A 23-year-old primigravid woman at 22 weeks' gestation is brought to the emergency department at a small rural hospital by her husband because of intern during the past week. The patient woke up this morning with a copious amount of vaginal bleeding and severe pelvic pain. She has noticed no fetal movem past 24 hours. Her pulse is 120/min, and blood pressure is 90/60 mm Hg. Her obstetrician is a woman whose practice is 2 hours away. The patient is dress and explains that she is a conservative Muslim. She does not want to be examined by a male physician. However, the only physician available in the emer department is a man. Which of the following is the most appropriate action by the physician?

) Ask the patient if she would allow the examination if her husband is present at all times
) Have a female nurse examine the patient and report her findings to the physician
) Obtain an emergency court order to examine the patient
) Request that the hospital chaplain speak with the patient
) Transport the patient to a major medical facility 2 hours away where she can be examined by her female obstetrician

A 37-year-old woman with HIV infection is brought to the emergency department because of a 6-hour history of chest and abdominal pain and shortness o exertion. She is currently receiving antiretroviral therapy. Her pulse is 100/min, respirations are 20/min, and blood pressure is 104/62 mm Hg. Physical exa no abnormalities. Laboratory studies show:

Serum	
HCO_3^-	16 mEq/L
AST	255 U/L
ALT	198 U/L
Lactate	90 mg/dL (N=9–18)
Arterial blood gas on room air	
pH	7.25
Po_2	98 mm Hg

A drug from which of the following classes is the most likely cause of the findings in this patient?

) CCR5 receptor antagonist
) HIV fusion inhibitor
) HIV protease inhibitor
) Integrase inhibitor
) Nucleoside reverse transcriptase inhibitor

A 32-year-old woman recently diagnosed with AIDS is at greatest risk for developing which of the following neoplasms?

) Epstein-Barr virus-induced brain lymphoma
) *Helicobacter pylori*-associated gastric lymphoma
) Hepatitis B virus-induced hepatocellular carcinoma
) Hormone-induced endometrial carcinoma
) Ultraviolet light-induced skin melanoma

A 7-year-old girl is brought to the emergency department (ED) because of a 1-hour history of excessive sleepiness and slurring of speech. The mother rep seemed to be feeling well earlier in the day and had eaten lunch 2 hours before this episode. Fingerstick blood glucose concentration ordered on arrival in 42 mg/dL. Intravenous dextrose is administered, and 5 minutes later her symptoms resolve. The patient has a history of three previous ED visits for similar during the past year. Her pulse is 94/min, respirations are 24/min, and blood pressure is 102/64 mm Hg. Physical examination shows no abnormalities. Re studies obtained prior to administration of dextrose are now available and are shown:

C-peptide	0.5 ng/mL (N=0.8–3.1)
Insulin	32 µU/mL (fasting N=5–20)
Beta-hydroxybutyrate	1.2 mg/dL (N=0.2–3.0)

Which of the following is the most likely diagnosis?

) Factitious disorder imposed on another
) Glucose 6 phosphatase deficiency
) Nesidioblastosis
) Pyruvate carboxylase deficiency
) Type 1 diabetes mellitus

A 54-year-old man with a myocardial infarction becomes progressively hypotensive. Which of the following physiologic events is most likely to cause swelli parenchymal cells in his vital organs within minutes?

) Decrease in intracellular ATP concentrations
) Decrease in intracellular pH
) Increase in ribosomal protein synthesis
) Large influx of extracellular Ca^{2+}
) Release of osmotically active glucose from glycogen granules

A 62-year-old man comes to the physician for a follow-up examination. One month ago, he was prescribed a proton pump inhibitor (PPI) for epigastric pain when he eats. Physical examination shows no abnormalities. The patient says that the medication has only partially relieved his symptoms, and he still has Serum studies show a gastrin concentration four times the reference range. The physician discontinues the PPI therapy in the patient. Three weeks later, a laboratory studies are ordered. It is most appropriate to measure the concentration of which of the following at this time?

) Plasma vasoactive intestinal polypeptide
) Serum cholecystokinin
) Serum gastrin
) Serum histamine
) Serum somatostatin

An otherwise healthy 35-year-old man sustains a fracture of the left pelvis in a motor vehicle collision. A 3-week period of bed rest for this patient is most li
which of the following physiologic changes?

