpling of skin
137. The sudden onset of diplopia is indicative of?
 A. neurogenic disease
 B. vascular disease
 C. ocular disease
 D. cardiac distress
138. What is characterized by pain that lasts 1-2 hours?
 A. ulcer
 B. tumor
 C. disc
 D. angina
140. A woman complains of discomfort, but no pain, legs feel rubbery and she feels like falling down. Feels like her legs are bandaged up.
 A. myasthenia gravis
 B. spinal canal stenosis
 C. MS
 D. psychogenic disorder
141. Patient presents with large, circumscribed silver, scaly patches over his back and buttocks.
 A. herpes zoster
 B. herpes simplex
 C. basal cell carcinoma
 D. psoriasis
142. A 65 year old male patient with cold feet, and bilateral leg pain of insidious onset. While riding a bike almost immediately relieved with rest.
 A. neurogenic referred pain
 B. vascular claudication
 C. lateral canal stenosis
 D. ?
143. A 32 year old male complains of colicky, abdominal cramping. Three months ago he was treated for anxiety. Choose the most likely cause of his pain?
 A. acute pancreatitis
 B. peristaltic dysfunction
 C. cholecystitis
 D. colic
144. What is the initial indication of a bacterial pneumonia?
 A. fever
 B. hypotension
 C. hypothyroidism
 D. bradycardia
145. Stressors that may cause subluxation
 A. ?
 B. ?
 C. chemical, mechanical, and mental
 D. ?

146. In the picture below, what structure is indicated by #3;



- A. lateral canthus
- B. pupil
- C. limbus
- D. pingueculae
- E. lens

147. There is a picture of a fat, old man with the following information: A 54 year old male presents with a blood pressure of 160/95, 2 temperature of 37° C, and a heart rate of 85/minute. He weighs 205 lb., 5'7", normal respiration, normal reflexes, no edema, no carotid or jugular bruits or problems palpable 5 cm, apical pulse (heave) Some explanation about S1 S2 S3 S4 sounds. History included: one hour attacks of substernal pain over the past few years that last about 1 hour and are relieved by rest and nitroglycerin. The episodes are caused by anxiety and exertion. Although he has taken three nitroglycerin pills in the past hour, he is still in pain and has a cold sweat. What would be useful to evaluate?

- A. CPK
- B. LDH
- C. amylase
- D. vitamin level

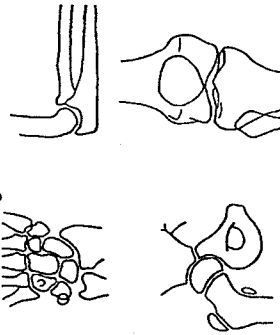
148. What procedure would you perform?

- A. echocardiogram
- B. electrocardiogram
- C. electromyography
- D. MRI

149. What is your diagnosis?

- A. acute MI
- B. angina
- C. acute anxiety attack
- D. pulmonary condition

150. What type of joint occurs around the axis through the humerus and radius?



- A. hinge
- B. ball and socket
- C. ellipsoid
- D. pivot
- E. saddle

151. A patient presents with a reduced upper extremity carrying angle as is shown in the figure. This condition is known as:



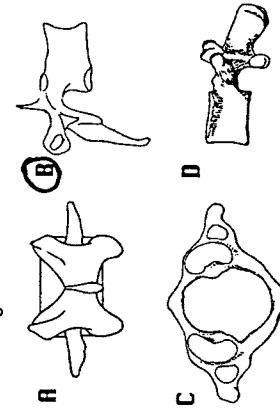
- A. valgus deformity
- B. swan neck deformity
- C. gunstock deformity
- D. seal-fin deformity

152. Which condition is depicted on Fig A

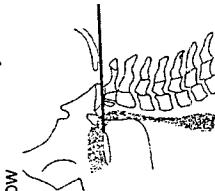


- A. geographic
- B. scrotal
- C. hairy
- D. strawberry

153. Which of the following is a median sagittal view of the thoracics?

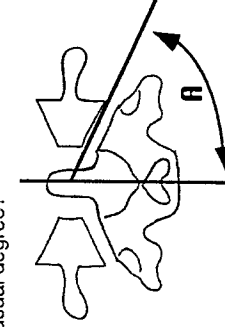


154. Identify the line in the diagram below



- A. McGregor's
- B. Chamberlains
- C. Martins
- D. McRae's

155. In the picture, the angle of the facets is indicated by a letter A, what is its usual degree?



- A. 90°
- B. 70°
- C. 30°
- D. 10°

156. An x-ray of with a lucent oval shaped region in the distal part of it. There was an x-ray belonging to a young 8 year old male with nocturnal pain of tibial diaphysis. It showed a radiolucent nidus with irregular and rather wide sclerotic margins. Choices were:

- A. Brodie's abscess
- B. osteoid osteoma
- C. bone island
- D. osteoblastoma

159. X-ray A-P lumbar and tomogram. A 16 year old female Gymnast with low back pain.

- A. congenital absence of pars with stress hypertrophy of opposite pedicle
- B. blastic METS of pedicle with absence of opp pedicle
- C. sclerosis of one pedicle defect of 2
- D. One eyed but lytic METS not a choice

160. What nerve is best evaluated with abduction of the fingers against resistance?

- A. ulnar
- B. median
- C. interossei
- D. radial

161. Atrophy and weakness of the small intrinsic muscles of the hand is most likely due to a lesion of what nerve root level?

- A. C6
- B. C7
- C. C8
- D. T1

162. What type of pain is indicative of causalgia?

- A. shooting
- B. stubbing
- C. burning
- D. pricking

163. Pupillary reflex testing is used to examine which cranial nerve?

- A. II
- B. III
- C. IV
- D. V

164. If the quadriceps muscles are paralyzed, what muscle would be used instead for leg extension?

- A. sartorius
- B. gastrocnemius
- C. biceps femoris
- D. hamstrings
- E. popliteus

165. A patient presents with pain which started in the low back and radiated down the postero-lateral leg. There is decreased sensation with numbness on dorsum of foot but with normal sensation on sole. What disc is involved?

- A. L2-L3
- B. L3-L4
- C. L4-L5
- D. L5-S1

166. A patient with Parkinson's disease will likely present with which physical findings?
☐ A. stooped posture
☐ B. intention tremor
☐ C. decreased muscle tone
☐ D. nystagmus
167. What will also be present in a patient with festination gait and pill-rolling tremor?
☐ A. nystagmus
☐ B. cogwheel rigidity
☐ C. stepage gait
☐ D. intention tremor
168. 30 year old female with leg weakness and fasciculations.
☐ A. multiple sclerosis
☐ B. extra-medullary tumor
☐ C. intra-medullary tumor
☐ D. ALS
169. Which of the following tumors occurs in patients older than forty years of age?
☐ A. Ewing's
☐ B. osteosarcoma
☐ C. multiple myeloma
☐ D. osteochondroma
170. Most common age for idiopathic infantile scoliosis to begin is?
☐ A. 2-4
☐ B. 6-8
☐ C. 10-12
☐ D. 12-14
171. The tube angulation for an A-P L5-S1 spot shot is:
☐ A. 35° cephalad
☐ B. 35° caudad
☐ C. 10° caudad
☐ D. perpendicular to the film
172. When taking an A-P oblique of the SI joint the affected side should be;
☐ A. away from the film
☐ B. toward the film
☐ C. parallel to the film
☐ D. perpendicular to the film
173. A pedunculated lesion attached by a stalk to the metaphysis of a long bone best describes?
☐ A. osteochondroma
☐ B. osteosarcoma
☐ C. osteoid osteoma
☐ D. non-ossifying fibroma
174. Which is the most likely contraindication for an MRI?
☐ A. dental filling
☐ B. pacemaker
☐ C. tumor
☐ D. organ problem
175. Which of the following radiographic studies are definitive of hyperparathyroidism?
☐ A. skull series
☐ B. hand series
☐ C. KUB
☐ D. chest series
176. Osteochondritis dissecans is most commonly found
☐ A. medial femoral condyle
☐ B. lateral femoral condyle
☐ C. talus
☐ D. femoral head
177. Facet imbrication is seen best on which view of lumbar spine?
☐ A. A-P lumbo-pelvic
☐ B. lateral lumbar
☐ C. oblique lumbar
☐ D. counter rotated
178. A "hot spot" on a bone scan suggests;
☐ A. decreased blood flow
☐ B. decreased bone activity
☐ C. increased blood and bone activity
☐ D.
179. A 25 year old male who stepped off a curb and experienced pain at L5/L4 level. X-ray shows decreased density at L1, with trabeculated vertical striations.
☐ A. hemangioma
☐ B. solitary plasmacytoma
☐ C. metastatic carcinoma
☐ D. idiopathic osteoporosis
180. If you take an ulnar deviation X-ray, what do you visualize?
☐ A. pisiform
☐ B. hamate
☐ C. navicular
☐ D. trapezium
181. Which of the following questions is most appropriate to ask a patient when inquiring about a lung ailment?
☐ A. Do you suffer from dyspnea?
☐ B. Do you have shortness of breath?
☐ C. Do you have lung cancer?
☐ D. Are your lungs normal?
182. Patient presents with calf pain after walking several hours. This information should be written as:
☐ A. chief complaint
☐ B. description of symptom
☐ C. intensity of symptom
☐ D. precipitating factor
183. The insurance company approves care for a patient. The patient has been seen for 2 months. The past two weeks the care has increased dramatically. What would the insurance company request from the doctor?
☐ A. initial patient entrance form
☐ B. patient progress notes
☐ C. initial case history
☐ D. physical exam
184. A young male comes in with low back pain which occurred when he tried to lift a heavy box. What question would you need to ask?
☐ A. Do you have insurance?
☐ B. Have you seen a chiropractor before?
☐ C. Can you lift your arms above your head?
☐ D. Where is the location of the pain?
185. Upon taking a case history of a musculo-skeletal pain, which is the most important question to ask the patient?
☐ A. Is there a family history of musculoskeletal disease?
☐ B. Was there recent trauma?
☐ C. Have you had previous musculoskeletal pain before?
☐ D.
186. A 20 year old male presents in your office with slight jaundice, and a slight increase in unconjugated bilirubin. The patient is asymptomatic, with all other lab findings normal. This is most suggestive of;
☐ A. Little's disease
☐ B. hemolysis
☐ C. early hepatitis
☐ D. Gilbert's disease
187. Most diagnostic of an eye with heliotope coloration
☐ A. blepharitis
☐ B. xanthelasma
☐ C. arcus senilis
☐ D. polymyositis
188. Which condition of the eye needs to be referred?
☐ A. ectropion
☐ B. sty
☐ C. Drusen
☐ D.
189. Which of the following will not be found on the eyelid?
☐ A. pinguecula
☐ B. xanthelasma
☐ C. sty
☐ D. chalazion
190. A patient presents with red, bulging disc with fuzzy, indistinct margins and red tortuous arterias would suggest;
☐ A. papilledema
☐ B. glaucoma
☐ C. hypertension
☐ D. Graves disease
191. An 18 year old male presents with a painful, bent erection which curves drastically upwards due to thickening and fibrous adhesions of the fascia of anterior or dorsal surface of the penis suggests;
☐ A. epispadias
☐ B. hypospadias
☐ C. Peyronie's disease
☐ D. syphilis
192. What is the primary cause of egophony, bronchophony, and whispered pectoriloquy?
☐ A. viral pneumonia
☐ B. bronchiectasis
☐ C. lobar pneumonia
☐ D. emphysema
193. With a vascular obstruction of an extremity, you may see?
☐ A. rise and fall of pulse
☐ B. difference of blood pressure between limbs
☐ C. difference of strength between limbs
☐ D.
194. What is considered a high risk for heart attack?
☐ A. increased cholesterol levels
☐ B. increased triglycerides levels
☐ C. stress
☐ D. no exercise (or inactivity)
195. The most common symptom of patient presenting with serous otitis media is?
☐ A. tinnitus
☐ B. hearing loss
☐ C. vertigo
☐ D. fever
196. A pregnant woman in her 3rd trimester of pregnancy presents with capral tunnel syndrome. Which of the following would you believe to be the cause?
☐ A. ligament laxity due to relaxin
☐ B. edema due to fluid retention
☐ C. B6 deficiency
☐ D. increased stress of pregnancy
197. A male patient presents with a "grape-like" or a "sac of worms" mass attached to his testicle. It does not transilluminate;
☐ A. malignancy
☐ B. varicocele
☐ C. hydrocele
☐ D. spermatocele

198. A 45 year old female presents with left sided headaches of 2 weeks duration lasting 1-2 hours and with lacrimation of left eye and rhinitis. What is the best diagnosis?
 A. cluster
 B. acute rhinitis
 C. transient ischemia
 D. —
199. A 70 year old male presents with low back pain. What studies should be performed?
 A. protein electrophoresis and bone marrow biopsy
 B. triglycerides, G.T.T.
 C. sickle cell and blood
 D. serum glucose
200. What physical findings would you expect to see in a patient with chronic uremia?
 A. reddish blue palms
 B. yellowish skin coloration
 C. yellow sclera and nail beds
 D. blue lips, gums and mouth and nail beds
201. A woman has breast cancer. Which is the most likely location that it can be palpated?
 a. upper lateral quadrant
 b. upper medial quadrant
 c. lower lateral quadrant
 d. lower lateral quadrant
202. A 19 year old female presented with well defined movable tender mass of the breast. Upon transillumination the mass was translucent. What is the most likely diagnosis?
 A. carcinoma
 B. cyst
 C. mastitis
 D. fibroadenoma
203. A 29 year old woman presents with a right adnexal mass of 9cm which is tender to the touch. Pain is only on the right side there is no fever and the CBC is within normal limits.
 a. ovarian cyst
 b. tubal pregnancy
 c. acute appendicitis
 d. uterine fibroid
204. Patient experiences acute onset of wheezing and dyspnea. What would be the most likely differential diagnoses?
 A. bronchogenic carcinoma and TB
 B. angina pectoris and myocardial infarction
 C. asthma and pulmonary embolism
 D. pneumonia and emphysema

205. Which of the following is the most appropriate for the initial evaluation in a 28 year old female with a suspected lower urinary tract infection?
 A. urine nitrate
 B. urine pH
 C. urine hemoglobin
 D. sodium urate
206. 35 year old male having problems urinating has a large hard painless lump in the prostate. What is the most likely diagnosis?
 A. prostatitis
 B. benign prostatic hypertrophy
 C. malignant prostatic carcinoma
 D. inflamed bladder
207. Which of the following is not associated with iritis?
 A. gonorrhea
 B. septicemia
 C. ankylosing spondylitis
 D. degenerative arthritis
208. A 25 year old female presents with chest pain in the left lower area especially when taking a deep breath. Pain is relieved with AP pressure. Examination reveals BP 117/80, temperature 98.7, pulse 68 and lab studies are within normal limits.
 A. reflux esophagitis
 B. angina pectoris
 C. Tietze's
 D. bronchogenic carcinoma
209. A patient with a history of angina pectoris presents with chest pain blowing a "blow out" of the chest. What condition must be ruled out?
 A. myocardial infarction
 B. coronary spasm
 C. hiatal hernia
 D. cardiac tamponade
210. A 60 year old male presents with a 6 month history of angina. He described pain as a sharp, stabbing pain in the thoracic while clenching fist over sternum. The pain is not relieved with rest.
 A. myocardial infarction
 B. thoracic subluxation
 C. angina pectoris
 D. —
211. A slender female presents with vague abdominal discomfort, diarrhea, and nausea. She also has chronic fatigue. Blue black spots in oral mucosa. Blood pressure 80/50. Light headedness when standing from seated position. She is most likely suffering from?
 A. adrenocortical deficiency
 B. cirrhosis of liver
 C. acute viral infection
 D. acute hypoglycemia

