Discussion Question Answers

Heart History

- **Why was heart disease almost nonexistent prior to the 20th century? Explain.**
  (*Briefly, the convenient and processed benefits of the Industrial Revolution have made today's people less active and their diets less healthy than those of their no-frills ancestors. This change in lifestyle has led to increases in clogged arteries, strokes, and heart attacks.*)

- **How has medical science helped to address this key health problem?**
  (*Among other things, medical science has conducted studies, like the famed Farmington Study, and developed greater insights into heart disease and better medicines, techniques, and technology for treating it, as highlighted in the "milestones of cardiology."*)

- **Name an automated product that you use regularly. What would you do if you didn't have this? How might that affect your health?**
  (*Accept all reasonable answers. Elicit responses from many students.)*

- **Beyond finding medical answers, what do you think should be done about this deadly, ongoing epidemic?**
  (*Accept all reasonable answers. Elicit responses from many students. Emphasize the importance of making the public aware of the radical lifestyle and dietary differences we've made from those of our ancestors.*)

The New Cholesterol

- **Why are researchers interested in investigating the unproven risk factors that may lead to heart disease?**
  (*These factors are thought to be substances in the body that may cause atherosclerosis. Once scientists tease out these risk factors, they can create ways to fight them.*)

- **What are some of these factors? What are they thought to do?**
  (*They include cholesterol, triglycerides, and homocysteine, a less-known but equally dangerous substance said to cause heart disease.*)

- **What do scientists believe to be the key in lowering homocysteine levels in the blood?**
  (*Beyond the preventative ideals of a healthy diet and regular exercise, researchers are looking at vitamins—B-vitamins in particular—for their abilities to reduce atherosclerosis and homocysteine levels.*)

- **What is atherosclerosis?**
  (*It is the accumulation of fatty plaque in arteries that leads to clogging that blocks the flow of blood to the heart and brain.*)

- **How do today's doctors treat people at risk for heart disease?**
  (*Physicians advise changes in diet and exercise and prescribe cholesterol-lowering drugs both to prevent a first heart attack and to help prevent cardiovascular events in those who have already suffered an attack.*)

- **Why are more studies needed?**
  (*Doctors still lack hard proof that homocysteine is directly linked to cardiovascular disease or that B-vitamins are a healthy and effective supplement for atherosclerosis.*)

- **What kinds of science and technology are currently being used to investigate, monitor, and prevent heart disease?**

(*In trials, researchers have begun to use advanced imaging techniques and scans to look into the body and, for example, to examine arteries and measure blood thickness as a means of determining how quickly someone is advancing toward heart disease.*)

Paleolithic Nutrition: Your Future Is In Your Dietary Past

- **What are some of the differences between the way human beings ate and lived in the Paleolithic era as compared to today?**
  (*Accept all reasonable answers based on the reading material.*)

- **What were the main causes for this change in diet and lifestyle?**
  (*Diet-changing events included the development of agriculture 10,000 years ago, the Industrial Revolution over 100 years ago, and more and more modernization of both life and diet.*)

- **What is the problem with modern diets in terms of genetics?**
  (*Briefly, 99% of our genetic heritage comes from the Paleolithic era, yet our modern diets are clearly out of sync with our genetic requirements. As a result, the less we eat like hunter-gathers, the more susceptible we are to heart disease, cancer, and diabetes.*)

- **What is considered to be the Paleolithic diet?**
  (*Foods included fruits, vegetables, wild game, roots, legumes, nuts, and other natural, non-cereal plants.*)

- **How does the modern diet compare? How does yours compare?**
  (*Due to the advent of agriculture and industrialization, more and more grains, high-fat meats, and highly refined, processed foods are eaten—as opposed to the more natural, leaner foods our ancestors ate. Accept all personal responses.*)

- **Does reading these findings make you want to change your own diet? Do you think these changes can last long-term? Why or why not?**
  (*Accept all reasonable answers. Encourage students to elaborate.*)

Assessment

- **How are science and technology being used to investigate, monitor, and prevent heart disease?**
  (*In trials, researchers have begun to use advanced imaging techniques and scans to look into the body and, for example, to examine arteries and measure blood thickness as a means of determining how quickly someone is advancing toward heart disease.*)

- **Beyond finding medical answers, what do you think should be done about the deadly, ongoing heart disease epidemic?**
  (*Accept all reasonable answers. Elicit responses from many students. Emphasize the importance of making the public aware of the radical lifestyle and dietary differences we've made from those of our ancestors.*)

- **Overall, do you think the Industrial Revolution has made the physical health of people better or worse? Support your answer.**
  (*Accept all reasonable answers. Answers should reflect the balance between the improvements and advances brought about by industrialization and the negative impacts of things like processed foods and the tendency toward a sedentary lifestyle.)*

Quiz

1. **C**. Heart disease
2. **D.** The Industrial Revolution
3. **D.** Inactive lifestyles and rich diets
4. **B.** Cardiology
5. **D.** Homocysteine
6. **C**. Atherosclerosis
7. **A.** Childhood
8. **B.** Alcohol use
9. **A.** Genes
10. **D.** Grains
11. **C**. Agriculture
12. **D.** Grains and dairy products