) Decreased blood volume
) Decreased plasma sodium concentration
) Increased plasma aldosterone concentration
) Increased plasma volume
) Increased sympathetic nerve activity

35-year-old woman with a long-standing history of asthma treated with corticosteroids dies of complications of histoplasmosis. Examination at autopsy sh
ngs are 1.5 times the normal weight. Extensive focal areas of fibrosis and 2- to 5-mm nodules are seen throughout both lungs. Examination of a biopsy sp
odules is most likely to show which of the following findings?

) Diffuse IgG deposition
) Immune complex deposition
) Increased concentration of eosinophils
) Infiltration of lymphocytes and monocytes
) Neutrophilic infiltrates

34-year-old woman is brought to the emergency department 45 minutes after she slipped on an icy sidewalk and landed on her outstretched right hand. Ex
e right upper extremity shows an exquisitely tender, swollen wrist with a palpable hard mass located immediately proximal to the wrist joint anteriorly. X-ray
ist are shown. Which of the following bones is most likely dislocated in this patient?

) Capitate
) Hamate
) Lunate

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) ~~Capitate~~
) ~~Hamate~~
) Lunate
) ~~Pisiform~~
) Trapezium
) Trapezoid
) Triquetral

55-year-old man comes to the physician because of a 2-week history of palpitations and anxiety. He has primary hypothyroidism treated with levothyroxin
e has been taking twice the prescribed dosage of his medication for the past 2 months. His pulse is 104/min, and blood pressure is 146/88 mm Hg. Physic
hows a fine resting tremor. Which of the following sets of laboratory findings is most likely in this patient?

	Serum Free Thyroxine (FT_4)	Serum Free Triiodothyronine (FT_3)	Thyroidal Iodine Uptake
)	Increased	increased	decreased
)	Increased	decreased	increased
)	Increased	decreased	decreased
)	Decreased	increased	increased
)	Decreased	increased	decreased
)	Decreased	decreased	increased

OX genes play a role in embryogenesis through which of the following processes?

) Allelic exclusion
) Alternate mRNA splicing
) Regulation of transcription
) Regulation of translation
) Signal transduction

15-year-old girl with cystic fibrosis has a mutation in the cystic fibrosis transmembrane regulator (*CFTR*) gene, which results in deletion of phenylalanine 5
utation does not prevent synthesis of the *CFTR* protein but does prevent it from folding properly. The improperly folded *CFTR* protein will accumulate in wl
llowing cellular compartments?

) Cytosol
) Endoplasmic reticulum
) Nucleus
) Peroxisome
) Secretory granules

59-year-old woman has a 10-year history of progressive right-sided hearing loss. An MRI of the head shows a large cerebellopontine angle mass that has
e vestibulocochlear nerve on the right. This mass most likely arose from which of the following cell types?

) Astrocytes
) Glioblasts
) Neural crest cells
) Neuroblasts
) Oligodendrocytes

55-year-old man with alcoholism is brought to the emergency department 30 minutes after consuming a bottle of methanol. In order to decrease methanol atient, the physician recommends that the patient be treated with ethanol. To increase the K_m of hepatic alcohol dehydrogenase for methanol in this patient ust act as which of the following?

) Competitive inhibitor
) Complete agonist
) Feedback regulator
) Noncompetitive antagonist
) Positive allosteric effector

27-year-old man comes to the physician because he and his wife have not been able to conceive a child. He has poor libido and is unable to maintain an as been receiving thyroid hormone and corticosteroid replacement therapy since surgical removal of a pituitary adenoma 2 years ago. His serum testostero oncentration is 0.05 nmol/L (N=10–35). Semen analysis shows azoospermia. Which of the following is the most appropriate treatment to restore this patien

) Injection of gonadotropin-releasing hormone
) Injections of gonadotropins
) Oral clomiphene citrate
) Oral progesterone
) Testosterone patches

rug X is given to a 25-year-old normal subject. This drug causes resting heart rate to increase from 62/min to 74/min. Prior to administration of the drug, th
eart rate increased to 150/min with exercise; after administration of Drug X, his heart rate increased to 98/min at the same level of exercise. The mechanis
rug X most likely involves which of the following?