212. A young adult male presents with chest pain of sudden onset following an episode of violent coughing. The pain is localized to a specific area in the chest. What is the most likely diagnosis?
 A. pneumonia
 B. pulmonary embolism
 C. myocardial infarction
 D. —
213. An 80 year old female presents after fall-ing. Her leg is in external rotation and appears shorter. (No x-ray or lab work given.)
 A. posterior dislocation of hip
 B. intra-articular femoral fracture
 C. extra-articular femoral fracture
 D. avulsion fracture of lesser trochanter
214. Where does the center of gravity run exactly through?
 A. entire body
 B. umbilicus
 C. spine
 D. pubic symphysis
215. A weakness of which muscle will cause a waddling gait?
 A. gluteus medius
 B. hamstrings
 C. quadriceps
 D. gastrocnemius/soleus
216. Strengthening vastus medialis helps chondromalacia patella by?
 A. supporting lateral meniscus
 B. prevents lateral deviation
 C. reduce the Q-angle
 D. increase strength of the quadriceps
 E. medial meniscus tear
217. A patient has weakness at the abductor pollices. Which other muscle do you need to check that could cause weakness to this muscle?
 A. brachioradialis
 B. supinator
 C. pronator teres
 D. posterior tibialis
218. A 2 month old female has asymmetrical skin folds on the anterior and posterior aspect of the hip. What orthopedic tests would you do?
 A. Ortolani's
 B. Thomas' test
 C. Derefild leg check
 D. straight leg raiser
219. What is a series of tests used to evaluate for vertebral basilar insufficiency?
 A. George's test
 B. Mill's test
 C. Adson's test
 D. Wright's test

220. Which of the following joints has an internal meniscus?
 a. carpo-ulnar
 b. carpo-ulnar
 c. TMJ
 d. acromioclavicular joint
221. Injury to the medial meniscus is usually accompanied by injury to:
 A. anterior cruciate
 B. posterior cruciate
 C. medial collateral
 D. lateral collateral
222. What joint is muscle integrity considered most important?
 A. acromioclavicular
 B. radio-ulnar
 C. gleno-humeral
 D. radio-humeral
223. What should high school football players increase in order to reduce knee injuries late in the game?
 A. strength
 B. endurance
 C. power
 D. flexibility
224. What is the primary elevator of the scapula?
 A. trapezius
 B. latissimus dorsi
 C. rhomboid minor
 D. rhomboid major
225. Which of the following muscles is responsible for external rotation of the humerus? (primary external rotator of the shoulder).
 A. subscapularis
 B. infraspinatus
 C. rhomboid major
 D. serratus anterior
226. (they explained) burns bench test patient had pain.
 A. malingering
 B. SI pain
 C. disc (something)
227. Neurovascular compression by scalenus anticus will give positive test.
 A. Allen's
 B. Eden's
 C. Wright's
 D. Adson's
228. What exercise will promote a normal lordosis in a patient with a hyperlordotic spine?
 A. hamstring stretches
 B. hamstring strengthening
 C. quadriceps stretch
 D. iliopsoas stretch

229. Which of the following is most commonly seen in a patient with thoracic outlet syndrome?

- A. increased systolic BP
- B. decreased oral temperature
- C. pallor of the fovea (optic fundus)
- D. bruit heard superior to the clavicle

230. What is the doctor trying to achieve with patient lying prone and alternately lifting each leg?

- A. increase lordosis
- B. decrease scoliosis
- C. decrease thoracic kyphosis
- D. increase thoracic kyphosis
- E. decrease lumbar lordosis

231. What is the recommended dietary management of a person with degenerative joint disease of a weight bearing joint?

- A. calcium and magnesium supplements
- B. manganese supplements
- C. obtain normal body weight
- D. decrease cholesterol
- E. zinc

232. Which element will help the liver promote the glucose tolerance factor?

- A. zinc
- B. selenium
- C. chromium
- D. magnesium

233. A woman who is in her 2nd trimester of pregnancy taking 44 grams protein a day per her dietitian, which is the recommended daily amount for non-pregnant female. What would you suggest?

- A. decrease protein intake 10 grams/day
- B. stay the same until last trimester, then increase by 30 grams/day
- C. increase protein intake by 30 grams/days now till end
- D. double protein intake now

234. Resection of terminal ileum may result in deficiency of which substance?

- A. vitamin B12
- B. folic acid
- C. vitamin C
- D. iron

235. A man presents with muscle weakness in the hands and arms. He is a confessed alcoholic and exam reveals a tortuous radial artery and a slightly enlarged heart. There are no lab findings. What B vitamin should be recommended?

- A. thiamine
- B. riboflavin
- C. niacin
- D. pyridoxine

236. A patient presents with macrocytic normochromic anemia suggests which kind of anemia?

- A. pernicious anemia
- B. iron deficiency
- C. calcium malabsorption
- D. serum ferritin

237. In which of the following conditions is ESR normal?

- A. myocardial infarction
- B. pelvic inflammatory disease
- C. multiple myeloma
- D. angina pectoris

238. In which condition is HLA-B27 increased?

- A. RA
- B. AS
- C. SLE
- D. Gout

239. What serum chemistries will be elevated with ongoing inflammation?

- A. total calcium
- B. chloride
- C. phosphorus
- D. ESR

240. Patient had a hyperflexion/extension injury 5 days ago, and was treated with ice and rest. What is the next immediate treatment?

- A. adjust fixations, intermediate traction
- B. adjust fixations, avoid stretching and strengthening
- C. general mobilization for cervicals and thoracics
- D. ice and rest for another 5 days

241. In which area of the spine should you not contact the transverse process?

- A. cervical
- B. upper thoracic
- C. lower thoracic
- D. lumbar

242. The adjustment occurs in which area of motion?

- A. parapsychological
- B. active
- C. neutral
- D. passive

243. What modality would be best for migraine headache;

- A. cold pack
- B. cervical traction
- C. hot pack
- D. TENS

244. A 62 year old man shoveling snow has a blood pressure of 170/90. What is the best advice you can give him to help him with

- a. use a curved bent handle shovel
- b. push the snow in small amounts rather than lifting it
- c. wear warm clothing to prevent muscle tightness
- d. turn alternating to alternating the right hand and left when shoveling

245. A patient that has a cast on a recent fracture presents with low back pain. Upon initial examination, you note that he has decreased sensation on the dorsum of his foot;

- a. refer back to the doctor that gave him the cast
- b. L5-S1 disk
- c. take a lumbopelvic x-ray
- d.

246. What is the best advice that should be given to a patient who suffers from angina pectoris?

- A. decrease exercise
- B. increase dietary fiber
- C. supplement with Vitamin C
- D. stop smoking

247. What should you do when you get a patient under 18 years of age?

- A. parental signature
- B. x-ray series
- C. full lab findings
- D.

248. ACA Journal's definition for using modalities in a chiropractic office.

- A. to increase circulation
- B. to break up adhesions
- C. to relax patient before adjustment
- D. allow body to return to a more normal state of health

249. Lateral epicondylitis treatment

- A. friction rub and pulsed ultrasound
- B. immobilize
- C. short wave diathermy and effleurage
- D. ice and stretch

250. Which would be the most recommended treatment for a person with chronic costoclavicular syndrome.

- A. hot moist heat
- B. sleep with arms elevated above heart
- C. exercises to strengthen the trapezius
- D. soft cervical collar

251. What contraindicates the use of (flexion distraction?) traction in the lumbar spine?

- A. spondylolisthesis
- B. disc protrusion
- C. myospasm
- D. grade III sprain
- E. facet syndrome

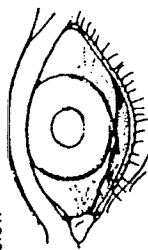
252. Which condition would be best helped with manipulation of the knee?

- A. lateral meniscus tear
- B. friction due to iliotibial band syndrome
- C. biceps femoris tendinitis
- D. popliteal tenosynovitis

253. What would be the proper care or treatment for a patient with lordotic nerve root irritation and facet imbrication;

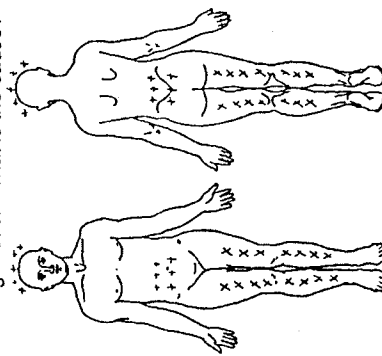
- A. strengthen and stretch the lumbar muscles
- B. adjust and give ice therapy
- C. bed rest
- D. ultrasound therapy

254. Identify the condition in the diagram below



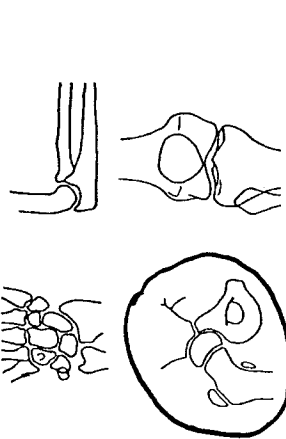
- A. exophthalmos
- B. ectropion
- C. ptosis
- D. periorbital edema

255. Patient presents complaining of pain, burning and paresthesias in the following areas. What is the cause?

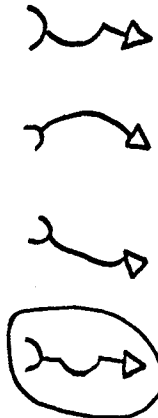


- A. psychological
- B. C1 subluxation
- C. L5-S1 disc
- D. post facet syndrome

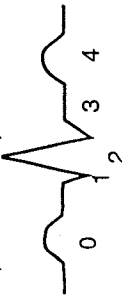
256. What joint has the most motion to it?



257. Which scoliosis is most likely to be a structural scoliosis?

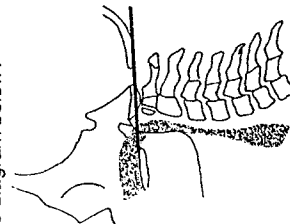


252589. Which number in the diagram depicts atrial depolarization?



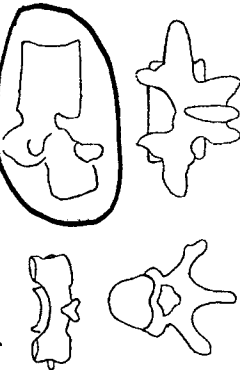
- A. 0
- B. 1
- C. 2
- D. 3

259. Which line is demonstrated in the diagram below?



- A. McRae's
- B. McGregor's
- C. George's
- D. Ferguson's

260. Which choice is median sagittal projection of a vertebra?



261. A 26 year old woman who is a typist has pain in the wrist. She states that she fell 2 weeks ago and landed on her hyperextended hand. What is the likely cause of her pain?



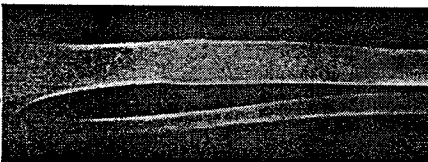
- A. perilunate subluxation
- B. scaphoid fracture
- C. Colle's fracture
- D. Monteggia fracture

262. 26 year old male presents with lower cervical and upper thoracic pain after painting his ceiling all weekend. What does the x-ray demonstrate?



- A. compression fracture of C7
- B. avulsion fracture of C6
- C. cervical rib syndrome
- D. C5 (?)

263. (30 year old with x-ray of tibia with a pathology of some sort. Anterior bowing of tibia and fibula)

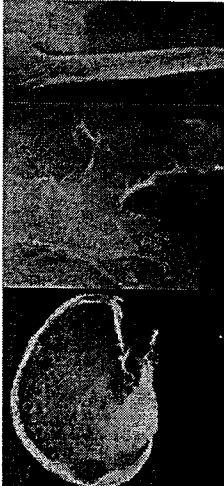


- A. Fibrous dysplasia
- B. Paget's
- C. multiple myeloma
- D. enchondroma

264. A 7 year old male is brought into your office with chest pain and a productive cough. Chest films reveal a 2.5cm opacity on the right with the air bronchogram sign. Examination reveals a dull sound on percussion. The most likely cause is:

- A. atelectasis
- B. emphysema
- C. asthma
- D. pneumonia

265. 40 year old male with anemia and rouleau, elevated ESR.



- A. MM
- B. Paget's
- C. lytic mets
- D. fibrous dysplasia

266. X-ray wrist



- A. Kienbock's
- B. styloid subluxation
- C. scaphoid fracture
- D. Colles

267. (Question was asking about) the black and white on an x-ray called

- A. film density
- B. subject density
- C. film contrast
- D. subject contrast

268. A man has no fluid arm motion. The arm stays at his side while walking. He has resting tremors and a mask-like face. What is he likely to have?

