Vocabulary

Academic Word List

consumption	contributor	dispose	economic
eliminating	incidents	individual	networks
role	statistics	task	transmitted

Other Vocabulary

abundance	adopted	affluence	appetite	suppresses
correlation	devise	genetic	gland	
hormones	nurture	prosperity	secreted	

1. Look at the vocabulary above. With a partner, discuss the vocabulary words together and decide how well you know each word. Put each word in the table below based on your level of understanding and usage.

I don't know what the word means and couldn't use it in a sentence.	When I see the word, I have a basic idea what it means, but I can't use it.	Sometimes I use the word, but I'm not sure if I am using it correctly.	I can use the word fairly confidently and could give its basic definition.

2. For each question, choose the best synonym. Answers must also be grammatically correct.

a. New policies adopted by a hospital usually must be accepted by its Board of Directors.
    1. accepted
    2. taken
    3. adapted
    4. assumed

b. Doctors need to eliminate all other possible medical alternatives before deciding to perform a major operation.
    1. abolish
    2. remove
    3. reduce
    4. eradicate

c. There is a great abundance of alternative medicines available if people are looking for other methods of treatment.
    1. many
    2. plenty
    3. number
    4. amount

d. Diseases which are transmitted through the air are the most difficult to control and contain.
    1. spread
    2. communicated
    3. conveyed
    4. broadcast

e. What people consume is often closely related to the state of their overall health.
    1. use
    2. destroy
    3. spend
    4. eat

f. Usually, the more prosperous a nation is, the better their healthcare system is funded.
    1. plentiful
    2. well-off
    3. generous
    4. helpful

Pre-Listening

3. Use the questions to begin a discussion. Try to be sure everyone in your group gives their opinion and explains why they hold that opinion before moving on to the next question. Type in your group's main ideas to use afterwards for class discussion.

    a. What are the main reasons people become obese? Do they just eat too much or is it more complicated than that?

    b. If a country is wealthy, does it mean that they will be healthier? What issues, other than obesity, could cause them to be less healthy?

Listening

4. Listen to first paragraph of a larger Listening, which is only an Introduction to the topic. In your group, discuss how this relates to the Reading you've just done and predict what you believe the rest of the Listening will be about and some of the topics that might be discussed. Try to find the General Statement and Thesis Statement in the Introduction and write your summary of them. Try to rephrase vocabulary as much as possible.

Settle down everyone. Let's get started. As you hopefully know, we are continuing our look at obesity today and now that we've seen the state of obesity and some of the negative consequences it can have, we'll turn our focus towards some of the factors that can lead to obesity. Of most importance are two categories of causes that we'll look at and those are genetic and environmental ones. You know, the way of looking at many things. Is it nature or nurture, biology or learning? Is it something in our DNA or did we get it from those around us socially? Right?

General Statement:	
Thesis Statement:	

5. Now listen to the complete Listening passage and take notes on it. When it is finished, talk to your group about the main ideas that are discussed in the Listening. In the box below, re-write the Thesis Statement you made above by adding some more information from the Listening.

Settle down everyone. Let's get started. As you hopefully know, we are continuing our look at obesity today and now that we've seen the state of obesity and some of the negative consequences it can have, we'll turn our focus towards some of the factors that can lead to obesity. Of most importance are two categories of causes that we'll look at and those are genetic and environmental ones. You know, the way of looking at many things. Is it nature or nurture, biology or learning? Is it something in our DNA or did we get it from those around us socially? Right?

So, genetics. Genetics have definitely been shown to have a strong correlation with incidents of obesity. Some studies which have looked at children who have been adopted by other families have been very telling. When the weight of adopted children, those raised separately from their biological parents, in a different environment, is compared to that of their birth parents, there is an extremely high degree of correlation. That is, up to 80% of the time, the adopted child's weight matches the weight of their biological parents, not the adoptive ones. That definitely shows there must be some type of genetic factors at play. It is thought that as much of 40% of why a person becomes obese could be based on these genetic factors alone.