) Antagonist at dopaminergic receptors
) Full agonist at angiotensin II receptors
) Full agonist at ADH (vasopressin) receptors
) Partial agonist at β-adrenergic receptors
) Partial agonist at serotoninergic receptors

A 12-year-old boy is brought to the physician by his mother for a well-child examination. His mother says that he has outgrown the clothes that she bought ago. He is at the 50th percentile for height and weight. Based on his medical record, the physician estimates the patient's growth velocity to be 6 cm (2.3 in Physical examination shows mild acne over the face. Pubic hair and testes development are Tanner stage 2. Which of the following is the most likely cause of the physical changes in this patient?

) Constant secretion of gonadotropin releasing hormone (GnRH)
) Decreased GnRH receptors
) Decreased secretion of inhibin
) Increased autonomous testosterone secretion
) Nocturnal luteinizing hormone pulses

An 83-year-old woman is brought to the physician by her daughter to discuss the results of a complete dementia work-up. The patient has had mild memor or 8 months. She takes no medications. Vital signs are normal. Her Mini-Mental State Examination score is 23/30. A rapid plasma reagin is 1:4, and a microhemagglutination assay for *Treponema pallidum* is positive. Which of the following is the best next step for the physician?

) Discussion of the diagnosis with the daughter privately
) Discussion of the diagnosis with the patient privately
) Disregarding the results since the patient is too old for treatment
) Repeated tests
) Lumbar puncture

An investigator is studying a new virus isolated from a 4-year-old girl with fever and cough. Initial experiments show that the virus forms plaques on culture aryngeal cells but rapidly loses its ability to form plaques when dried or exposed to a pH of 5.0. This infectious agent is most likely similar to which of the fo viruses?

) Coronavirus
) Coxsackievirus
) Epstein-Barr virus
) Norovirus
) Rotavirus

A 32-year-old woman comes to the physician because of pain and swelling of her right cheek for 24 hours. Physical examination shows a mildly swollen ar overlying the parotid gland. Sialolithiasis is suspected. The calculus is most likely present in a duct that passes through which of the following muscles to e cavity?

) Buccinator
) Masseter
) Orbicularis oris
) Temporalis
) Zygomaticus major

Serum cholesterol concentrations are measured as part of a community study. The means and standard deviations are given for women by age group.

Age (Years)	Cholesterol (mg/dL)
45-49	229 ± 47
50-54	246 ± 50
55-59	255 ± 48
60-62	244 ± 36

Assuming serum cholesterol concentrations follow a normal (gaussian) distribution, which of the following is the probability that a woman between the ages
years has a serum cholesterol concentration greater than 296 mg/dL?

) 1%
) 2.5%
) 5%
) 16%
) 95%

A 43-year-old woman comes to the physician because of a 1-week history of abdominal pain, nausea, vomiting, itching, and fatigue. Physical examination cterus and right upper quadrant abdominal tenderness. There is no rash. Abdominal ultrasonography shows a large stone in the common bile duct. Comp count with differential shows no abnormalities. Serum total bilirubin concentration is markedly increased. The serum concentration of which of the following o be markedly increased?

) Acid phosphatase
) ALT
) Alkaline phosphatase
) AST
) Lactate dehydrogenase
) Unconjugated bilirubin

A 27-year-old man who works from home as a software engineer comes to the physician with his girlfriend because she is worried that he may be depress girlfriend tells the physician, "I practically have to drag him out of the house to see my family or friends, and then when we get there he refuses to talk to th with them. He just stands around looking uncomfortable, and then he asks to go home half an hour after we arrive." She says that he seems fine when he her or with his own family and friends. After she leaves the room, he tells the physician, "I wish I could have relationships with her family and friends, but I know they'll hate me once they get to know me." He has been this way for as long as he can remember. This patient most likely has which of the following personality disorders?

) Antisocial
) Avoidant
) Paranoid
) Schizoid
) Schizotypal

A 33-year-old woman comes to the physician because of a 2-month history of easy fatigability and dark urine in the mornings. She has not had fever or we his period. She has not traveled internationally. She takes no medications. Her temperature is 36.9°C (98.4°F), pulse is 107/min, respirations are 20/min, a pressure is 121/73 mm Hg. Physical examination shows scleral icterus. Laboratory studies show:

Hemoglobin	9.2 g/dL
Hematocrit	35%
Serum	
Bilirubin, total	3.5 mg/dL
Direct	0.2 mg/dL
Indirect	3.3 mg/dL
Urine	
Blood	2+
Protein	1+

The result of a direct antiglobulin (Coombs) test is negative, and the result of an acidified serum test is positive. Which of the following best describes the u cellular cause of this patient's condition?