- a. cerebellar
- b. pyramidal
- c. extrapyramidal
- d. end organ defect (dysfunction)

269. The lateral cervical film of a patient with a hyperflexion-hyperextension injury reveals a retropharyngeal interval of 29 mm. This would suggest;

- a. hematoma

270. What supplement would you recommend for a patient removal of the parathyroid gland?

- a. calcium

271. Tapping on the volar carpal ligament in the distribution of the median nerve to reproduce pain is known as:
 a. Leri's sign
 b. Tinel's sign
 c. Allen's test
 d. Wright's test
272. The primary protractor of the scapula is innervated by which of the following nerve roots?
 a. C1-C3
 b. C5-C7
 c. T2-T4
 d. T4-T6
 e. T6-T8
273. A 37 year old female with arthralgia; tender, swollen hand joints and a mild rash on the malar aspect of the face. CBC was normal; urinalysis reveals a +2 proteinuria; ESR was 35 mm/hour. What is the diagnosis?
 a. Parkinson's
 b. SLE
 c. Reiter's
 d. scleroderma
274. What time period should a Milwaukee brace be worn?
 a. 23 hours a day
 b. only when awake
 c. when asleep
 d. taken off at night
 e. 24 hours/day
275. What is the normal WBC count?
 a. 1,000-3,000
 b. 3,000-5,000
 c. 5,000-10,000
 d. 10,000-30,000
276. A decreased hematocrit would be seen in which of the following conditions?
 a. pregnancy
 b. polycythemia vera
 c. acute infection
 d. dehydration
277. Which of the following would show normal laboratory findings?
 a. Marie-Straumpell disease
 b. Reiter's syndrome
 c. Dupuytren's contracture
 d. Dermatomyositis
278. What type of sound occurs during expiration when air is forced through a constricted bronchiole?
 a. wheeze
 b. vesicular
279. Use of a small focal spot; will increase distortion
 a. decreases patient dose
 b. increases resolution
 c. decreases magnification
280. A 22 year old patient presents with short breath. The most common cause is:
 a. pulmonary embolism
 b. anxiety
 c. TB
 d. cancer
281. What condition presents with sputum that smells like rotten eggs?
 a. acute tracheobronchitis
 b. alveolar cell carcinoma
 c. lung abscess
 d. pulmonary edema
 e. tuberculosis
282. What is found in rheumatic fever?
 a. tics
 b. chorea
 c. athetosis
 d. dystonia
283. A patient presents with an athletic injury to the knee. What is the best way to visualize?
 a. 3 view x-ray
 b. MRI
 c. CT scan
284. Which of the following minerals should be given in a 1:1 ratio with calcium to prevent hypocalcemia?
 a. phosphorus
 b. potassium
 c. iron
 d. magnesium
285. A 25 year old female is seven months pregnant with signs and symptoms of weakness, pallor, sore tongue, and intermittent diarrhea. She has a macrocytic anemia. What dietary advice would you give?
 a. fruits and green vegetables
 b. grains and legumes
 c. animal proteins and green vegetables
 d. dairy products and fruits
286. What groups cause the most common food allergies?
 a. milk, egg, wheat and corn
 b. banana, grapefruit, chocolate and beef
 c. lemon and carrots
 d. orange and peanut butter
287. A 64 year old male presents with the chief complaint of paroxysmal nocturnal dyspnea for 2-3 years. The physical exam revealed a temperature of 98.8°, pulse of 90 BPM and a blood pressure of 179/105. Light crackles were heard at both lung bases. There was a 2/4 rumbling apical diastolic murmur with an opening snap. What is the cause?
 a. pulmonary edema
 b. pericardial effusion
 c. positional hypertension
 d. decreased blood volume
288. What would you do next?
 a. CPK
 b. A-P & lateral thoracic films
 c. electrocardiogram
 d. ESR
289. What is your diagnosis?
 a. acute myocardial infarction
 b. mitral stenosis
 c. pulmonary infection
 d. angina pectoris
290. A 50 year old patient complains of increased difficulty driving at night. He also has papular lesions on the posterior aspects of his upper arm. What deficiency below could apply to the condition?
 a. zinc
 b. Mg
 c. biotin
 d. Vitamin A
291. What is a description of superficial pain?
 a. throbbing
 b. pricking
 c. cramping
 d. boring
292. Which of the following produce an elevated serum calcium?
 a. hypoparathyroidism
 b. celiac disease
 c. rickets
 d. hypervitaminosis D
 e. multiple myeloma
293. Why should parents of a child with a viral infection be cautioned against giving the child aspirin?
 a. Reye's
 b. Guillain-Barre
294. Which physiological effect of heat would make heat a poor choice in the treatment of a patient with an acute injury and tissue edema?
 a. Increased nerve conduction velocity
 b. local histamine release
 c. decreased number of motor nerve impulses
 d. decreased muscle tension
295. A patient has hearing loss. Weber's test lateralizes to the right. This suggests what problem?
 a. otosclerosis in the right ear
 b. nerve lesion in the right ear
 c. cerumen obstruction in the left ear
 d. otitis media in the left ear
296. Patient presents with a dull, aching pain which originates above the greater trochanter and extends down the lateral thigh to the knee and sometimes extends to the antero-lateral leg. The onset was insidious and the patient is unaware of any initiating accident. Walking up and down stairs aggravates the condition. Plumbline analysis reveals that the pelvis is shifted away from the side of pain. What therapy is indicated for this condition?
 a. transverse frictional massage of the ilio-tibial band
 b. stretching of the erector spinae muscles
 c. strengthening of the erector spinae muscles
 d. sacroiliac belt
297. At which age is scoliosis most progressive?
 a. 0-5
 b. 5-10
 c. 12-15
 d. 18-25
298. A circumferential tear within the disc in early degeneration may be due to what motion?
 a. flexion
 b. extension
 c. rotation
 d. lateral flexion
299. An athlete presents with knee pain on active knee extension. He is unable to fully extend his knee and there is no rotation of the femur on the tibia.
 a. anterior cruciate
 b. posterior cruciate
 c. medial meniscus
 d. lateral collateral ligament
300. When a patient comes into the office and the doctor asks, "What brings you in here today?", he is trying to elicit;
 a. the chief complaint
 b. the history
 c. the social history
 d. the family history
 e. past medical history
301. A patient complains of morning stiffness in the joints which improved as the day went on. Test was positive for HLAB-27.
 a. rheumatoid arthritis
 b. ankylosing spondylitis
 c. osteoarthritis

- 3.12
302. Of the following shoulder lesions, which is described as a slight hollowness over the joint with a tight firm stringy deloid?
 a. anterior inferior humeral dislocation
 b. posterior humeral dislocation
 c. acromioclavicular subluxation
 d. rupture of the biceps brachii
303. Apparent leg length showed a 1" difference, but the measurement from the ASIS to the medial malleolus was equal:
 a. pelvic obliquity
 b. old Legg-Calves-Perthes's
 c. fracture
304. What muscle action is best used as a test for L4?
 a. inversion
 b. eversion
 c. dorsiflex
 d. plantar flexion
305. What do you need to know in a case of ankle sprain for initial treatment?
 a. grade or severity
 b. direction
 c. previous injury
 d. how old is the patient
306. Bronchospasm may result from a reflex subluxation of the _____ vertebrae.
 a. C2-5
 b. C7
 c. T1-2
 d. T3-4
 e. T5-9
307. The most important physical finding to suggest successful resolution prior to releasing an athlete back to play football after a pinch-stretch neuropathia of the brachial plexus is:
 a. increased strength of extremity
 b. absence of paresthesia and tenderness
 c. absence of pain with range of motion of the upper extremity
 d. decreased tingling and numbness in the upper extremity
308. A 60 year old patient presents with generalized weakness, light headedness, rapid pulse and mild diarrhea. She is also experiencing tingling in her finger tips, and difficulties knitting and picking up coins. Recent CBC reveals MCV of 110 fL, decreased leukocytes, platelets, and erythrocytes and the sedimentation rate is decreased. What would be your next procedure?
 a. serum folic acid
 b. serum B12 assay
 c. TIBC
 d. liver enzyme panel
309. Which of the following sequelae of an acute whiplash injury contraindicates the use of continuous cervical traction?
 a. muscle spasm
 b. temporomandibular joint pain
 c. foraminal compression
 d. facet jamming
310. A 63 year old female presents with pain in multiple joints. She also complains of chronic eye irritation, and a dry mouth and eyes. Sometimes when she touches cold things, she will get blanching of the skin. Two years ago, she was diagnosed by an M.D. as having Raynaud's syndrome. Based on this history, which syndrome is the most likely diagnosis?
 a. Horner's
 b. Sjögren's
 c. Adles
 d. Felty's
311. A man complains of a long history of diffuse and aching pain bilaterally in the back and down to his knee. Palpation of the L4-5 facet is very tender. Lasèque's test reproduces the leg pain. Spinous percussion is tender at the L4-5 and L5-S1 interspaces. His pain is likely to be.
 a. neurogenic
 b. sclerogenous
 c. myotogenous
 d. discogenic
312. What is the most common reason for using interferential current on a patient presenting with low back pain?
 a. relief of pain
 b. edema reduction
 c. muscle contraction
 d. heat
 e. break up adhesions
313. A 50 year old male presents with dull, aching, low back pain. Auscultation reveals a systolic bruit over the abdominal aorta. There is moderate diffuse spondylosis of the lumbar spine on x-ray. All orthopedic and neurological tests are negative.
 a. lymphoma
 b. aortic aneurysm
 c. central canal stenosis
 d. disc prolapse
314. A 67 year old male smoker has episodes of fainting. Each time before fainting, he gets muscle weakness in the arm. He also noted that afterwards, he feels irritable and has also urinated on himself. What would you do?
 a. EEG
 b. ECG
 c. Hemocult
 d. arteriole GAS
315. A male patient presents who has persistently high cholesterol levels. He has tried a modified diet for two months, with no change in his blood. He has a transient, prickly hot sensation of the skin of his arms, legs and face. What is this a result of?
 a. increased fiber in the diet
 b. unusual findings of increased cholesterol
 c. excess intake of dietary pyridoxine
 d. excess intake of dietary niacin
316. A 40 year old man presents with knee pain. His knee locks up when he sits in a theater too long or drives too long. What is the most likely cause?
 a. Baker's cyst
 b. pes anserine bursitis
 c. chondromalacia patella
 d. rheumatoid arthritis
317. What would be the initial treatment for a patient with adhesive capsulitis?
 a. prone circumduction exercises
 b. supine circumduction exercises
 c. seated circumduction exercises
 d. finger walking up the wall exercises
318. A male patient presents in the office complaining of whiplash. He was in an auto accident two days ago. He has dried blood in his right ear, leans to his left, has a positive Romberg's test with his eyes closed. He has neck and low back pain with muscle spasms and subluxations at C1, C2, and L5. What would be the most appropriate initial case management of this patient?
 a. make plans to immediately take patient to the emergency room
 b. take an AP and lateral full spine film to analyze the subluxations
 c. bed rest see in 3 days
 d. tell him to see his physician for medication
319. Which of the following is the most sensitive way of detecting early ischemic necrosis of the femoral capital epiphysis?
 a. radionuclide bone scan
 b. computed tomography
 c. soft tissue radiography
 d. magnetic resonance imaging
320. A patient presents with dull thoracic pain. Two days earlier, the patient said he experienced flu-like symptoms, vomiting, clammy skin and a racing pulse along with deep chest pain and a "pressure" sensation.
 a. influenza B
 b. spontaneous pneumothorax
 c. dissecting aneurysm
 d. myocardial infarction
321. A left-handed carpenter presents with anterior humerus pain which radiates down the lateral arm. He has increased pain on movement and is unable to work. Which movement would be most painful?
 a. adduction
 b. abduction
 c. supinate
 d. pronate
322. How would his pain be differentiated from a visceral problem?
 a. pain worse with movement
323. What is your diagnosis of his problem?
 a. synovitis
 b. bursitis
324. If you find calcium pyrophosphate crystals, what would you expect?
 a. SLE
 b. gout
 c. RA
 d. chondrocalcinosis
325. A 28 year old male presents complaining of polyuria and polydipsia for the last 3 weeks. He has lost 10 lbs without lying. Based on this information, what is the most likely cause?
 a. psychogenic polydipsia
 b. hypertrophic prostate
 c. congestive heart failure
 d. diabetes
326. A solitary pulmonary parenchymal opacity is present in the patient's chest x-ray:
 a. infiltrate
 b. fibrosis
 c. cyst
 d. bullae
327. Which of the following is contraindicated for a grade 2 spondylolisthesis:
 a. abdominal strengthening
 b. soft tissue therapy
 c. flexion/distraction technique
 d. extension
328. In a grade one spondylolisthesis, which type of exercises would be indicated?
 a. spinal flexion
 b. spinal extension
 c. abdominal
329. Name an orthopedic test for testing a weak gluteus medius and minimus:
 a. Hibb's
 b. Goldthwait's
 c. Ely's
 d. Trendelenburg

330. A 30 year old female complains of dull low back pain, (not related to any thing in particular). She is a secretary and the pain is worse at the end of the working day. Lab, orthopedic and neurological tests are normal. What would you recommend to this patient?
 a. to increase calcium intake
 b. to change her postural habits
 c. to see her MD
 —
 331. What method would be used to measure central canal stenosis:
 a. McNabb's
 b. Meyerding's
 c. Eisenstein's
 d. Cobb's
 —
332. Which of the following would be a malingering test in possible lower limb paralysis?
 a. Holmes
 b. Hoover
 c. Bum's Bench
 d. Mannkopf's
 —
333. Idiopathic scoliosis is seen most commonly in which age group?
 a. 10-15
 b. 18-22
 c. 25-30
 d. 3-7
 —
334. Which vitamin excess produces flushing and tingling of the skin?
 a. riboflavin
 b. thiamin
 c. niacin
 d. phosphorus
 —
335. What is the most common method used to grade a spondylolisthesis?
 a. Risser's
 b. Cobb's
 c. Meyerding's
 d. Ferguson's
 —
336. Which nerve lesion would give a right lateral deviation of the tongue?
 a. right hypoglossal
 b. left hypoglossal
 c. right glossopharyngeal
 d. left glossopharyngeal
 —
337. A patient presents with a case of claw hand. What nerve is affected.
 a. radial
 b. axillary
 c. ulnar
 d. musculocutaneous
 —
338. Which lesion contains a central nidus?
 a. osteoma
 b. osteochondroma
 c. osteoblastoma
 d. osteoid osteoma
 —
339. A 14 year old female presents with elbow pain after falling on her out-stretched arm. X-ray analysis reveals a (+) posterior fat pad sign. The elbow otherwise appears anatomically intact. What would be your initial management of this patient?
 a. perform stress x-rays of the elbow
 b. 20 minutes of pulsed galvanic current followed by ice to reduce swelling and promote healing.
 c. immobilize the elbow and refer to orthopedist
 d. Instruct patient on the use of ice and elevation and re-evaluate the elbow the following day.
 —
340. Which of the following, when found together with anemia, would indicate the presence of multiple myeloma?
 a. uremia
 b. jaundice
 c. prostate hypertrophy
 d. splenomegaly
 —
341. How would you differentiate iritis from conjunctivitis?
 a. turn lid upward to see extent of redness
 b. perform corneal reflex and see if lids move
 c. perform eye external movements
 d. perform consensual light reflex and look for pain
 —
342. What supplement helps to increase the efficiency of the immune system?
 a. zinc
 b. Mg
 c. sodium
 d. potassium
 —
343. The patient presents with subcostal pain. CPK is normal, SGOT slightly increased, alkaline phosphatase is increased. LDH is normal.
 a. acute MI
 b. acute cholecystitis
 c. angina pectoris
 —
344. What is the angle (in degrees) of cervical traction that will most influence the occiput/C1/C2 complex?
 a. 5-10
 b. 10-15
 c. 15-20
 d. 20-25
 —
345. Which of the following symptoms is predominant in a ventral nerve root lesion?
 a. decreased sensory perception
 b. hyperreflexia
 c. referred pain
 d. flaccidity of the muscle supplied by the nerve
 —
346. A child raised on a macrobiotic diet presents with swollen, tender, "mushy" gums. What supplement should you give him?
 a. Vitamin A
 b. iron
 c. Vitamin C
 d. Magnesium
 —
347. A patient with polycythemia vera will have an increase in?
 a. hematocrit
 b. erythrocyte sedimentation rate
 c. mean corpuscular volume
 d. mean corpuscular hemoglobin concentration
 —
348. The statement, "my back hurts", most closely corresponds to the;
 a. case history
 b. family history
 c. chief complaint
 d. laboratory findings
 —
349. According to Schmorl's and Junghans' concept of joint physiology, contiguous spinal components are referred to as:
 a. spinal lesions
 b. segments
 c. vertebral motor unit
 d. meric zones
 —
350. The best method of determining pericardial effusion:
 a. percussion
 b. EKG
 c. echocardiogram
 d. chest x-ray
 —
351. Which diagnostic procedure is contraindicated for a patient with a foreign metallic object in the eye?
 a. CT
 b. MRI
 c. tomogram
 d. chemistry screen
 —
352. The patient presents with an enlarged supraclavicular lymph node on the left. In what area would you look for the pathology?
 a. chest
 b. neck
 c. upper abdomen
 d. lower abdomen
 —
353. Which of the following disease processes is the most common etiology of pathologic spondylolysis?
 a. degenerative osteoarthritis
 b. metastatic carcinoma
 c. chronic facet instability
 d. osteopetrosis
 —
354. A 60 year old male presents with early satiety, indigestion and weight loss. Physical exam reveals a Virchow's node in the left supraclavicular area and a positive Guaiac for occult blood. Based on the information, what is the diagnosis?
 a. esophageal varices
 b. stomach cancer
 c. leukocytosis
 d. pancreatic cancer
 —
355. A 30 year old male presents with a history of pain in the right sacroiliac region and right little toe for the last three months. He showed no Achilles or quadriceps tendon reflexes on the right, with hamstring and gluteus maximus weakness on right. He is unable to toe walk on right. Three days prior to your exam, the back pain disappeared but he still has leg pain. He is awakened at 4:00 am everyday with excruciating leg pain. He also shows anal sphincter flaccidity, muscle fasciculations in the medial head of the right gastrocnemius, and a (+) Dejerine's triad. This patient has:
 a. nucleus pulposus protrusion of L4-L5 necessitating flexion /distraction therapy
 b. nucleus pulposus protrusion of L5-S1, necessitating nerve conduction study
 c. free fragment from the L5-S1 disk necessitating CAT scan, MRI, and neurological consultation
 d. cauda equina syndrome, necessitating observation only for 7 days
 —
356. The most important recommendation to a patient with low back pain of postural origin?
 a. avoid climbing and descending stairs
 b. limit aerobic workout to 20 minutes
 c. optimize nutritional vitamin supplements
 d. maintain lordosis when sitting and bending forward
 —
357. What sequela will cause muscle cramping due to excess salt loss?
 a. heat injury (burns)
 b. visceral disturbances
 c. Crohn's
 —
358. What are the advantages to using intensifying screens?
 a. change density
 b. change contrast
 c. decrease exposure time
 d. reduce penumbra
 e. decrease scatter radiation
 —
359. The type of lesion seen with hives is described as:
 a. papule
 b. nodule
 c. wheal
 d. plaque
 —

