

Week 38 Quiz

Questions - 40

Q.1) The Week 38 EBHF Quiz gives you a chance to reflect on a variety of challenging question. The purpose is to stimulate and push your thinking. The goal is to keep helping you refine and refine your expertise! Your goal is to get a score of 50 % or more. Anything above 50% is fantastic... so good luck and please look up answers (google, textbooks, lecture notes) if you are not sure.

- A. ☐ Okay, I understand! I'm aiming for a score of 50% or more
- B. ☐ I'm aiming for a score of 100%

Q.2) What is the most frequently used treatment for acromegaly?

- A. ☐ radiotherapay
- B. ☐ somatostatin analogues (octreotide)
- C. ☐ transphenoidal adenomectomy
- D. ☐ growth hormone antagonist (pegvisomant)

Q.3) Which of the following blood tests results are elevated in women with idiopathic hirsutism?

- A. ☐ testosterone
- B. ☐ DHEAS
- C. ☐ FSH
- D. ☐ prolactin
- E. ☐ none of the above

Q.4) Mrs Johnson is a 77 year old woman with androgenetic alopecia using minoxidil. She comes to see you regarding additional options to treat her androgenetic alopecia. She says that "My biggest concern in the world is MY HAIR!" The past medical history of Mrs Johnson includes high blood pressure, osteoarthritis and high cholesterol. Her medications include hydrochlorothiazide and rosuvastatin. Although you understand her perspective regarding her hair, what is this patient's biggest medical issue?

- A. ☐ Heart disease
- B. ☐ Breast cancer
- C. ☐ Alzheimer disease
- D. ☐ Lung Cancer

Q.5) Brittany is a 47 year old female with depression, obesity, and chronic alcohol use. She presented with easy bruising, increased sweating and headaches. She was given a requisition to have a low dose dexamethasone suppression test to evaluate for possible Cushing syndrome and her results came back showing failure to suppress cortisol level (a positive result). Her endocrinologist thinks this is likely a false positive result. Which of the following could account for a false positive result?

- A. ☐ obesity
- B. ☐ alcohol use
- C. ☐ depression
- D. ☐ all of the above

Q.6)

Mellie is a 32-year-old woman who has been a patient of the hair loss clinic who presents with concerns about hirsutism. She has 'lost her period' and has been plagued with low grade headaches daily for several months. She tells you that sometimes she has brownish white discharge from the breast.

Laboratory test results included a grossly elevated serum prolactin level of 180.6 µg/L (reference range, 2-29 µg/L). Her beta HCG was negative. Her follicle-stimulating hormone level was 7.5 mIU/mL (reference range, 2.5-10.2 mIU/mL), and luteinizing hormone level of 8.2 mIU/mL (reference range, 2.4-12.6 mIU/mL). Several other blood tests were ordered and were normal including TSH, liver function tests and creatinine. Magnetic resonance imaging (MRI) of the pituitary showed a cystic nodule measuring 3.1 × 4.2 mm. What is the most likely diagnosis?

- A. ☐ Pituitary Macroadenoma
- B. ☐ Microprolactinoma
- C. ☐ Macroprolactin
- D. ☐ Acromegaly with features of Hyperprolactinemia

Q.7) **Abigail is a 46 year old female of Ashkenazi Jewish descent. She has androgenetic alopecia and is using topical 5% minoxidil and also oral minoxidil 1.25 mg. Her past medical history includes breast cancer at age 43 treated with surgery and radiation, high blood pressure (treated with an antiotensin receptor blocker), restless leg syndrome and anxiety about health issues. Her family doctor referred Abigail to you to for consideration of oral spironolactone after reading a research paper that spironolactone can be used in women with breast cancer. Which of the following issues make you feel unsettled about starting spironolactone?**

- A. ☐ Her BRCA1/2 status
- B. ☐ Her blood pressure control
- C. ☐ Her restless leg syndrome
- D. ☐ Her anxiety

Q.8) Janet has androgenetic alopecia and was started on 0.625 mg oral minoxidil last month. Her other current medications include amlodipine for high blood pressure (started 12 months ago but increased from 5 to 10 mg last month) and sumatriptan for migraines (started 15 years ago and uses 1-2 times per month). Janet contacted the office this morning worried about newly developing fluid retention and weight gain. This has never happened before. Which of the following reasons could be responsible for Janet's fluid retention?

- A. ☐ Amlodipine
- B. ☐ Oral minoxidil
- C. ☐ Oral minoxidil and amlodipine
- D. ☐ Oral minoxidil and amlodipine and sumatriptan

Q.9) Mary was given 2.5 mg oral minoxidil by another practitioner 7 months ago and now has significant pedal edema. She will be going to a party next month and wants to get rid of this extra fluid if possible. She wants to wear a certain pair of shoes and says it's 100% impossible for her to fit into these shoes! Her family doctor prescribed furosemide (LASIX). Which of the following might be reasons why you would tell Mary not to use the furosemide (LASIX)?