) ~~Abnormal cell morphology~~
) ~~Decreased glucose 6 phosphate dehydrogenase activity~~
) Defect in a cell membrane anchor protein
) Destabilization of the cytoskeleton
) ~~Underproduction of globin proteins~~

A 15-year-old girl is brought to the physician because of a 3-day history of fever, sore throat, and malaise. Her temperature is 39.2°C (102.6°F). Physical e shows diffuse pharyngeal erythema, moderately enlarged tonsils, and tender anterior and posterior cervical lymphadenopathy. A complete blood count sho

Leukocyte count	19,500/mm^3 (N=3500–10,500)
Segmented neutrophils	30%
Bands	7%
Eosinophils	2%
Lymphocytes	25%
Lymphocytes, atypical	30%
Monocytes	6%

ncubation of this patient's serum with sheep erythrocytes results in agglutination. The atypical lymphocytes in this patient are most likely which of the follo

) B lymphocytes
) CD4+ T lymphocytes
) CD8+ T lymphocytes
) FOXP3-expressing regulatory T lymphocytes
) Natural killer cells

An 18-year-old woman is brought to the physician because of sharp chest pain and shortness of breath 1 hour after receiving a nonpenetrating injury during a rugby game. Her respirations are 22/min. Physical examination shows decreased breath sounds and increased tympany to percussion on the right. A chest x-ray is shown. This patient is at greatest risk for developing which of the following complications?

A) ~~Amyloidosis~~
B) ~~Carcinoid tumor~~
C) Diffuse alveolar damage
D) ~~Empyema~~
E) ~~Pulmonary edema~~
F) ~~Pulmonary embolism~~
G) Respiratory acidosis

A 20-year-old woman with asthma comes to the physician because of exacerbation of her symptoms during the past 3 months. She says, "I'm able to cont attacks using my inhaler, but it concerns me that these attacks are happening so often lately." She is a college student who has always carried a heavy cou says that it is sometimes stressful taking so many classes at one time, but she enjoys the challenge. Three months ago, she moved from the campus dorm off-campus apartment with some friends. She tells the physician, "I'm really happy that I was able to bring my pet poodle to live in the apartment. Sometime disagreements with my roommates because they never seem to want to clean up after themselves, and one of them kind of annoys me by smoking in the Also, I think he keeps the apartment too warm. But all in all, I'm really happy to be there." Physical examination shows no abnormalities. It is most appropri physician to advise that the patient do which of the following?

) Ask the roommate not to smoke in the apartment
) Begin treatment with daily prednisone
) Decrease her course load until the exacerbations decline in frequency
) Get an air cleaner for the apartment
) Move back to the dormitory
) Try to find a new home for the dog
) Turn down the thermostat to keep the ambient temperature at 65°F

A 3-month-old boy is brought to the emergency department because of shortness of breath and listlessness for 3 hours. He has had an upper respiratory t and has eaten poorly for the past 3 days. His temperature is 37°C (98.6°F), and respirations are 30/min. Physical examination shows lethargy and mild hep Laboratory studies show hypoglycemia, lactic acidemia, ketonemia, and metabolic acidosis. Following the intravenous administration of glycerol or fructose days, his serum glucose concentrations do not increase. However, they do increase normally after the intravenous administration of galactose. A defect in following liver metabolic pathways is the most likely cause of these findings?

) Fatty acid oxidation
) Gluconeogenesis
) Glycogen breakdown
) Glycogen synthesis
) Glycolysis

A 37-year-old man is admitted to the hospital because of gradually progressive weakness, anorexia, and weight loss over the past 6 months. His blood pre
mm Hg and his skin is hyperpigmented. Morning serum cortisol concentration is 2 µg/dL. Which of the following is the most likely diagnosis?

) Adrenocortical carcinoma
) Amyloidosis
) Autoimmune adrenalitis
) Basophilic pituitary adenoma
) Metastasis to the adrenal gland
) Pituitary necrosis (Sheehan syndrome)
) Sarcoidosis
) Waterhouse-Friderichsen syndrome

A 38-year-old woman comes to the physician because of blood-tinged discharge from her right breast for 3 months. Menses have occurred at regular 28-d She takes no medications. There is no family history of breast cancer. Physical examination shows no breast masses and no palpable axillary adenopathy. discharge can be expressed from the upper outer corner of the right nipple. Mammography shows no abnormalities. Which of the following is the most like discharge?