360. The cells that reproduce the least when exposed to slight radiation
 a. lymphocytes
 b. nerve
 c. bone
 d. muscle
361. A 45 year old man with a 9 year history of cervical spine pain which radiates to his right arm, forearm, hand and fingers. Recently he has begun to experience episodes of numbness in his right hand and weak grip strength. Past history reveals 2 mild whiplash injuries several years ago. Adson's test is negative. Which exam would be the most focused screening technique in regards to the given information?
 a. blood pressure measurement
 b. deep tendon reflex exam
 c. upper extremity range of motion evaluation
 d. _____
362. A 45 year old male has lower thoracic pain that radiates into his right groin. Position change and movement appear to have no effect. Based on this information, your most likely diagnosis is:
 a. thoracic subluxation
 b. kidney stone
 c. acute cholecystitis
 d. gangrenous appendicitis
363. In an adult, what is the normal ADI space?
 a. 1-3mm
 b. 3-5 mm
 c. 5-7 mm
 d. 7-12mm
364. How does an upper cervical subluxation cause face and head pain?
 a. because the upper cervical nerves innervate the face.
 b. because the spinal nucleus of the trigeminal nerve is affected by noxious afferent stimuli from C1-3 because the blood vessels come from the vertebral artery which may cause ischemic face pain
 c. _____
365. A person with myxedema would demonstrate what symptoms?
 a. heat intolerance
 b. weakness
 c. weight loss
 d. intolerance to cold
366. Which of the following is the most accurate procedure for adjusting a base posterior?
 a. segmental contact is the apex
 b. line of correction is A-P
 c. line of correction is S-I
 d. doctor contacts with thenar
367. With which of the following syndromes would chiropractic manipulation offer the poorest prognosis:
 a. lumbosacral sprain
 b. facet imbrication
 c. disc prolapse
 d. canal stenosis
368. You will NOT find an increased ESR with?
 a. osteoarthritis
 b. osteomyelitis
 c. rheumatoid arthritis
 d. acute urinary tract infection
 e. fracture
369. A patient presents with retrosternal pain and dysphagia. The most likely cause is:
 a. duodenal ulcer
 b. mediastinal tumor
 c. esophagitis
 d. diverticulitis
370. A 31 year old female presents with hand tremors and exhibits a speech pattern with characteristic slow enunciation and hesitancy at the start of words and syllables. This characteristic speech is known as?
 a. clipped speech
 b. dysphonia
 c. dysphagia
 d. scanning speech
371. A 32 year old male presents with left lumbosacral pain. He states there is no previous trauma or injury. Pain is increased on bending and rotation. A-P radiograph.
 a. facet tropism
 b. early ankylosing spondylitis
 c. degenerative joint disease
 d. transitional segment
372. A man becomes dizzy and develops a headache after exercising vigorously. His father died of a stroke.
 a. berry aneurysm
 b. tumor
 c. _____
373. Which of the following would be most useful in determining the effect of iron replacement therapy in iron deficiency anemia?
 a. MCV
 b. MCH
 c. iron binding protein
 d. ferritin
374. At which level does the most significant anomaly appear?
 a. C1-C2
 b. C3-C4
 c. C5-C6
 d. C7-T1
375. When adjusting the cervical spine, you should use caution with what type of anomaly because of its relationship with the vertebral artery?
 a. ponticulus posticus
 b. spina bifida
 c. ossiculum terminale
 d. blocked vertebrae
376. In which of these patients would you take a lateral cervical x-ray to check for integrity of the transverse ligament?
 a. Down's syndrome
 b. block vertebra
 c. pregnant
 d. _____
377. A young female presents 6 months pregnant with cracking at the corners of her lips and an oily dermatitis of her face. What factor may be missing from her diet?
 a. thiamine
 b. riboflavin
 c. niacin
 d. pyridoxine
378. What is the modality that gives you short and long term analgesia, has a deep thermal effect, decreases fibrosis and increased absorption as well as a pronounced and powerful micro-massage?
 a. ultrasound
 b. interferential
 c. diathermy
 d. high volt galvanic
 e. paraffin
379. The most common definite symptom in a person with multiple myeloma is:
 a. malaise
 b. fever
 c. bone pain
 d. nausea
380. A 30 year old man who recently started working out has been riding a stationary bike for each of the last 3 days. He comes in complaining of posterior thigh pain. Lasegue's test reproduces the pain at 40° but ankle flexion does not. You suspect which of the following:
 a. hamstring strain
 b. lumbar disc herniation
 c. facet syndrome
 d. sciatica
381. A patient presents with atrophy of the intrinsic muscles of palmar surface of the left hand, presenting a "claw like" appearance. The condition is?
 a. carpal tunnel syndrome
 b. ulnar neuropathy
 c. radial neuropathy
 d. brachial neuropathy
382. A teenage male presents with sparse coarse hair, dry rough skin and cracked lips. He also has severe headaches, and generalized weakness. He is treating himself for an acne condition. Based on this information, what is the most likely nutritional cause of his symptoms?
 a. decreased calcium
 b. hypervitaminosis A
 c. hypervitaminosis C
 d. decreased vitamin D
383. Neuritic pain indicates which pathophysiological process?
 a. increased impulse transmission on visceral efferent fibers
 b. decreased impulse transmission on somatic motor fibers
 c. increased impulse transmission on somatic afferent fibers
 d. increased impulse transmission on visceral or somatic efferents
384. A patient presents with moderate to severe whiplash symptoms. Which would be the most appropriate initial case management?
 a. 3 days of bed rest with a pillow
 b. cryotherapy and neck brace for 2 days
 c. immediate vigorous cervical manipulation
385. A 50 year old woman presents complaining of nausea, vomiting, fever and right upper quadrant colicky pain. Physical examination revealed slight icterus of the eye and pain on inspiration to the point where she could not breathe. Laboratory findings reveal 14,000 WBC, 84% neutrophils, 7% bands, 7% lymphocytes, and 2% eosinophils. What sign is elicited upon deep palpation of the right upper quadrant?
 a. Cullen's
 b. Murphy's
 c. Courvoisier's
 d. McBurney's
386. What laboratory studies would be most appropriate?
 a. serum lipase
 b. serum amylase
 c. acid phosphatase
 d. alkaline phosphatase
 e. bilirubin
387. What would be your diagnosis of this patient's condition?
 a. viral hepatitis
 b. pyelonephritis
 c. acute cholelithiasis
 d. acute pancreatitis

388. Due to the viscerosomatic reflex, where would the pain be referred to?

- a. right lower quadrant
- b. right scapula
- c. right flank
- d. epigastrium

389. A patient presents with low back pain, sciatica, marked stiffness with trunk movements and indocyclitis. The most likely condition is?

- a. osteoarthritis
- b. ankylosing spondylitis
- c. aortic aneurysm
- d. lumbar facet syndrome

390. A 14 year old child presents two days after having been kicked in the shin during a soccer practice. The overlying skin is taut and shiny. There is a 1" gash that is swollen. You suspect;

- a. shin fracture
- b. anterior compartment syndrome
- c. osteomyelitis
- d. adductor hallucis strain

391. A lady complains of headaches that have changed in intensity. 6 months ago she complained of "common headaches" that would start at the back of her neck and head and gradually become a constricting band of pain over her head and affect her eyes. Her present headaches are much worse. They are preceded by a strange feeling. The headache causes violent head pain and she often vomits. Her eyes are very light-sensitive.

Using the description of her headaches above, what type of headaches did she have 6 months ago?

- a. cluster headaches
- b. migraine headaches
- c. muscle contraction headaches
- d. temporal arteritis

392. In the last 6 months, what kind of headache has she been experiencing?

- a. cluster headaches
- b. migraine headaches
- c. muscle contraction headaches
- d. temporal arteritis

393. If you thought that she had temporal arteritis, which of the following tests would you use to confirm that diagnosis?

- a. ESR
- b. acid phosphatase
- c. alkaline phosphatase

394. The ESR would be highest in which of the following?

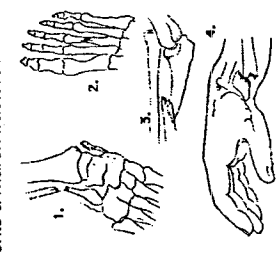
- a. tension headache
- b. migraine headache
- c. temporal arteritis

128. Identify the type of malposition?



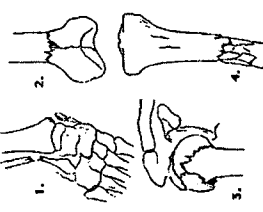
- a. flexion malposition
- b. extension malposition
- c. decreased interosseous spacing
- d. decreased foramina

395. Which one of these pictures represents a march fracture?



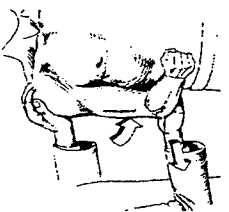
- a. 1
- b. 2
- c. 3
- d. 4

396. Which diagram best shows a intercondylar fracture?



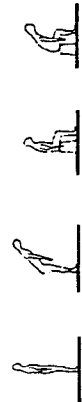
- a. 1
- b. 2
- c. 3
- d. 4

397. Which muscles are being tested?



- a. pectoralis major, latissimus dorsi
- b. anterior deltoid, coracobrachialis
- c. middle deltoid, supraspinatus
- d. latissimus dorsi, teres major, posterior deltoid

398. Which of the following positions puts the most amount of pressure on the L3-L4 disc?



- a. standing
- b. standing bending forward
- c. sitting
- d. sitting bending forward

399. A 24 year old woman with a mild case of whiplash is NOT within the 10 day rule but also says she is NOT pregnant. How would you manage the case?

- a. wait 28 days and do only manipulative therapy
- b. use gonadal shielding and take x-rays.
- c. take AP and lateral full spine films and adjust full spine.
- d. use light cervical manipulation and x-ray at the end of the 10 day rule.

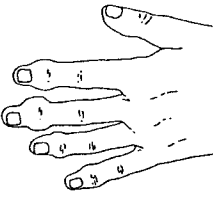
400. What is this area most often used for?



- a. palpation of the most commonly dislocated carpal
- b. palpation of the most commonly fractured carpal
- c. psoriatic arthritis.
- d. ganglionic cyst

401.

This patient has osteoarthritis with swellings at the dorso-lateral aspect of the distal interphalangeal joints in the hands. Name the pathology in the diagram below.



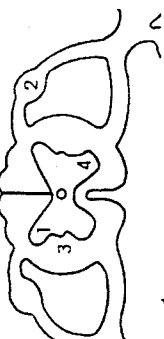
- a. gout tophi
- b. Haygarth's nodes
- c. Heberden's nodes
- d. Bouchard's nodes

402. Which suture has closed prematurely?



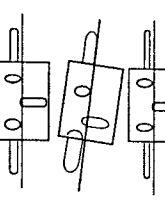
- a. lambdoid
- b. coronal
- c. sagittal
- d. notha

403. In which of the following areas are the sensory neurons located?



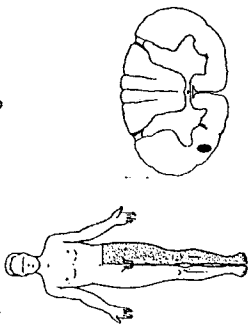
- a. 1
- b. 2
- c. 3
- d. 4

404. What is the listing for the spinous and for the articular process?



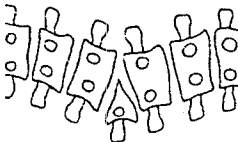
- a. PLS/RP
- b. PLI/RP
- c. PLI/RP
- d. ESR/LP

405. What area of the cord is exhibited by the lesion showed in figures below?



- a. cord ventral spinohalamic
b. commissural
c. sensory cortex
d. thalamic

406. What is the cause of the scoliosis in the diagram below?



- a. Pott's disease
b. Sprengel's deformity
c. hemivertebra
d. spondylolysis

407. What is the initial management for a untreated asymptomatic 14 year old female who presents with the finding in the diagram below?



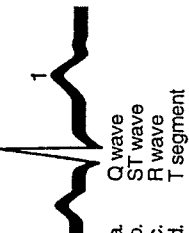
- a. spinal manipulation
b. refer for orthopedic bracing
c. put her in a brace and use physical therapy
d. refer to a neurologist for a second opinion

408. Which muscles are being tested?



- a. pectoralis major, latissimus dorsi
b. anterior deltoid, coracobrachialis
c. middle deltoid, supraspinatus
d. latissimus dorsi, teres major, posterior deltoid

409. Label the peak #1 in diagram



- a. Q wave
b. ST wave
c. R wave
d. T segment

410. A 55 year old male presents with dysphagia and restricted range of motion in the lower cervical spine. (they showed a picture of cervical x-ray with ant tissue calcified. s/s were dysphagia and decreased ROM similar to figures 10.61 A and 10.62 A&B on pages 576-577 of Yochum/Rowe). Based on the information given, what is the most likely diagnosis?

- a. advanced discogenic spondylosis of C4, C5, C6 & C7
b. myositis ossificans
c. diffuse idiopathic skeletal hyperostosis
d. rheumatoid arthritis

411. (exact picture of a unicameral bone cyst from Russell Erhardt's bone tumor flashcards). Which of the following may be responsible for this pathological fracture?

- a. metastatic carcinoma
b. non-ossifying fibroma
c. unicameral bone cyst
d. osteochondroma.
e. giant cell tumor

412. Picture of innominate angle. Which muscle strengthened would reduce angle?

- a. An x-ray of an AP pelvis with osteoblastic metastatic (lots of cannonballs). diagnosis is:
b. osteoblastic metastatic
c. osteoclastic metastatic

414. 75 year old male - x-ray of pelvis:

- a. Paget's
b. osteoblastic CA

415. An x-ray of an AP pelvis with lytic metastatic (right ilium very lytic at SI joint) To whom would you refer this patient to?

