**Female Athlete Triad—Case Study**

**Part 1: A 22-year-old female college athlete comes to your office for a pre-participation sports physical. She just started her senior year and has been on the varsity cross-country team for the past 3 years. She appears anxious and has a thin physique.**

1. What is the definition of the Female Athlete Triad?
2. What are some examples of screening questions you may ask in an attempt to identify if the patient has symptoms pertaining to the Female Athlete Triad?
3. What sports are generally considered higher risk for developing the Female Athlete Triad?

**Part 2: Upon questioning, your patient admits to “not having a period” for the past 6 months. Prior to that time she would have regular periods—with a 28-day interval, little to moderate bleeding, lasting around 5 days. The patient started her menstrual cycle at 12 years old. This is the longest she has gone without menstruation. She has never missed a period before. She states that in preparation for her senior year, she has increased the duration and her weekly mileage with the goal of completing at the national championships.**

1. Is this patient presenting with primary or secondary amenorrhea, and what defines each?
2. As amenorrhea secondary to excessive exercise is a diagnosis of exclusion, what other possible diagnoses may this patient have? What would you consider doing for a physical exam or lab tests?
3. If history, physical exam, and labs returned normal and the patient was diagnosed with secondary amenorrhea due to exercise, what would you consider for treatment?

**Part 3: Upon further questioning, the patient admits to actively trying to lose 10 pounds before her first cross country meet in 2 weeks. She has been accomplishing this with frequent weigh-ins and by increasing her daily distance without increasing her caloric intake. The patient admits to current bingeing and purging practices at least one time per week for the past 3 months. She also admits to prior purging at the beginning of her freshman year when she was told by her coach that in order to make the team she “had to make weight.” On physical exam you see swollen parotid glands, erosion of tooth enamel, knuckle scars, and bloodshot eyes. The patient has a normal BMI and appears appropriate for her developmental stage.**

1. What diagnosis does this patient likely have and why?
2. What consultations would you consider after taking this portion of the history and physical exam?
3. When questioning the patient about foods that she avoids, the patient breaks down and admits to only eating salads for the past month and states that she has mealtime anxiety and depression about her self-image. What medications would you consider using in this patient?

**Part 4: Because you have successfully identified low energy availability with disordered eating and menstrual dysfunction in this athlete, you astutely decide to screen for the third component of the female athlete triad—low bone mineral density. The patient admits to frequent metatarsal pain and two diagnosed “foot fractures” last year after her season was over.**

1. Would you consider any imaging modalities in this patient at this time?
2. Are there any lab tests you would consider ordering?
3. If both calcium and vitamin D were found to be low, what goal dose would you provide for the patient? Would you ever consider bisphosphonates in women aged 16–28?