- A. ☐ Mary has allergies to Sulfa drugs
- B. ☐ Mary has allergies to Penicillin
- C. ☐ Mary has allergies to Ciprofloxacin
- D. ☐ Mary has allergies to doxycycline

Q.10) All of the following diseases would tend to lead to poor absorption of vitamins A, E and K except :

- A. ☐ Celiac disease
- B. ☐ Crohn's disease
- C. ☐ Scurvy
- D. ☐ Cystic Fibrosis

Q.11) Match the following B vitamin names to the correct name

	Choice		Match
--	--------	--	-------

A	Vitamin B1	1	Riboflavin
B	Vitamin B2	2	Folic acid
C	Vitamin B3	3	Niacin
D	Vitamin B5	4	Pantothenic acid
E	Vitamin B6	5	Thiamine
F	Vitamin B7	6	Cobolamin
G	Vitamin B9	7	Biotin
H	Vitamin B12	8	Pyridoxine

Q.12) Where in the body is vitamin A stored?

- A. ☐ Heart
- B. ☐ Kidney
- C. ☐ Liver
- D. ☐ Bone
- E. ☐ Brain

Q.13) Some animals can make their own vitamin C. Humans can't synthesize vitamin C! Why can't humans make vitamin C ?

- A. ☐ They lack ascorbate dehydrogenase
- B. ☐ They lack L-gulonolactone oxidase
- C. ☐ They lack xylulose reductase
- D. ☐ They lack L-gulonate dehydrogenase

Q.14) Which of the following is the best source of vitamin B12?

- A. ☐ citrus fruits
- B. ☐ eggs
- C. ☐ beans
- D. ☐ sweet potatoes

Q.15) Vitamin B3 has an important role for which of the following

- A. ☐ maintain health of the nervous system
- B. ☐ reduce oxidative stress
- C. ☐ maintain eye sight
- D. ☐ convert food into energy

Q.16) Whole wheat is a good source of which of the following?

- A. ☐ vitamin D
- B. ☐ vitamin A
- C. ☐ thiamine
- D. ☐ vitamin C

Q.17) Increased protein intake is accompanied by an increased dietary requirement for which of the following

- A. ☐ thiamine
- B. ☐ folic acid
- C. ☐ vitamin B2
- D. ☐ nicotinic acid

Q.18) A 43 unhouseed man is brought to the hospital emergency room with hallucinations and delusions and has alcohol on his breath. Which of the following compounds is important to administer (ideally as soon as possible)?

- A. ☐ glucose
- B. ☐ niacin
- C. ☐ thiamine
- D. ☐ essential fatty acids

Q.19) A deficiency of which vitamin results in large, immature red blood cells on account of insufficient DNA production?

- A. ☐ vitamin B2
- B. ☐ vitamin B3
- C. ☐ vitamin B9
- D. ☐ vitamin C

Q.20) Josephine is 56 years old and is being treated with the drug isoniazid (INH) for tuberculosis. She has developed a sideroblastic anemia. Which micronutrient deficiency may be responsible?

- A. ☐ vitamin B2 deficiency
- B. ☐ vitamin B3 deficiency
- C. ☐ vitamin B6 deficiency
- D. ☐ vitamin B12 deficiency

Q.21) "Magenta tongue" is found in patients with a deficiency of which vitamin ?

- A. ☐ vitamin B1
- B. ☐ vitamin B2
- C. ☐ vitamin B5
- D. ☐ vitamin B6

Q.22) Which of the following is an antioxidant?

- A. ☐ vitamin D
- B. ☐ vitamin E
- C. ☐ vitamin K
- D. ☐ vitamin B12

Q.23) Which of the following tissues would have the highest concentrations of vitamin C ?

- A. ☐ liver
- B. ☐ kidney
- C. ☐ adrenal glands
- D. ☐ spleen

Q.24) Beriberi and Wernicke's disease can be treated by administering which vitamin ?

- A. ☐ vitamin A
- B. ☐ vitamin B1
- C. ☐ vitamin B6
- D. ☐ vitamin B12

Q.25) Increased glucose consumption will increase the dietary requirement for which vitamin ?

- A. ☐ vitamin B1
- B. ☐ vitamin B2
- C. ☐ vitamin B3
- D. ☐ vitamin B7

Q.26) Which of the following are most likely with vitamin B2 (riboflavin) deficiency?

- A. ☐ cheilosis
- B. ☐ loss of weight
- C. ☐ mental impairment
- D. ☐ dermatitis

Q.27) Both vitamin B12 and vitamin B9 (folic acid) are needed for

- A. ☐ deamination of serine
- B. ☐ deamination of threonine
- C. ☐ methylation of homocysteine to methionine
- D. ☐ conversion of pyridoxal phosphate to pyridoxamine phosphate

Q.28) Harman is a 71 year old male who present with hair shedding that is thought to be consistent with a telogen effluvium. He is noted on further review to have worsening fatigue as well as shortness of breath (dyspnea) with activities. On examination you note that he has pallor of the conjunctiva. Which of the following questions would be most helpful to ask about?