- a. neurologist
b. rheumatologist
c. oncologist
d. orthopedist

416. Story of man exercising on bike for 2 hours without pain. (Several of these neurogenic vs vascular claudication questions!) Guy gets pain when stands up briefly.

417. A 35 year old woman with pain in her fingers and hand. The pain began when she was ironing and picking up a heavy object. Verbage not exact but leading to carpal tunnel.

418. Another carpal tunnel question referring to nocturnal pain relieved by shaking hands.

419. A lot of questions on neurogenic claudication/canal stenosis vs vascular claudication.

420. What is the most common age for "pulled elbow syndrome" to occur?

- a. 6-18 months
b. 2-4
c. 6-8
d. 10-12

421. With cubital tunnel syndrome you would inform the patient to:

- a. avoid elbow extension
b. avoid elbow flexion
c. avoid pronation
d. avoid supination
e. sleep with arm raised above the heart

422. In pronator teres syndrome adjunctive therapy includes placing the elbow in _____ and forearm in _____

- a. extension, supination
b. extension, pronation
c. flexion, supination
d. flexion, pronation

423. A patient with tarsal tunnel syndrome should avoid:

- a. sloping
b. lifting
c. bending
d. jogging

424. Patient presents with constricted, unreactive, and unequal pupils which also did not react to painful stimulus to the neck; cilioespinal reflex

- a. Horner's syndrome

C. Argyll-Robertson pupil
D. Westphal's

425. What type of fracture is the most unstable?

- a. transverse
b. impacted
c. green stick
d. oblique

426. What is the lowest possible loss of bone density needed to detect osteoporosis on x-ray?

- a. 5%
b. 15%
c. 30%
d. 45%

427. What step does a doctor take to prevent the upper incisors from being superimposed over the odontoid process on an A-P open mouth x-ray set-up?

- a. lift the patients chin
b. tuck the patients chin
c. move the central ray 5° caudal
d. decrease focal film distance

428. Which imaging method is the best to view an aortic aneurysm?

- a. ultrasonography
b. angiogram
c. K.U.B. radiograph
d. lymphography

429. Right middle lobe syndrome is associated with:

- a. chronic pneumonia
b. aspiration pneumonia
c. pneumothorax
d. pulmonary fibrosis

430. What is the best way to visualize a mediastinal mass?

- a. air bronchogram
b. angiogram
c. CT
d. tomography

431. What is the radiologic objective of supinating the forearm on an A-P radiograph?

- a. so that the radius and ulna don't superimpose
b. to make the patient more comfortable to place the olecranon directly on the film
c. to decrease magnification

432. The normal adult ADI space is:

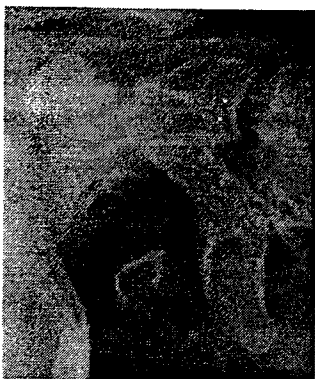
- a. 1-3 mm
b. 3-5 mm
c. 5-7 mm
d. 7-8 mm

434. When using a 14 x 36 cassette the focal film distance to be used consistently is:
 A. 10"-20"
 B. 20"-40"
 C. 40"-60"
 D. 60"-72"
 —
435. Which of the following cells would least likely be affected by radiation?
 A. red blood cell
 B. white blood cell
 C. neuron
 D. lymphocyte
 —
436. The doctor extends and rotates the patient's head for 15-40 seconds and the patient becomes dizzy and nauseated. What test is the doctor performing?
 A. Maigne's
 B. Adson's
 C. Eden's
 D. Wright's
 —
437. Which of the following problems is most likely to produce a negative Patrick's?
 A. coxa femoral osteochondrosis
 B. transient synovitis of the hip
 C. chronic sacroiliac strain
 D. slipped femoral epiphysis
 —
438. Which of the following is the mechanism for an increase in the intrathecal pressure?
 A. compression
 B. distraction
 C. Valsalva's
 D. Adson's
 —
439. Increased TSH levels are seen with which condition?
 A. pituitary hypothyroidism
 B. thyroid hypothyroidism
 C. toxic goiter
 D. Grave's disease
 —
440. For which condition is cryotherapy contraindicated?
 A. strain
 B. sprain
 C. fibrositis
 D. shock
 —
441. When treating carpal tunnel with ultrasound under water, what is the correct treatment?
 A. .5 - 1.0 cm³
 B. 2.0 - 2.5 cm³
 C. 1.5 - 2.0 cm³
 D. 2.0 - 2.5 cm³
 —
442. Which of the following modalities is used for its bactericidal effects?
 A. ultrasound
 B. infrared
 C. cold quartz UV
 D. hot quartz UV
 —
443. When using ultrasound and high volt in combination, what must you be sure to do?
 A. put probe in water
 B. put dispersal pad in water
 C. only use pulsed because continuous doesn't work in combination
 D. put dispersal pad on patient
 —
444. What is the desired effect with infrared treatment?
 A. skin gets a pink color
 B. patient experiences a pleasant tingling sensation in the extremities
 C. no trauma to the patient
 D. patient experiences profuse sweating
 —
445. Ultraviolet irradiation treatment is most effective in which of the following conditions?
 A. pulmonary tuberculosis
 B. lupus erythematosus
 C. diabetes
 D. psoriasis
 —
446. A male patient presents with a healing fibular fracture of 12 weeks duration. He is still wearing his cast. What modality would be used taking into consideration the slow healing time?
 A. microwave or SWD
 B. continuous ultrasound
 C. mechanical vibration
 D. transcutaneous electrical stimulation
 —
447. A patient presents two days after an auto injury with whiplash symptoms. Which adjunctive therapy would you use? 10 seconds of cervical traction produced pain
 A. cryotherapy
 B. moist heat
 C. rigid cervical collar
 D. mechanical traction
 —
448. You are treating a patient with diathermy and the patient complains of hot spots. The appropriate response is to _____ the patient: apparatus distance, or _____ the intensity.
 A. decrease, increase
 B. increase, increase
 C. increase, decrease
 D. decrease, decrease
 —
449. A 45 year old male presents with intercostal neuritis of two weeks duration. What adjunctive therapy is contraindicated?
 A. interferential
 B. continuous ultrasound
 C. vibro therapy
 D. short wave diathermy
 —
450. When utilizing the Weber test, which of the following would demonstrate a complete occlusion of the right external auditory meatus?
 A. Weber's lateralizes to the left
 B. Weber's lateralizes to the right
 C. Weber's does not lateralize
 D. Rinne indicates air conduction 2 times longer than bone
 —
451. Severe recurrent episodes of dizziness and for 10-15 seconds following a change of position from lying down to sitting or standing is indicative of?
 A. transient ischemic attack
 B. vertebral-basilar insufficiency
 C. Meniere disease
 D. benign positional vertigo
 —
452. Which examination procedure produces a flow of endolymph via convection into the semicircular canal?
 A. rotation test
 B. cold caloric irrigation test
 C. electronystagmia metric exam
 D. vertebra basilar maneuver
 —
453. A patient presents with tinnitus and vertigo where is the problem?
 A. inner ear
 B. external ear
 C. Eustachian tube
 D. middle ear
 —
454. A condition that is characterized by its greatest pain upon initial onset?
 A. dissecting aneurysm
 B. mild muscle strain
 C. migraine headache
 D. peptic ulcer
 —
455. A 60 year old patient presents with history of severe rheumatic fever and multiple bouts with strep throat as a child. What would be the most common sequela?
 A. osteoporosis
 B. osteoarthritis
 C. mitral valve disease
 D. aortic aneurysm
 —
456. A 35 year old male has episodes of unilateral headaches which are increased by alcohol. Other findings with the headaches are lacrimation and rhinorrhea. What type of headache is he experiencing?
 A. tension
 B. migraine
 C. cluster
 D. hypertension
 —
457. Which of the following physical findings is commonly seen with cirrhosis of the liver?
 A. spider angioma
 B. café au lait
 C. Heberden's nodes
 D. clubbing of the digits
 —
458. The Surgeon General has determined that the following substance is responsible for the most serious illness and death in this country:
 A. heroin
 B. tobacco
 C. cocaine
 D. alcohol
 —
459. Which of the following is indicative of a C6 nerve root compression?
 A. weakness of deltoid
 B. loss of sensation over the lateral aspect of the 5th digit
 C. diminished brachioradialis reflex
 D. diminished triceps reflex
 —
460. In which direction do you test acromioclavicular joint play?
 A. A-P glide
 B. axial rotation
 C. abduction
 D. adduction
 —
461. In transporting an unconscious athlete it takes four people to carry him and; one to check pulse
 A. one to stabilize neck and keep it from moving
 B. one to monitor pupil dilation
 C. one to clear the way for the ambulance
 D. What would be associated with psoriasis?
 A. scales
 B. ulcers
 C. crusts
 D. eruptions
 —
463. Which of the following conditions would cause decreased pigmentation of the skin?
 A. vitiligo
 B. jaundice
 C. carotenemia
 D. hemochromatosis
 —

464. A man presents with red, fiery lesions on the upper extremities and trunk. The lesions are 1.5 cm in diameter with spider extensions. This is caused by:
 A. vitamin C deficiency
 B. liver cirrhosis
 C. infectious disease process
 D. vascular insufficiency
465. A male patient presents with a 1 cm raised pearly gray nodule on his cheek which showed occasional telangiectasis. What would you suspect?
 A. basal cell carcinoma
 B. seborrheic keratosis
 C. squamous cell carcinoma
 D. melanoma
466. A patient presents with an enlarged left supraclavicular lymph node. What is the most specific test to determine the disease?
 A. lymph node biopsy
 B. upper GI series
 C. colonoscopy
 D. fiber optic gastric
467. Which of the following is least indicative of child abuse?
 A. hypernatremia dehydration
 B. multiple skin bruises
 C. old dislocations and fractures
 D. angry interface between the adult and the child
468. Which of the following conditions is most likely to be lethal?
 A. Bastrup's
 B. osteochondritis dissecans
 C. hematogenous osteomyelitis
 D. spina bifida
469. Bracing for lumbosacral region to limit flexion.
 A. lumbar corset
 B. Williams
 C. chair back brace
 D. Knight's
470. For a post partum woman what would you do to strengthen a pelvic muscles.
 A. Kegel
 B. low impact aerobics
 C. stretching
 D. Williams
471. A female presents with a swollen red mass at the fifth left costochondral junction, she has had the pain for a week, there was no trauma involved. What is the cause?
 A. Tietze's
 B. herpes zoster
 C. herpes simplex
 D. intercostal muscle pull
472. What type of muscle movement or contraction could you observe with a person that was almost asleep?
 A. athetosis
 B. chorea
 C. myoclonus
 D. dystonia
473. Dorsiflexion of the big toe causing an increase in sclatic type pain down the leg is _____ sign;
 A. Sicard's
 B. Gowers'
 C. Adam's
 D. Tinell's
474. What muscles are responsible for maintaining a level pelvis when standing on one foot?
 A. adductors
 B. abductors
 C. rotators
 D. flexors
475. Which technique emphasized adjusting on the convexity of a scoliotic curve?
 A. Grostic
 B. Gonstead
 C. Thompson
 D. Cox
476. A patient presents with hypotension, intolerance to cold and a moon face. What system is involved?
 A. neurological
 B. endocrine
 C. vascular
 D. respiratory
477. What is the greatest risk factor for coronary heart disease?
 A. increased triglycerides
 B. stress
 C. lack of exercise
 D. smoking
478. What is the most likely diagnosis of a 60 year old female with rasing tremors of her hands, slow movements and cogwheel rigidity on passive motion?
 A. hepatolenticular degeneration
 B. Huntington's chorea
 C. paralysis agitans
 D. multiple sclerosis
479. A patient has sharp, colicky abdominal pain after eating fatty or fried food. The pain is most likely to be referred to which area:
 A. left side of neck above 2nd rib
 B. right upper arm
 C. tip of right shoulder
 D. right scapular tip
480. A patient is being treated for a mild goiter. Which group of foods would you have the patient avoid?
 A. broccoli, cabbage and soybeans
 B. milk, cheese and eggs
 C. liver, kidney and other organ meats
 D. wheat, barley and oats
481. What supplement is indicated for mild goiter?
 A. zinc
 B. Mg
 C. cobalt
 D. ascorbic acid
482. What would be the most effective dietary supplement for seboreic dermatitis?
 A. protein and essential amino acids
 B. vitamin B complex
 C. essential fatty acids
 D. oil soluble vitamins; A, D, E
483. Which of the following can be used in the treatment of neurovus system degeneration?
 A. vitamin A
 B. B complex
 C. vitamin K
 D. ascorbic acid
484. What vitamin is best indicated for uncomplicated acne?
 A. vitamin C
 B. zinc
 C. manganese
 D. cobalam
485. Which is the most appropriate nutritional supplement for a thyroid problem?
 A. tyrosine and iodine
 B. typtophan and B6
 C. chromium and thiamine
 D. iron and protein
486. A 30 year old boxer had a fight three days ago. Now he's experiencing mid-thoracic and right shoulder pain. Which of the following would be the least likely cause?
 A. stomach disorder
 B. vertebral subluxation
 C. rib lesion
 D. liver injury
487. A 17 year old male experiences syncope on exertion. Based on this information, which of the following would be most useful in ruling out idiopathic hypertrophic sub-aortic stenosis?
 A. auscultate the precordium
 B. chest x-ray
 C. echocardiogram
 D. angiogram
488. A 60 year old male with chest and mid thoracic pain, cyanosis of the lips and oral mucosa and clubbing of the fingers. He also had bilateral hypertrophy of the SCM. What system was involved?
 A. endocrine
 B. cardiac
 C. respiratory
 D. vascular
489. A 30 year old computer programmer complains of aches and tingling in her hands and arms after prolonged typing or holding her arms above shoulder level. During physical examination her symptoms are reproduced by holding her arm in abduction and external rotation. X-rays reveal normal cervical transverse processes at C7 bilaterally. Based on this information what is the most likely site of neurological compression?
 A. between first rib and clavicle
 B. between the anterior and middle scalene muscles
 C. beneath the pectoralis minor muscle at the edge of the cervical transverse process.
490. What is the most common cause of left ventricular hypertrophy?
 A. mitral stenosis
 B. aortic stenosis
 C. pulmonary hypertension
 D. systemic hypertension
491. What is contraindicated for the third trimester of pregnancy?
 A. walking in normal posture
 B. standing for long periods of time
 C. swimming before membrane ruptures
 D. pelvic tilt exercises
492. In lateral flexion of the spine the motion would be in the _____ plane and around the _____ axis.
 A. horizontal:horizontal
 B. sagittal:vertical
 C. frontal:vertical
493. While reducing a postero-lateral L4-L5 disc protrusion using flexion distraction cephaloid pressure is applied to what structure?
 A. L4 transverse
 B. L4 spinous
 C. L5 transverse
 D. L5 spinous
494. The vertical innominate angle is increased due to increase in the muscle strength of what muscle group?
 A. quadriceps
 B. biceps femoris
 C. adductor muscles
 D. abductor muscles