) Fibrocystic changes of the breast
) Fibrosarcoma
) Intraductal papilloma
) Paget disease of the breast
) Prolactinoma

Which of the following terms best describes the fibrous proteins that form the two-dimensional network on the inner surface of the nuclear membrane?

) Actin filaments
) Fibronectin
) Granum
) Lamins
) Tubulin

A 1-month-old male newborn is brought to the physician for a routine examination. His parents both have olive-colored skin, dark hair, and dark eyes. Phys
examination shows hypopigmentation of the skin, light blonde hair, and translucent irises. The inherited disorder that causes this phenotypic expression is
o a defect in the metabolism of which of the following?

) Epinephrine
) Phenylalanine
) Serotonin
) Tryptophan
) Tyrosine

A 28-year-old man has a blood pressure cuff placed around his left arm; the cuff is inflated to totally occlude arterial blood flow for 2 minutes and is then re
low in the left arm increases by 50% during the next 3 minutes and then decreases to control values. Which of the following humoral substances is most li

) Acetylcholine
) Adenosine
) Aldosterone
) Epinephrine
) ~~Norepinephrine~~
) Prostacyclin (PGI_2)
) Prostaglandin $F_{2\alpha}$
) ~~Serotonin~~
) Thromboxane A_2

A 30-year-old man develops tingling around the lips and mouth after consuming a small portion of fugu (puffer fish) in a Japanese restaurant. The liver of t
contains tetrodotoxin, a substance that causes cardiac arrest when consumed in high doses. This patient's symptoms are most likely due to the blocking a
etrodotoxin on which of the following ion channels?

) Calcium
) Chloride
) Potassium
) Sodium

A 17-year-old girl has significant blood loss after being injured in an automobile collision. Blood loss stimulates bone marrow to synthesize which of the foll

) δ-Aminolevulinate
) Bilirubin
) Erythropoietin
) Ferritin
) Uric acid

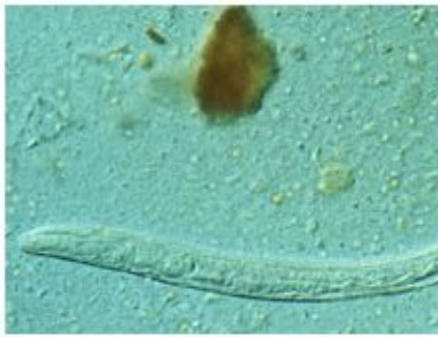
A 22-year-old woman comes to the physician for a follow-up examination. She has a 5-year history of migraines. She began taking an oral contraceptive 6 but she stopped the contraceptive 1 month ago because it resulted in increased frequency and severity of her migraines. The headaches have since impro not want to try other forms of hormonal birth control, and she asks about the most effective alternative. It is most appropriate for the physician to recomme following contraceptive methods for this patient?

) Contraceptive sponge
) Diaphragm
) Intrauterine device
) Rhythm method
) Spermicidal foam

A 62-year-old man comes to the physician because of a 2-month history of intermittent, severe pain of his left leg that began shortly after the leg was ampu
he knee. The pain is described as throbbing, aching, and shooting, and is localized to the distal portion of the absent extremity. Each episode lasts from se
o a few minutes. The pain is exacerbated by feelings of anxiety and changes in temperature and is not relieved by changing position. His vital signs are w
imits. Examination of the left lower extremity shows a well-healed surgical scar over the stump. Neurologic examination, including muscle strength testing,
notion, deep tendon reflexes, and muscle tone, is within normal limits. Which of the following is the most likely cause of this patient's symptoms?

