

## EPREUVE ECRITE D'ANGLAIS

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### Hemochromatosis

The normal iron content of a human body is about 3-4 grams, which is held mostly in the red blood cells. It is an important component in our body in that it helps magnetize oxygen onto the red blood cells. The body also stores a small amount on a molecule called ferritin that can hold up to 4,500 molecules of iron.

Hemochromatosis is a condition in which iron can accumulate and create damage and inflammation in the body. This excess iron can be very corrosive to the internal organs, and if left untreated, can hasten organ degradation and even lead to death.

The main marker for hemochromatosis is high serum of ferritin levels. A normal ferritin level is 50 – 100ng/ml of serum. Below 10 is suggestive of anemia, and levels above 200ng/ml in men and 150ng/ml in women warrant further evaluation for hemochromatosis. Some 10 percent of people are heterozygous for the hereditary form of hemochromatosis; 0.5 percent inherited the genetic mutation from both parents, and are thus homozygous for the more severe disease form.

Iron overload can happen to anyone at any age, and to detect it, testing with ferritin is essential. Unexpected abnormalities in liver function tests or chronic liver disease such as cirrhosis, cardiac enlargement, diabetes mellitus, decreased libido and impotence in men skin hyperpigmentation, fatigue, joint pain, especially involving the second and third finger joints, etc. are suspicious of iron overload.

Luckily the disease is readily treated by phlebotomy or “bloodletting”. People who have been diagnosed with hemochromatosis need to have regular (weekly or biweekly) phlebotomy until iron levels return to normal. They then need to be monitored to assess a subsequent phlebotomy schedule. Iron chelation is an alternative option, consisting in using the pharmaceutical or natural products to bind iron. The latter which includes black tea, spinach, sardines, yogurt, kale, etc. is also a good option for maintaining optimal iron levels after the initial phlebotomy push.

Adapted from Emily A. Kane, Better Nutrition: June 2017, p. 24.

### Guided commentary

- 1) Basing on the text, define hemochromatosis and give its effect on the patient. ( 3 points)
- 2) According to the text, what is the role of iron in the human body? (2 points)
- 3) Relying on the text, how can we determine an abnormal level of iron in a person's body? (4 points)
- 4) Referring to the text, how do we cure hemochromatosis? (5 points)
- 5) In your opinion, what must be done to improve people's health conditions in your country? (6 points)

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