495. The designation of the spatial orientation of one vertebra in relation to the adjacent segments is known as:
 A. static listing
 B. lesion
 C. lordosis
 D. dynamic listing
496. With an extension injury of a rear end collision, what kind of strain would you suspect?
 A. scalenes and SCM
 B. trapezius and deltoid
 C. splenius capitis and cervicis
 D. pectoralis major and minor
497. A 4 year old boy complains of sore throat and fever. He also has swollen lymph nodes and the tip of his spleen is palpable. A throat culture and fast slide (Monospot) are negative. What other test should be performed?
 A. heterophil
 B. Epstein Barr
 C. cervical x-ray
 D. bone marrow examination
498. A disc protrusion affecting the extensor hallucis longus muscle will result in which of the following?
 A. inability to walk on heels
 B. weakness of calf muscle
 C. positive Chaddock's
 D. ankle clonus
499. Spontaneous muscle spasms intermittent muscle contractions associated with wry neck deformity may be due to;
 A. spasmodic torticollis
 B. acquired torticollis
 C. Klippel-Feil syndrome
 D. fibrositis
500. What symptoms are present in a ventral nerve root lesion?
 A. sensory loss
 B. deep tendon hyperreflexia
 C. flaccid paralysis of muscles
 D. Absence of light reflex would be found with:
501. A syncope
 B. alcoholic toxication
 C. metabolic coma
 D. structural brain lesion
502. A 65 year old male patient complains of flu like symptoms and a "constant headache unlike any I've ever had." These symptoms have lasted 6 weeks. He also reported an incidence where he lost vision in his left eye for 15 minutes. He has pain in his jaw on chewing. This is most likely:
 A. temporal arteritis
 B. herpetic encephalitis
 C. subdural hematoma
 D. TMJ syndrome
503. Upon examination of a patient with knee injury a painful click is felt on extension of leg from flexed position with foot in external rotation. What is the sight of injury?
 A. lateral meniscus
 B. medial meniscus
 C. anterior cruciate
 D. posterior cruciate
504. 83 year old female has severe left lower quadrant pain, low back pain, nausea and vomiting. Her abdomen is distended but compressible with frequent bowel sounds. A KUB film shows proximal dilation of ascending, transverse and descending colon. Of the following which is the most appropriate next step in case management?
 A. colonoscopy
 B. gastric lavage
 C. Chiropractic adjustment
 D. hemicolectomy
505. Patient complains of low back pain, which of the following conditions would most warrant oblique x-rays of the sacroiliac joint:
 A. severe low back pain following a recent trauma
 B. incapacitating low back pain with history of metastatic disease
 C. low back pain with decreased nerve conduction
 D. low back pain of insidious onset with a decreased lung excursion in a young male patient
506. What lab finding would be diagnostic of inflammation?
 A. <11,000 WBC
 B. increased ESR
 C. decreased C-RP
 D. PMN <3% band
507. Which condition has the highest increase in WBC count?
 A. polycythemia
 B. chronic myelogenous leukemia
 C. acute lymphocytic leukemia
 D. possible mononucleosis?
508. What will show a decreased urine specific gravity?
 A. viral
 B. dehydration
 C. acute fever
 D. chronic nephrosis
509. A 12 year old male patient presents with hematuria and has increased RBC casts. What should be the initial screening test?
 A. ASO titre
 B. LDH determination
 C. cystic evacuation
 D. intravenous pyelogram
510. A fifty year old female presents with a generalized osteopenia from plain film x-ray. Hematology studies indicate a mild normocytic anemia and an elevated ESR. What test would you do next?
 A. serum immunoelectrophoresis
 B. serum acid phosphatase
 C. routine urinalysis
 D. cerebrospinal fluid analysis
511. Total serum protein is increased the most in which of the following:
 A. multiple myeloma
 B. Hodgkin's disease
 C. myelogenous leukemia
 D. peptic ulcer
512. Patient is a 45 year old male with history of mitral stenosis. He now has a temperature of 104°, tender nodules on toes and fingers and small hemorrhages of skin and retina. He is currently taking no medication. Which test should be performed?
 A. E.L.I.S.A. test
 B. VDRL test
 C. RA latex
 D. ASO titre
513. A 27 year old white female presents herself for a physical. Her only complaint is of moderate fatigue. She has no signs of infection, gastrointestinal complaints, melena or hematochezia. Physical finding of pale conjunctiva. CBC 3.72 MCV 71 MCHC 26. With these finds what is the most likely cause?
 A. decreased TIBC
 B. decreased alpha Hb
 C. decreased serum ferritin
 D. increased beta Hb
514. A 34 year old male patient presents with left flank pain that began a few hours ago. The patient denies any occurrence of diarrhea, constipation, fevers or chills. He states that he has been pacing the floor constantly trying to find a comfortable position that relieves the pain. The pain is described as sharp and stabbing and occurs in waves or paroxysms. Based on these findings what would be your initial diagnosis?
 A. nephrolithiasis
 B. multiple myeloma
 C. irritable bowel syndrome
 D. acute hepatitis
515. What lab test would be the most appropriate to run initially?
 A. urinalysis
 B. CBC
 C. Bence Jones
 D. possible stool sample
516. What lab findings would you most likely expect to find based on your information so far?
 A. pH 7.1, few RBC's, few WBC's and trace casts
 B. 4.7 x10⁶ RBC's, 11,000 WBC's
 C. ESR=9m/hr
 D. Stool smear = shows few polymorpholeukocytes
517. What other incidental findings would you likely see?
 A. brownish urine
 B. pain is relieved by a high fiber diet
 C. pain moves into the left hypochondriac region
 D. urgency and pain upon urination
518. A 46 year old female is a known hypochondriac who uses her illnesses to avoid social responsibility, to explain failures and to protect self-esteem. Which of the following evaluation methods would identify this condition and ensure a prompt referral to a psychologist?
 A. Minnesota Multiphasic Personality Inventory
 B. Stanford Binet
 C. Harvard Profile
 D. Rorschach
519. Patient presents with posterior neck numbness and pain radiating to the ear and mastoid. The patient has normal deep tendon reflexes in the upper extremity. What disc is involved?
 A. C2/C3
 B. C3/C4
 C. C4/C5
 D. C5/C6

3.20
543. Identify the condition in the radiograph below;



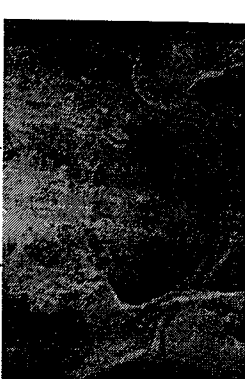
- A. posterior arch agenesis C1
B. basilar impression
C. dens fracture
D. Jefferson's

544. An 18 year old male presents with cervico-thoracic pain and occasional tingling in the arms. What is indicated on x-ray?



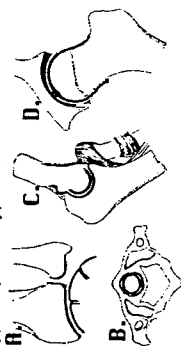
- A. hemivertebra
B. spina bifida occulta
C. Pancoast tumor
D. bilateral cervical rib

545. Based on the radiograph below, to whom should you refer this patient?



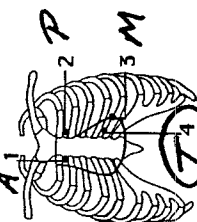
- A. oncologist
B. neurologist
C. orthopedist
D. rheumatologist

530. (Four pictures of joint types) What type of joint is type B;

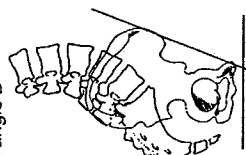


- A. ball and socket
B. ellipsoidal
C. hinge
D. pivot

540. Where can the tricuspid valve be auscultated this best?

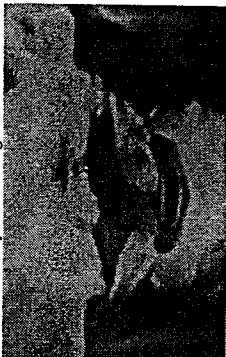


541. Weakness of which muscles increases angle D



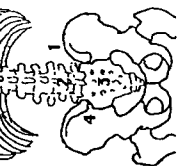
- A. adductor magnus
B. biceps femoris
C. quadriceps femoris
D. tensor fascia lata

542. A 30 year old female tripped and fell over a curb with no trauma to the head or neck. What is your finding?



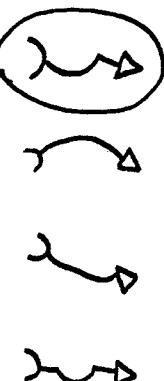
- A. spina bifida C1
B. Jefferson's
C. C1 rotatory subluxation
D. C2 dens fracture

526. Where would pain be located in the case of quadratus lumborum sprain?

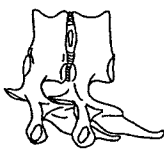


- A. 1
B. 2
C. 3
D. 4

527. What diagram represents a double major compensated scoliosis?

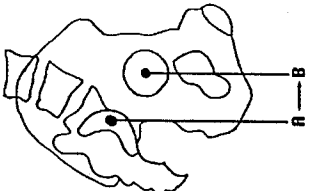


528. Which area of the spine is indicated below?



- A. cervical spine
B. mid thoracics
C. lower lumbar
D. upper lumbar

529. In the normal adult what would be the measurement between A and B?



- A. 1/2 inch
B. 2 inches
C. 4 inches
D. 6 inches

520. Pain when getting up from seated position and pain when walking upstairs.

- A. intra patella bursitis
B. femoral patellar arthralgia
C.

521. A 23 year old male with low back pain and pain in the right thigh and knee. He is holding his leg in flexion, abduction and external rotation. He has malaise and bouts of chills and sweating. Which is least likely to be used?

- A. x-ray
B. CBC
C. VA
D. EMG

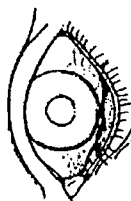
522. A male patient suffers from claudication, impotence, cold extremities. He likely suffers from:

- A. neurogenic claudication
B. vascular claudication
C. S2

523. CT scan that reveals radiolucent lesions within the white matter of the brain?

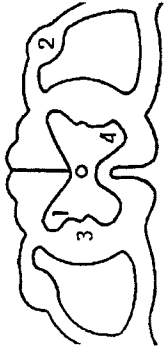
- A. multiple sclerosis
B. diabetic neuropathy
C. Alzheimer's

524. Which is pictured in the diagram above?



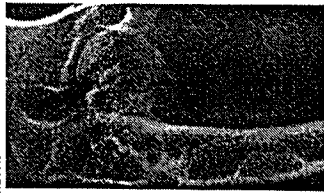
- A. ectropion
B. exophthalmos
C. xanthelasma
D. pinguecula

525. Where are the sensory neurons located?



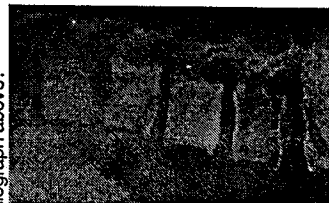
- A. 1
B. 2
C. 3
D. 4

546. A 27 year old female presents with pathological proximal femur head fracture. Also lucent ground glass appearance well margined with thin cortical border. Radiological report showed mixed fibrous and osseous cells. No evidence of mitosis or neoplasm.



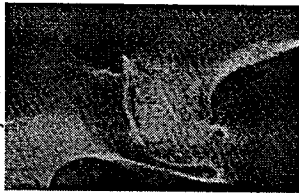
- A. multiple myeloma
B. metastatic adenocarcinoma
C. fibrous dysplasia
D. solitary unicameral lesion

547. A 50 year old male presents with a history of 6 months of low back pain and 6 weeks of urinary incontinence. Which would most likely cause the abnormality viewed in the radiograph above?



- A. osteoblastic metastatic carcinoma
B. giant cell
C. multiple myeloma
D. Paget's

548. A 30 year old female presents with hip pain, she has been on steroid therapy for the pain for 10 years. The most likely etiology for the unusual appearance of the coxa femoral joint is?



- A. congenital acetabular agenesis
B. tuberculosis of the hips
C. bilateral avascular necrosis of the femoral heads
D. bilateral gouty arthritis of the hips

549. Which of the following is the most common cause of iatrogenic bowel obstruction?

- A. oral contraceptives
B. antibiotics
C. NSAID
D. narcotic analgesics

550. Which of the following does not cause acute skin eruptions?

- A. drug use
B. food allergy
C. contact dermatitis
D. syphilis

551. What is the most common cause of falls in the elderly?

- A. Parkinson's
B. senile macular degeneration
C. Vitamin B-12 deficiency
D. temporal arteritis

552. An obese 21 year old female presents with hypertension, polyuria, and muscle weakness. Lab shows potassium depletion and hypokalemic alkalosis. The most probable diagnosis is;

- A. ankylosing spondylitis
B. aldosteronism
C. cirrhosis
D. colitis

553. Which of the following when associated with anemia is indicative of hemolytic anemia?

- A. uremia
B. jaundice
C. waxy skin
D. pica

554. A 45 year old male presents with mid thoracic pain that radiates laterally about 6 inches from the spine. Which of the following worsens the prognosis for a complete uncomplicated recovery?

- A. family history of back pain
B. happened while lifting boxes
C. muscle spasms accompanied initial symptoms
D. this has happened before

555. Which of the following is the most common sequela to atrial fibrillation?

- A. cerebrovascular accident
B. aortic aneurysm
C. aortic stenosis
D. mitral valve prolapse

556. A 53 year old female complains of recurring episodes of syncope. She is asked if the episodes are preceded by a prodromal phase. Her answers to questions will help to distinguish between syncope of cardiovascular origin or _____ origin;

- A. traumatic
B. neurogenic
C. congenital
D. metabolic

557. A patient presents with headaches, visual disturbances and vertigo. This is characteristic of what type of problem?

- A. rheumatological
B. neurological
C. endocrinological
D. pulmonary

558. Which of the following is suspected with a palpable mass on the anterior aspect of the neck that rises on swallowing?

- A. thyroglossal cyst
B. carotid artery aneurysm
C. carotid tubercle tumor
D. lymphadenopathy

559. In addition to the information obtained from the parents, what is the youngest age that a relevant case history can be obtained from a youth?

- A. 1
B. 5
C. 10
D. 15

560. A 30 year old white male presents with a painless mass on his right testicle. The best working diagnosis is?

- A. epididymitis
B. orchitis
C. varicocele
D. testicular tumor

- 3.21
561. In the diagnosis of a patient with cataracts, which aspect of the examination would be most revealing?

- A. ophthalmoscopic examination
B. pupillary reflex
C. peripheral vision
D. accommodation reflex

562. All of the following have scales on the scalp except;

- A. psoriasis
B. seborrheic dermatitis
C. tinea unguium
D. tinea capitis

563. While palpating the lymph nodes, which would represent the most severe clinical consequence?

- A. small node
B. soft node
C. hard node
D. mobile node

564. Which of the following may be a reversible eye disorder?

- A. cataract
B. macular degeneration
C. progressive myopia

565. A 65 year old woman presents with left lower quadrant pain and rebound tenderness. She recently noted blood coated stools and a history of chronic constipation. This is suggestive of?