) Chronic infection of the residual extremity
) Fibromyalgia
) Neuralgia
) Phantom limb pain
) Radiculitis

A 35-year-old woman with asthma comes to the emergency department because of a 1-week history of abdominal pain and diarrhea. She also has had progressive cough and wheezing that paradoxically worsened shortly after she began treatment with oral prednisone for an asthma exacerbation. She recently returned from a trip to Papua New Guinea. Her temperature is 37.8°C (100°F), pulse is 96/min, respirations are 24/min, and blood pressure is 124/84 mm Hg. Physical examination shows cutaneous larva currens over the abdomen. A chest x-ray shows bilateral central alveolar infiltrates. Her leukocyte count is 18,000/mm^3 (with 23% eosinophils). Stool examination and analysis of fluid obtained on bronchoalveolar lavage show the presence of the organism shown in the photomicrograph. Prednisone is discontinued. Which of the following is the most appropriate pharmacotherapy for this patient?



A) ~~Dexamethasone~~
B) ~~Hydroxychloroquine~~
C) ~~Mefloquine~~
D) Praziquantel
E) Thiabendazole

A 4-year-old girl has a history of multiple bone fractures and poor wound healing. A photograph of the face is shown. Which of the following components of s most likely to be affected as a direct result of her underlying disease?

) Cell migration
) Clot formation
) Granulation tissue deposition
) Inflammation
) Scar formation

A 43-year-old woman comes to the physician because of a nonproductive cough for 3 weeks. She has had a 6.8-kg (15-lb) weight loss during the past 3 months. A chest x-ray shows three 0.3- to 1-cm nodules in the right lung. Cytologic examination of fine-needle aspirate from the largest nodule strongly suggests a malignant neoplasm. A photograph representative of the findings in this patient's lungs is shown. Which of the following is the most likely diagnosis?

A) Carcinoid tumor
B) Malignant mesothelioma
C) Metastatic carcinoma
D) Pulmonary hamartoma
E) Small cell carcinoma

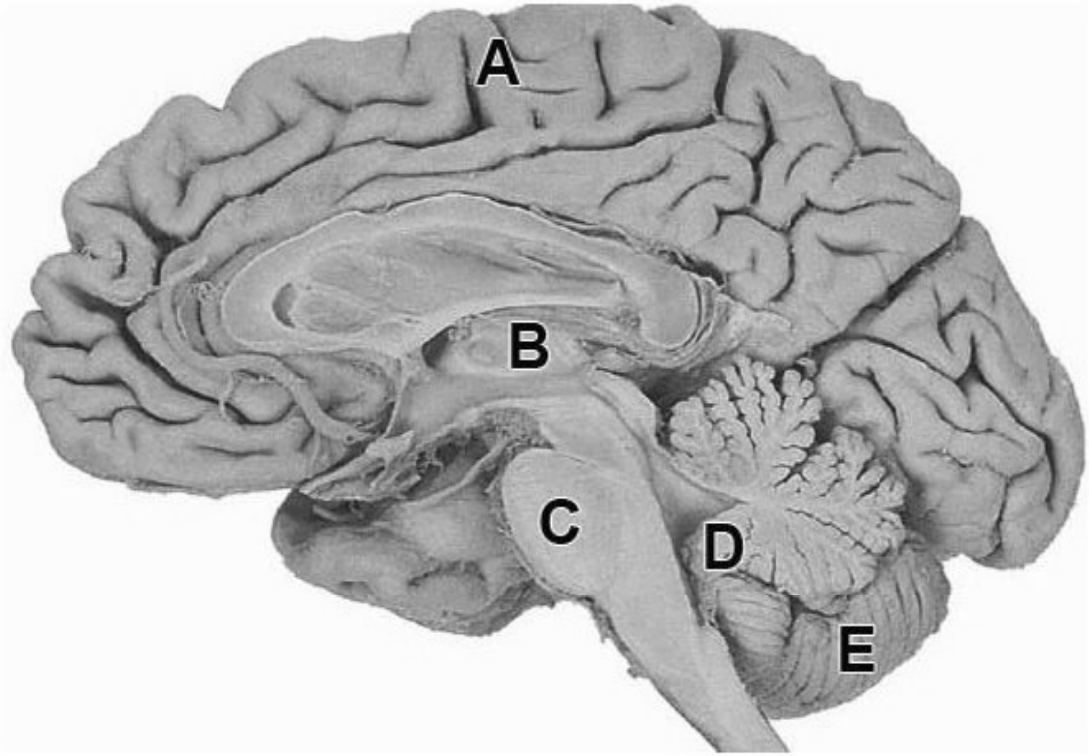
A 21-year-old woman with asthma comes to the physician because her current medication regimen is not relieving her symptoms. The physician tells the p
clinical trial of a new drug for asthma. This trial is a large, randomized, prospective, double-blind study on volunteers with asthma. This trial is most likely o
which of the following phases of drug development?