The next question is what is it genetically that seems to be causing obesity at all? There seem to be two hormones in the body that are contributing to this, namely leptin, that's L-E-P-T-I-N, and ghrelin, that's G-H-R-E-L-I-N. Leptin is a hormone that is secreted from fat cells and makes its way to the hypothalamus, which is a gland in the brain that helps to regulate appetite. When there is excess leptin, it suppresses appetite and increases energy used, therefore, causes a person to burn or reduce fat. The interesting thing is that obese individuals have high levels of leptin in their system, yet seem to have acquired some form of immunity to it through a genetic irregularity. The signals that would normally tell their body to

stop eating and increase energy consumption do not get transmitted and they continue to gain weight through excess fat. The second hormone, ghrelin, seems to work in an opposite way. Whereas leptin lets the body know it has eaten enough, ghrelin signals the brain that the body it is hungry and need more food intake. If people have an overactive or increased production of ghrelin, this could cause false signals to be sent to the brain that the body is hungry and lead, of course, to further obesity. Scientists are looking closely at both of these hormones and trying to devise treatments that could hopefully combat obesity on a genetic level.

Well, as was mentioned, it's not all about genetics because the environment around an individual can also play a great role in someone becoming obese. One environmental factor that is often pointed to is the daily habits that people have, especially in modern times. Most studies show that modern, industrialized societies such as Canada, the United States, and countries in Europe have far more cases of obesity. The argument is that with economic prosperity comes more abundance and access to more high-fat, unhealthy food sources. Some look at fast food outlets as a major contributor to this problem. By looking at any map produced by organizations such as the World Health Organization that shows obesity levels, it is very easy to see how the most obese nations continue to be those that are most industrialized and, well, rich. Societies that are poorly developed just don't have the same statistics. As mentioned, these richer societies have a high-fat diet, and this is another factor: the type of food a society eats. Nations with developed economies tend to eat more unhealthy food in general. But on top of that is quantity. We, I guess I should count myself in this, we eat far more than other societies. Think about how much Canadians put on their plates when they eat. Compared with a typical meal in many Asian nations, where there is far, far less obesity, it's very excessive. It's no wonder there's more obesity.

A last environmental factor that leads to obesity, which can also be related to affluence in society, is the amount of exercise people get, or rather, the lack of exercise. In general, if people exercise less, they burn less energy and, therefore, store up far more fat than they dispose of. Some of this can be due to illness or old age where people just become less physically able to be as active and then gain weight as a result. Urbanization can also lead to this because

modern conveniences of city life such as easy transportation networks and sedentary jobs such as office work cause people to move much less. Even once at home, with TV and personal computers, people do less physically than they may have years ago.

Obesity continues to be a health problem that is increasing around the world. We seem to have a better ideas as to how to treat the problem genetically and identify the factors in our lives that make us more prone to it, but eliminating it can be a much more difficult task.

Notes:
Thesis Statement:

Post-Listening

6. Answer the questions for this Listening.

a. What two other terms are used to explain "nature"?
   1. biology
   2. DNA

b. Well over half of the time, adopted children weigh the same as…
   their birth/biological parents

c. Genetics is responsible for over half of the reasons why a person becomes obese.
   1. true
   2. false

d. Leptin is a hormone created in fat cells that travels to the hypothalamus, a gland in the brain.

e. Which hormone signals the body to start eating, leptin or ghrelin?
   ghrelin

f. Which situation could be lead to obesity?
   1. too much leptin and ghrelin
   2. immunity to leptin and too much ghrelin
   3. too much leptin and immunity to ghrelin
   4. not enough leptin or ghrelin

g. Why might prosperity relate to obesity?
   access to more high-fat, unhealthy food sources

h. What other cause does the author include himself in on?
   (Nations with developed economies) we eat far more than other societies

i. Take notes on the section about obesity and exercise.

- Environmental factor
    - lack of exercise
        - burn less energy = store more fat
    - some illness / old age
    - urbanization
        - modern conveniences
            - transportation networks
            - easy
        - sedentary jobs
            - office work
        - at home
            - TV, computers

7. You will hear a TED Talk given by Dr. Peter Attia that discusses the connection between obesity and diabetes.

TED Talk - Peter Attia

Take notes while you listen about the traditional beliefs about the connection between obesity and insulin and what the new beliefs are according to Dr. Attia.

Traditional Beliefs	New Beliefs

8. Compare your notes with your group and modify them where necessary.