- A. diverticulitis
B. Crohn's disease
C. irritable bowel syndrome
D. gastroenteritis

566. A 6 year old male was brought into the office by his mother. He awoke with a 102° fever painful swallowing and a sore throat. There was tenderness in the sub-mandibular area and the angle of mandible was obliterated due to swelling unilaterally. This is likely to be;

- A. peritonsillar abscess
B. Hodgkin's
C. acute pharyngitis
D. mumps

567. A 35 year old female comes in complaining of chest pain. She uses hand gestures to describe the pain. Which of the following would describe angina pectoris?

- A. point to small area on heart
B. move hands up and down from epigastric region to cheek
C. move hands back and forth from inferior rib border
D. places clenched fist over sternum

568. Patient with liver cirrhosis has a 3 mm red spot of the skin. How would you differentiate between petechiae and telangiectasis?
 a. palpation for surface irregularity
 b. illuminate for irregularity
 c. illuminate with black light for fluorescence
 d. apply pressure with a glass slide for blanching
569. A 36 year old female presents with tinnitus, headaches, dizziness and vertigo. She has been taking Nalton Forte for six months for arthritis. What should you suspect?
 a. salicylate poisoning
 b. liver disease
 c. splenic disease
 d. kidney failure
- 570a. 38 year old male patient presents with low back and leg pain after a violent sneeze three weeks ago. Physical exam shows (+) Laseque's pain at 30° and +Kemp's on the left, leg extension increased pain, flexion decreased pain. There are decreased reflexes and muscle strength is +4 on the left. All other reflexes are normal. Patient presents with a forward and lateral flexion antalgia to the right. What is possible diagnosis?
 a. disc lesion
 b. canal stenosis
 c. facet syndrome
 d. lumbosacral sprain strain
- 571a. What confirms diagnosis?
 a. CT
 b. thermograph
 c. alkaline phosphatase
 d. acid phosphatase
572. Atrophy of the interosseus muscles of the hand will present with what appearance on the palmar surface.
 a. flat
 b. contoured
 c. cyanotic
 d. swollen
573. Woman presents with a history of urinary calculi, kidney, bladder and ureter infection. What is least likely to cause her pain on urination?
 a. urinary calculi
 b. cystitis
 c. nephritis
 d. ureteritis
574. A 21 year old afebrile female presents with severe headache of sudden onset of one day duration. The headaches started temporally, moved to the occipital region and now encompasses the entire head. She also has drowsiness, confusion, and motor changes of left side of body. What is the most likely diagnosis?
 a. encephalitis
 b. temporal arteritis
 c. basilar migraine
 d. subarachnoid hemorrhage
575. Small yellow spots commonly found in the mouth in adult suggest?
 a. ulcer
 b. sebaceous gland
 c. Koplik spots
576. A 65 year old male presents with acute pain, edema, and redness of the knee. He has chills and sweating. There is no history of trauma. Two weeks ago he had surgery for the removal for a rectal cyst. One week ago radiographs taken by another physician revealed no pathology. The likely diagnosis would be?
 a. rheumatoid arthritis
 b. osteoarthritis
 c. intrapatellar bursitis
 d. hematogenous osteomyelitis
577. A 65 year old male presents with low back and right leg pain that is described as deep and throbbing. Examination reveals (-) SLR and (-) Braggard's. Normal deep tendon reflexes. X-ray reveals increased sclerosis of L4 and decreased disc height throughout lumbar spine. Lab reveals increased acid phosphatase. Based on the information, what is the diagnosis?
 a. Paget's
 b. metastatic carcinoma
 c. joint dysfunction
 d. lumbar disc lesion
578. A 72 year old female presents with headache radiating into the region of the jaw three weeks duration. Erythrocyte sedimentation rate was 102 mm. Based upon the presenting information, what diagnostic test would be appropriate?
 a. CAT
 b. angiography of carotid artery
 c. temporal artery biopsy
 d. dental x-rays
579. A 45 year old male presents with central chest pain one hour after exercising. He is in your office for exam 5 hours after onset still with chest pain. He also has low back pain and is weak and nauseated. EKG: ST elevation at V1 & V3, no Q wave changes. CPK elevated. Pain radiates into neck but not into either arm.
 a. acute MI
 b. variant angina
 c. stable angina
 d. reflux esophagitis
580. Which of the following will cause re-vascularization of the eye?
 a. choroiditis
 b. glaucoma
 c. diabetes mellitus
 d.
581. In a case of essential hypertension due to vascular obstruction, which area should you assess?
 a. eyes
 b. buccal mucosa and mouth
 c. finger tips
 d. proximal extremities
582. A 60 year old male presents with painful red swelling in the left distal metacarpal-phalangeal joint. Which of the following can be ruled out?
 a. septic arthritis
 b. rheumatoid arthritis
 c. gout
 d. osteoarthritis
583. Which of the following conditions may cause a significant increase of the erythrocyte sedimentation rate?
 a. osteoarthritis
 b. multiple myeloma
 c. polycythemia vera
 d. angina pectoris
584. Which of the following is a likely consequence of long term antipsychotic medication?
 a. syringomyelia
 b. tardive dyskinesia
 c. multiple sclerosis
 d. polymyositis
585. In a diabetic patient, which is the best method to assess the long term effectiveness of insulin therapy?
 a. glucose tolerance test
 b. glycosylated hemoglobin
 c. fasting blood sugar
 d. serum amylase
586. An auscultatory sound was heard at the second right intercostal space. There was pain radiating to the axilla. This suggests:
 a. aortic stenosis
 b. mitral stenosis
 c. mitral regurgitation
 d. pulmonic stenosis
587. Which of the following would not have hyperactive bowel sounds?
 a. early obstruction
 b. peritonitis
 c. gastroenteritis
 d. diarrhea
588. Tenderness and a suprapubic mass would be most indicative of?
 a. inguinal hernia
 b. cystitis
 c. prostatic hypertrophy
 d. renal vein thrombosis
589. A 60 year old woman presents with a history of renal calculi and pink urine. Which of the following would this most suggest?
 a. kidney stones
 b. nephrosis
 c. cystitis
 d. urethritis
590. Gross hematuria would most likely be due to?
 a. pyelonephritis
 b. bladder tumor
 c. glomerulonephritis
 d.
591. An inguinal hernia will most likely be palpated in which area?
 a. iliac crest
 b. femoral triangle
 c. greater trochanter
 d. sciatic nerve
592. A 16 year old male is brought into your office by his teammate with headache and confusion. During a football game he was hit and lost consciousness. Which question would be the most important to ask this patient?
 a. How hard were you hit?
 b. How long were you unconscious?
 c. Have you had headaches before?
 d. Have you had dis-equilibrium before?
593. The most common organism associated with pyogenic spondylitis?
 a. streptococcus pyogenes
 b. staphylococcus aureus
 c. pneumococcus
 d. E. Coli

594. On otoscopic examination, serous clitis media would be demonstrated by;
 a. amber colored fluid with air bubbles
 b. behind the tympanic membrane
 c. tympanic membrane is dull with red-grey appearance with obstructed ossicles
 d. tympanic membrane is fiery red with obliterated ossicles
 —
595. Dullness on percussion and absence of vocal fremitus suggests?
 a. pleurisy
 b. lung abscess
 c. lung obstruction
 d. lobar pneumonia
 —
596. A black male with a history of hypertension presents with sudden onset of chest pain from his throat to the epigastrium but does not radiate into the arm. He feels like his body is being torn in half. The blood pressure on the right is normal, low on the left. In the lower extremities the B.P. is equal, and the carotid pulse is decreased.
 a. abdominal aneurysm
 b. dissecting aneurysm
 c. myocardial infarct
 —
597. When a patient presents with Down's syndrome, ankylosing spondylitis, rheumatoid arthritis, psoriatic arthritis or Reiter's syndrome, which x-ray would be necessary before a chiropractic adjustment is initiated?
 a. pillar
 b. cervical oblique
 c. lateral cervical flexion/extension
 d. neutral lateral cervical
 —
598. A mass in the anterior superior mediastinum on a lateral chest x-ray is likely to be a;
 a. teratoma
 b. neurofibroma
 c. leiomyoma
 d. neuroblastoma
 —
599. What is not an extradural tumor?
 a. neurinoma
 b. lipoma
 c. leiomyoma
 d. chondroma
 —
600. Which skull view is taken with the patient supine using a 35° caudal tube tilt?
 a. A-P cervical
 b. Water's
 c. Towne's
 d. submentovertex
 —
601. Surgical intervention is indicated when an aortic aneurysm on a lateral lumbar film reaches what dimension?
 a. 2 cm
 b. 3 cm
 c. 4 cm
 d. 5 cm
 —
602. Upon evaluating a patient with Down's syndrome, the lateral cervical radiograph may reveal _____ as a result of the absence of _____ ligament.
 a. atlanto-axial instability/ transverse
 b. atlanto-occipital instability/ transverse
 c. basilar impression/ dentate ligament
 d. ponticulus posticus/ atlanto-occipital
 —
603. The optimum temperature for the chemicals in manual x-ray processing is;
 a. 58°
 b. 68°
 c. 72°
 d. 80°
 —
604. What is the correct FFD for a chest radiograph?
 a. 36"
 b. 40"
 c. 60"
 d. 72"
 —
605. Klein's line is used in the evaluation of which of the following?
 a. Legg-Calve-Perthe's
 b. slipped capital femoral epiphysis
 c. congenital hip dislocation
 d. protrusio acetabuli
 —
606. The Maximum Permissible Dose for a 25 year old occupational worker is;
 a. 15 REM
 b. 25 REM
 c. 35 REM
 d. 45 REM
 —
607. Which of the following is the most stable fracture?
 a. hangman's fracture
 b. bilateral facet dislocation
 c. posterior arch fracture
 d. hyperextension fracture with dislocation
 —
608. Which of the following would best visualize the right C5-C6 IVF?
 a. left cervical articular pillar
 b. cervical anterior oblique
 c. cervical left posterior
 d. left lateral cervical
 —
609. Because of the multiple non-segmentation or congenital block of vertebral bodies in _____ adjustments of the region of spine is contraindicated,
 a. Klippel-Feil; cervical
 b. Sprengel's; thoracic spine
 c. acromegaly; cervical spine
 d. McCune-Albright syndrome; thoracic spine
 —
610. The normal measurements of the ADI in the adult should be _____ mm; and in the child _____ mm.
 a. 1-2; 1-5
 b. 1-3; 1-5
 c. 1-5; 1-7
 d. 1-7; 1-9
 —
611. In a hyperflexion/hyperextension injury to the cervical spine, which of the following radiographs must be taken?
 a. AP lower, lateral cervical and obliques
 b. AP open mouth, AP lower cervical
 c. full Davis series
 d. AP and lateral cervical
 —
612. At what age will there be union of the epiphysis of lesser trochanter to the shaft of the femur?
 a. 14
 b. 16
 c. 18
 d. 20
 —
613. A 55 year old female presents with mid-thoracic pain, hyperkyphosis and decreased ranges of motion. X-rays reveal a generalized radiolucency of the vertebral bodies. Laboratory findings; normal serum calcium, phosphorus and alkaline phosphatase. What is most suggested by these findings?
 a. osteoarthritis
 b. osteomalacia
 c. osteoporosis
 d. discogenic spondylitis
 —
614. Codman's reactive triangle is caused by;
 a. cortical thinning
 b. periosteal new bone formation
 c.
 —
615. On a cervical oblique, lateral thoracic and lumbar, which structures would best be seen?
 a. pars
 b. pedicle
 c. IVF
 d. articular pillars
 —
616. How do you make a patient with facet syndrome comfortable when lying prone?
 a. pillow under the shins
 b. pillow between the knees
 c. pillow under the abdomen
 d. pillow under the thighs
 —
617. Which of the following is characterized by intractable back pain accompanied by increasing neurological signs unrelated to body position?
 a. myositis
 b. disc lesion
 c. tumor
 d. facet syndrome
 —
618. If a scoliosis on a 30 year old male does not correct on following lateral bending films, the curve is considered _____ and will possibly be _____.
 a. reversible; slowly progressive
 b. irreversible; slowly progressive
 c. reversible; rapidly progressive
 d. irreversible; rapidly progressive
 —
619. A local bulge along the midline of the long axis of a muscle would most likely indicate;
 a. local hypertrophy
 b. malignancy
 c. parasitism
 d. rupture
 —
620. Which of the following tests is specific for costoclavicular syndrome;
 a. Allen's
 b. Codman's
 c. Adson's
 d. Eden's
 —
621. What is the best method in the differential diagnosis of a recurrent disc herniation from a post-surgical scar tissue?
 a. discography
 b. myelography
 c. MRI
 d. CT
 —
622. Which of the following areas will have the most traction on the straight leg raiser test?
 a. L2-3
 b. L3-4
 c. L4-5
 d. L5-S1
 —