) Phase 0
) Phase 1
) Phase 2
) Phase 3
) Phase 4

A 37-year-old man who is a farmworker comes to the emergency department because of a 12-hour history of severe pain in his abdomen and legs and pai his jaw. Physical examination shows marked spasms of the masseter and abdominal musculature. During the examination, a loud noise in the examination painful spasms and respiratory compromise requiring intubation. Administration of antitoxin prevents further symptoms, but the patient continues to require ventilatory support for the next 3 weeks. This patient most likely has a syndrome that involves binding of a toxin to which of the following?

) Acetylcholinesterase
) *N*-Acetylneuraminic acid
) Calmodulin
) Monamine oxidase
) Synaptobrevin
) Ubiquitin

A 22-year-old man is brought to the emergency department 30 minutes after he was involved in a motorcycle collision. Physical examination shows dysme
ight. Muscle strength is normal. Which of the following labeled structures in the photograph of the brain is the most likely site of injury in this patient?



A) B) C) D) E)

A 65-year-old man is brought to the emergency department 30 minutes after the sudden onset of shortness of breath and discomfort in his chest. He says
and apprehensive. His pulse is 110/min, respirations are 22/min, and blood pressure is 100/80 mm Hg. Physical examination shows diaphoresis. An ECG
segment elevation in the anterior leads. Compared with a healthy man of the same age, which of the following sets of cardiopulmonary changes is most lik
patient?

	Systemic Vascular Resistance	Pulmonary Vascular Resistance	Pulmonary Capillary Wedge Pressure
)	↑	↑	↓
)	↕	↕	↕
)	↑	↓	↓
)	↕	↕	↕
)	↕	↕	↕
)	↕	↕	↕

A 3-year-old girl has a history of recurrent infections. In vitro, neutrophils isolated from this patient are capable of phagocytosis and can kill *Lactobacillus* sp *Staphylococcus aureus*. This patient most likely has a defect involving which of the following enzymes?

) Catalase
) Elastase
) Myeloperoxidase
) NADPH oxidase
) Superoxide dismutase

A group of physicians submits a report to a medical journal that describes three patients with idiopathic pulmonary fibrosis who developed hepatotoxicity fo
reatment with a recently approved drug. In the report, the physicians state that they are unaware of any previous description of this adverse effect. Which
best describes the study design used by these clinicians?

) Case series
) Case control study
) Clinical trial
) Correlational study
) Prospective cohort study
) Retrospective cohort study

A 2-year-old boy is brought to the emergency department because of a 12-hour history of headache, loss of appetite, and vomiting. His temperature is 39.
pulse is 120/min, respirations are 40/min, and blood pressure is 90/50 mm Hg. Physical examination shows nuchal rigidity. A lumbar puncture is done. Cer
analysis shows an increased protein concentration, decreased glucose concentration, abundant neutrophils, and gram-positive diplococci. Immunization w
ollowing would most likely have prevented this patient's infection?

) Envelope glycoprotein
) Killed bacterial vaccine
) Polysaccharide protein conjugate vaccine
) Recombinant vaccine
) Toxoid

A cohort study is done to evaluate the association between use of video display terminals (VDTs) by women and the risk for congenital heart disease in the The relative risk (risk ratio) of congenital heart disease in newborns born to women who work for 6 or more hours daily using a VDT is 1.1 (95% confidence 0.8–1.4) compared with women who are not exposed to VDTs. Which of the following is the *p*-value calculated from a chi square test?

) 0

) $0 < p < 0.01$

) $0.01 < p < 0.05$

) $0.05 < p < 1.0$

) $p > 1.0$

A man accidentally touches the surface of a hot stove; 20 minutes later a blister develops at the site. Light and electron microscopy of the inflamed tissue a most likely to show which of the following?

) Accumulation of macrophages
) Fragmentation and hyalinization of dermal collagen
) Interendothelial gaps in venules
) Necrosis of arterioles
) Perivascular collections of eosinophils

The pedigrees of patients with schizophrenia most closely resemble those of patients with which of the following?

) Cystic fibrosis
) Diabetes mellitus, type 1
) Fragile X syndrome
) Polycystic kidney disease
) Tay-Sachs disease