- A. ☐ "Do you have a family history of anemia?"
- B. ☐ "What things do you eat (Dietary history)?"
- C. ☐ "Have you had a change in bowel habits?"
- D. ☐ "Do you use testosterone replacement therapy?"
- E. ☐ "What do you do for a living or what did you do for a living?"

Q.29) Harman's labs show hemoglobin 83 g/L (8.3 g/dl) with normal range 130-160 g/L (13-16 g/dL). MCV is 68 fL (normal range 80-100). RDW is 18.3% normal (11-14%). Ferritin is 4 (normal range 30-300). What is the next best step in the evaluation?

- A. ☐ hemoglobin electrophoresis
- B. ☐ bone marrow aspiration
- C. ☐ colonoscopy
- D. ☐ JAK2 mutation testing

Q.30) For Harman, colonoscopy reveals colon cancer. Haman undergoes surgery and is now recovering. Which of the following statements best describes how his iron deficiency should best be treated?

- A. ☐ give one dose of intravenous iron therapy to boost his iron
- B. ☐ give 200 mg of elemental iron orally every day forever (indefinitely)
- C. ☐ give 200 mg of elemental iron orally every day until hemoglobin rises up into the normal range
- D. ☐ give 200 mg of elemental iron orally every day until hemoglobin rises into the normal range and then give 3 more months of therapy
- E. ☐ no treatment is needed as the cancer was treated

Q.31) What would be the typical 'expected' rate at which hemoglobin might rise if we treat Harman's anemia aggressively ?

- A. ☐ 1 g/dL (10 g/L) every 2-3 days
- B. ☐ 1 g/dL (10 g/L) every 2-3 weeks
- C. ☐ 1 g/dL (10 g/L) every 2-3 months
- D. ☐ none of the above

Q.32) You see Harman back in 2 months and his hemoglobin had increased from 83 g/L (8.3 g/dl) to just 95 g/dL. You are surprised it did not increase more! What is the most likely reasons for Harmon's suboptimal response to treatment?

- A. ☐ His colon cancer has probably recurred
- B. ☐ His colon cancer was likely incompletely resected
- C. ☐ He likely has malabsorption
- D. ☐ He is likely non-compliant to treatment

Q.33) Janet is a 67 year old female presents with fatigue and tingling in her feet, which has been worsening over the last few months. She has some difficulty walking. On examination, she has hyperreflexia and diminished proprioception in her lower limbs. Other examination findings are shown here. What is the most likely diagnosis?



- A. ☐ folate deficiency
- B. ☐ zinc deficiency
- C. ☐ vitamin B3 deficiency
- D. ☐ vitamin B1 deficiency
- E. ☐ vitamin B12 deficiency

Q.34) Where in the body is vitamin B12 absorbed?

- A. ☐ stomach
- B. ☐ duodenum
- C. ☐ terminal ileum
- D. ☐ kidney

Q.35) Janet ultimately is diagnosed with "pernicious anemia" and started on intramuscular vitamin B12 therapy. Which "lab test" should be monitored closely during the early weeks of vitamin B12 replacement therapy?

- A. ☐ Magnesium
- B. ☐ Sodium
- C. ☐ Calcium
- D. ☐ Potassium
- E. ☐ Phosphate

Q.36) Absorption of vitamin B12 requires the presence of which of the following

- A. ☐ Pepsin
- B. ☐ Intrinsic factor
- C. ☐ Hydrochloric acid
- D. ☐ Both hydrochloric acid and intrinsic factor

Q.37) Where is vitamin B12 stored in the body?

- A. ☐ It's not stored in the body at all
- B. ☐ It's stored in the liver
- C. ☐ It's stored in the bone marrow
- D. ☐ It's stored in the lymph nodes

Q.38) 25 hydroxylation of vitamin D occurs in which organ?

- A. ☐ skin
- B. ☐ kidneys
- C. ☐ liver
- D. ☐ intestine

Q.39) Parathyroid hormone (PTH) is required for the conversion of

- A. ☐ cholecalciferol into 1 hydroxycholecalciferol
- B. ☐ cholecalciferol into 25 hydroxycholecalciferol
- C. ☐ 25 hydroxycholecalciferol into calcitriol
- D. ☐ cholesterol into 7 dehydrocholesterol

Q.40) Iron deficiency is often straightforward to diagnose. Sometimes, however, it's challenging! For patients with BOTH iron deficiency and infection, some of the markers can be altered. Which of the following best describes the blood test results in someone with severe infection AND iron deficiency?

- A. ☐ Low hemoglobin, low ferritin, high serum transferrin receptors, low hepcidin
- B. ☐ Low hemoglobin, high ferritin, high serum transferrin receptors, high hepcidin
- C. ☐ Low hemoglobin, low ferritin, normal serum transferrin receptors, high hepcidin
- D. ☐ Low hemoglobin, low ferritin, low serum transferrin receptors, high hepcidin