623. A 45 year old female presents with numbness in right hand on thumb and index fingers. Her hand becomes painful at night with radiating pain into the elbow. She's a part time secretary and knits 2-3 hours a day. The symptoms have been getting worse in the last four months. What is the most likely cause of her symptomatology?
 a. neuroma
 b. ganglion
 c. herniated C4-C5 disc
 d. carpal tunnel syndrome
624. A basketball player presents with pain in the knee. The injury occurred during a game where he planted his foot and internally rotated the femur on a fixed tibia.
 a. anterior cruciate
 b. medial collateral ligament
 c. lateral semilunar cartilage
 d. medial meniscus
625. A 21 year old male day nature walker presents with localized, non-radiating left lumbar pain initially relieved by light activity but aggravated by continued activity. From the above information alone what problem can be eliminated?
 a. muscular pathology
 b. ligamentous injury
 c. disc prolapse
 d. spondylitis
626. Which muscle is weakened with knock knees?
 a. gluteus minimus
 b. gluteus maximus
 c. piriformis
627. When palpated from origin to insertion, what muscle is the longest?
 a. sartorius
 b. gastrocnemius
 c. vastus medialis
 d. biceps femoris
628. Upon testing for lateralization, the tuning fork is placed on vertex of the midline of the skull. This test is;
 a. Chvostek's
 b. Rinne's
 c. Weber's
 d. Homan's
629. A 17 year old male presents with left calf pain that occurred when he was hit by a steel door on the back of his calf. He has no Achilles reflex and cannot toe walk. There is tenderness and a painful swelling at the medial aspect of the calf. Which test would be useful in his case;
 a. Thomas'
 b. Drawer's
 c. Goldthwait's
 d. Thompson's
630. A 45 year old woman presents with pain in the arm, shoulder and hand. The hand was shiny, swollen, edematous, and cyanotic. Which of the following conditions is suggested by the findings?
 a. carpal tunnel syndrome
 b. shoulder-hand syndrome
 c. thoracic outlet syndrome
 d. cervical discopathy
631. Which test would be used to differentiate between a muscular strain and IVF encroachment of the cervical spine?
 a. Soto-Hall
 b. cervical distraction
 c. Adson's
 d. Spurling's
632. Which of the following would a supported Adam's test be used to differentiate?
 a. anatomical vs. a functional scoliosis
 b. lumbosacral vs. sacroiliac lesion
633. In a patient over 30 years of age, which of the following would not be a cause of low back pain?
 a. increased facet loading
 b. increased turgor and nucleus pulposus hydration
 c. motion increases from the lower to the upper lumbar spine
634. Which of the following is NOT applicable in a case of cervical IVF encroachment or nerve root involvement?
 a. cervical compression
 b. cervical distraction
 c. maximum cervical compression
 d. Yeoman's
635. What is a mechanical cause of leg pain?
 a. hypocalcemia
 b. neurogenic claudication
 c. overexertion
636. To enhance the patellar reflex, the doctor instructs the patient to grasp his hands together with fingers flexed and pull apart as hard as he can. This is known as the _____ maneuver.
 a. Leopold's
 b. Ritger's
 c. Jendrassik's
 d. Valsalva's
637. Which joint structure does not have a nerve supply?
 a. ligament
 b. tendon
 c. meniscus
 d. periosteum
638. Sensation to the ulnar side of the elbow is innervated by which spinal nerve?
 a. C3
 b. C7
 c. T1
 d. T3
639. Pain radiating to the anterolateral aspect of the foot and leg suggest involvement of which nerve?
 a. L2
 b. L3
 c. L4
 d. L5
640. Patient comes in complaining of anterior thigh pain from the inguinal area to the knee. He can flex and extend his knee but cannot raise his knee to his chest when seated.
 a. L1
 b. L2
 c. L3
 d. T11
641. Using the Van Allen index, a muscle that has full range of motion with gravity eliminated is considered to be?
 a. 5
 b. 4
 c. 3
 d. 2
642. A 35 year old male presents with low back pain after lifting a heavy box. The pain is midline and radiates down the right posterior thigh to the knee. Reflexes were 2+ bilaterally at the patella, 2+ Achilles on the left, 0 on the right with weak plantar flexion on the right. Your most likely diagnosis is a disc protrusion at which level?
 a. L1-L2
 b. L2-L3
 c. L3-L4
 d. L4-L5
 e. L5-S1
643. Which of the following is a serious neurological sign and cause for immediate referral?
 a. vertical nystagmus
 b. (+) Weber's
 c. decreased accommodation
644. Why would you want to ask about vertical and horizontal nystagmus?
 a. integrity of the cranial nerves
 b. severity of the problem
 c. malingering
645. Which cranial nerve is involved with turning the head and shrugging the shoulder?
 a. abducens
 b. spinal accessory
 c. vagus
 d. trigeminal
646. What reflex has both somatic and visceral components?
 a. jaw reflex
 b. cilioespinal
 c. patellar
647. What is the clinical description of nerve pain?
 a. gnawing
 b. burning
 c. aching
 d. stabbing
648. The most common direction for a scapula subluxation is;
 A. anterior
 B. posterior
 C. lateral
 D. medial
649. Misalignment of the proximal ulna most commonly occurs in which direction;
 A. posterior; lateral
 B. posterior; medial
 C. anterior; medial
 D. anterior; lateral
650. Flexion of the wrist occurs almost exclusively at the _____ joint?
 A. radiocarpal
 B. mid-carpal
 C. radioulnar
 D. ulnomeniscotriquetral
651. The adjustive thrust occurs in the _____ of zone of joint motion;
 A. active
 B. passive
 C. para-physiological
 D. pathological
652. The adjustment force that causes ligamentous damage is in the _____ zone.
 a. active
 b. passive
 c. para-physiological
 d. pathological
653. In differentiating between a mobilization and a manipulation of a joint, in mobilization it occurs in the _____ boundaries; whereas manipulation occurs within the _____ boundaries.
 a. active; passive
 b. passive; para-physiological
 c. passive; pathological
 d. para-physiological; pathological
654. What is the term for overall mechanical alteration;
 a. displacement
 b. distortion
 c. misalignment
 d. distraction

655. Which of the following physiological effects of chiropractic adjustments addresses the phylogenic? the adjustment maintains normal myotonic and structural integrity of man as biped
- the adjustment maintains normal reflexes
 - the adjustment maintains normal autonomic
 - the adjustment maintains normal viscerosomatic
656. With a right scoliosis and posterior rotation of transverse of L5 on the left, where do you contact with a reinforced pisiform contact?
- left pisiform on right side spinous
 - left pisiform on left side spinous
 - left pisiform on right side mammillary
 - left pisiform on left side mammillary
657. A patient presents with muscle pain. She also has scanning speech, intention tremors and nystagmus. Her MD told her he could just help her with symptomatic relief. What would your care include?
- chiropractic adjustments and ROM exercise
 - chiropractic adjustments and hot baths
 - chiropractic adjustments and aerobic exercise
 - mobilization and heat
658. In a patient who presents with an inferior rib subluxation, which of the following would be expected?
- increased intercostal space above rib
 - decreased intercostal space below rib
 - deep inhalation is painful
 - area above the rib space is painful
659. Which area of the spine is important in afferent feedback and postural changes?
- cranial sacral
 - costovertebral
 - sacrococcygeal
 - iliofemoral
660. On a lateral analysis, which of the following structures will the plumbline NOT fall through:
- external auditory meatus
 - lumbar vertebral bodies
 - posterior to the axis of the knee
 - anterior to the lateral malleolus
661. For the majority of patients with a spondylolisthesis, chiropractic adjustments are _____
- contraindicated, since most of the patients with spondylolisthesis have structural instability
 - indicated, due to the benefits of relocation of the anterior translation
 - contraindicated, since most of the patients with spondylolisthesis have neurological deficits
 - indicated due to the concurrent sacroiliac and lumbar facet subluxation
662. An acutely intoxicated 23 year old male enters with multiple cranial abrasions and neck with stiffness. He is holding his head with his hands but has no complaint of pain. His friends say he fell down a short flight of stairs at a party and landed on his head. What is the appropriate initial treatment?
- adjust him
 - take x-rays
 - re-schedule him and tell him to return when sober
 - refer to hospital
663. A 32 year old male reports of low back pain after hiking two days prior. The pain is worse on motion and subsides at rest. He points to a generalized non-specific region over the left lumbosacral region. How would you manage this case?
- send to orthopedic specialist
 - treat muscular injury
 - treat joint instability
 - send to neurologist
664. A 68 year old male presents with low back pain radiating pain down the right leg with numbness and loss of strength. He cannot heel walk on the right. Radiographic examination reveals a degenerative scoliosis with anterior slippage of L5. Which health care professional would be most appropriate to consult before adjusting?
- cardiologist
 - urologist
 - neurosurgeon
 - physiotherapist
665. A 53 year old shipping clerk presents with low back and right buttock pain that began the previous day after heavy lifting. Examination reveals moderate limited lumbar range of motion, paraspinals and gluteal muscle spasm, subluxation of L5 and the right sacroiliac joint. Straight leg raising reproduces the lumbar and right buttock pain. Neurologic exam of the lower extremity is negative. Lateral / AP lumbar x-rays reveal moderate discogenic spondylosis of L5-S1. What is the appropriate case management?
- referral to a neuro surgeon
 - chiropractic adjustment
 - TENS
 - hot packs
666. 18 year old male presents with acute left leg pain. One week ago he jumped off a grain truck to the ground and landed on his leg. X-rays were negative for pathology or fracture. The left leg is still swollen and tender with a palpable mass, but there is discoloration. There is pain with weight-bearing. What is the initial case management?
- re x-ray
 - refer to an orthopedist
 - ice and elevate
 - radionuclide scan
667. An 18 year old baseball player presents with pain in the shoulder in the area of the biceps 24 hours after exercise, especially on abduction. What is your recommended management of the patient?
- apply heat after every game
 - adjust the extremities and take him off the pitching rotation for 2 weeks
 - patient warms up and proper stretching before every game
668. With a patient with carpal tunnel syndrome, which regimen is not recommended?
- wrist mobilization
 - occupational correction if necessary
 - exercises to strengthen the flexors of the wrist
 - cock-up splint
669. A 43 year old male painter presents with fatigue, discoloration of the gums, pallor and headache. What question on the case history would be important?
- Have you been to Mexico?
 - Do you use lead paints?
 - Do you eat iron rich food?
670. A 19 year old male presents with mid thoracic pain. Visual inspection shows a hyperkyphotic spine. There is no history of trauma. What is the best initial management?
- refer to an orthopedist
 - radiographic examination
 - perform orthopedic exam
 - run a CBC and UA
671. A 30 year old male presents with pain following a short nature hike. Pain is reproduced on active motion but not during rest. He pointed out pain by placing his hand over the left lumbar spine but could not pinpoint the exact area of pain. He said he had the same symptoms approximately 1 year ago. What is the best initial case management?
- refer for a bone scan
 - treat for muscle dysfunction
 - treat for joint dysfunction
 - refer for orthopedist
672. A person presents with headaches, conjunctivitis, a dilated pupil and a cloudy, steamy cornea. What would be indicated in their case?
- immediate referral
 - benign and self limiting but should be monitored
673. A middle-aged obese female presents with a history of fatigue, intermittent headaches and tachycardia. What question would be most relevant in the diagnosis of her case?
- Do you have an exercise regimen?
 - Are you on a diet or weight loss program?
 - Does she have a family history of thyroid problems?
674. A girl with Down's syndrome is brought in for a physical exam for the Special Olympics. The most important thing to evaluate to assess her risk of injury?
- heart rate and blood pressure
 - extension/flexion films of the cervical spine
675. A 6 year old boy presents with fever, neck pain and stiffness. Family members have had similar symptoms recently. What is recommended?
- refer to an MD
 - refer to a hospital
 - bed rest
 - do an ortho-neuro exam
676. A patient is found to have an aplastic odontoid and agenesis of the posterior arch of atlas. Your initial management should be?
- refer for corrective surgery
 - flexion extension films of the cervical spine
 - adjust
678. What exercise would be recommended for a 45 year old executive under stress presenting with fatigue?
- William's
 - Jacobson's
 - Frenkel's
 - Bobath's
679. What is the most common position for short wave diathermy on a patient with chondromalacia patella?
- standing
 - sitting
 - side lying
 - prone
680. What condition would whirlpool baths be most indicated?
- hyperthyroidism
 - renal failure
 - recently healed fracture
 - acute dermatitis

681. A 21 year old male has a history of migraine headaches and light sensitivity. Which modality would be indicated?

- a. cold packs
- b. SW diathermy
- c. intermittent cervical traction
- d. ultrasound
- e. vibratory

682b. A 46 year old left handed female office worker presents with shoulder, arm and hand pain of gradual onset. In the previous 48 hours, the patient has had trouble sleeping and there is pain limiting shoulder flexion and abduction. There is point tenderness at the anterolateral aspect of the humerus. What is the probable diagnosis?

- a. hyperabduction syndrome
- b. adhesive capsulitis
- c. rotator cuff tear
- d. subacromial bursitis

683b. Which is contraindicated in the treatment of the above diagnosis?

- a. pendulum exercises
- b. rigid immobilization
- c. broom handle exercises
- d. ice

684c. A 12 year old girl presents in your office with an S-shaped scoliosis, 14° primary thoracic curve and there was no rotation noted. What is the appropriate initial treatment?

- a. refer to an orthopedist for bracing
- b. chiropractic treatment
- c. refer to a neurologist
- d. TENS

685c. What type of supportive brace do you use with this condition?

- a. Milwaukee
- b. Minerva
- c. Philadelphia
- d. Thomas

686c. Which of the following exercises will be recommended?

- a. Jacobson's
- b. Codman's
- c. Buerger-Allen
- d. Blount's
- e. William's

687. Which of the following modalities would be used in a patient with Bell's palsy?

- a. pulsed ultrasound
- b. sine wave-surge
- c. high volt galvanic
- d. micro-current stimulation

688. Which of the following produces heat by infra-red?

- a. tanning lamps
- b. microwave ovens
- c. hot packs
- d. ultrasound

689. An 11 year old male presents with pain at the anterior aspect of the leg distal to the knee. It is worse when running, jumping, kneeling and riding a bicycle. He also has a palpable swelling at the tibial tuberosity. Which of the following is recommended on this patient?

- a. spray and stretch technique
- b. limitation of activity
- c. hot packs and massage
- d. isotonic exercises

690. An increase in the segmented neutrophils and the bands would be most suggestive of:

- a. viral infection
- b. bacterial infection
- c. allergies
- d. fungal infections

691. What is initially done in the diagnosis of tuberculosis?

- a. sputum culture
- b. CBC
- c. chest x-ray
- d. acid fast stain

692. Intake of what substance may give a false positive Gualiac test;

- a. iron
- b. vitamin C
- c. red meat
- d. aspirin

693. Lab results on a 65 year old reveals; WBC-80,000, PMNs-18%, 5% pro-lymphocytes, RBCs-1 million, MCV-101, MCH 30. Which of the following is this most suggestive?

- a. acute lymphocytic leukemia
- b. pernicious anemia
- c. polycythemia

694. What predisposes to heart attacks?

- a. high cholesterol
- b. high triglycerides
- c.

695. Which of the following is most easily absorbed by the stomach?

- a. salt
- b. water
- c. alcohol
- d. dilute acid

696. Identify the finding in the diagram below;

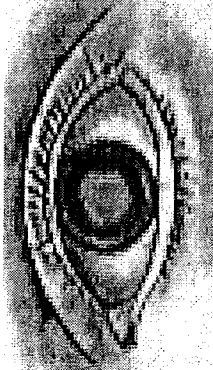
- a. Turner's sign
- b. Moon's sign
- c. Horner's sign
- d. Hutchinson's teeth

Smaller teeth, more widely spaced



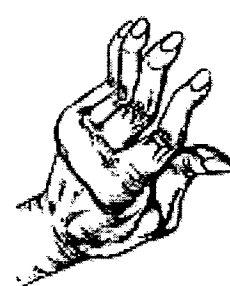
697. Identify the finding in the diagram below;

- a. cataract
- b. pinguecula
- c. glaucoma
- d. retinal detachment



698. Identify the finding in the diagram below;

- a. Sprengel's deformity
- b. swan neck deformity
- c. boutonniere
- d. mallet finger



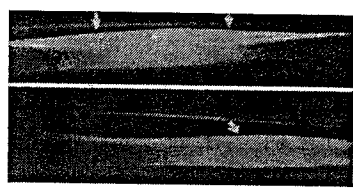
699. An 11 year old female presents with left hip and knee pain. She has a slight limp and decreased range of motion of the coxa-femoral joint;

- a. aseptic arthritis
- b. slipped femoral epiphysis
- c. Legg-Calve-Perthes
- d. osteoid osteoma

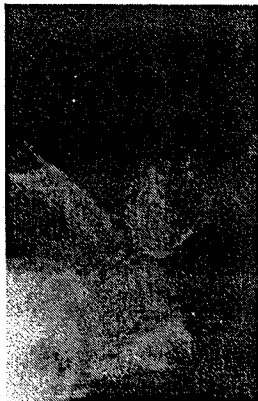


700. An 8 year old female with leg pain which is relieved with aspirin;

- a. osteoblastoma
- b. osteoid osteoma
- c. osteoma
- d. non-ossifying fibroma



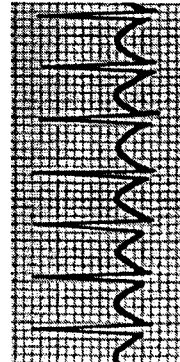
701. Identify the finding in the radiographs.
- posterior arch agenesis
 - posterior arch fracture
 - hypoplastic dens
 - facet dislocation



702. A 30 year old male presents with back pain after a fall. He has had bone pain for 10 years. Most likely diagnosis?
- Paget's
 - fibrous dysplasia
 - multiple exostosis
 - enchondromatosis



703. What is the abnormality in the EKG?
- paroxysmal tachycardia



704. What is the abnormality in the EKG?
- atrial fibrillation
 - ventricular fibrillation
 - premature ventricular contraction
 - arrhythmia

