

Unit ...

Obesity



Unit Focus:

Reading 1: Obesity: An Issue to Consider

Reading Strategy: Scanning

Vocabulary: Collocations; word mapping;
word family; multiple meanings

Grammar: The passive construction

Reading 2: The Dream Diet

Reading 1

Check up

A. Doctors use people’s body mass index (BMI) to measure their body fat. To calculate an adult’s BMI, they divide the weight in kilograms by the height in meters squared. The results are interpreted as follows:

BMI > 40 Morbidly Obese

BMI > 30 Obese

BMI > 25 Overweight

BMI = 18.5 – 24.99 Normal

BMI < 18.5 Underweight

BMI < 17 Moderate and severely thin

Now, let’s measure your own BMI.

B. Which of the following do you think are the direct or indirect causes of obesity?

- depression
- heavy smoking
- aging
- antidepressant drugs
- obese parents

C. Put the following words and phrases in the right columns below.

muscle tissue sore joints body water fat tissue hip bone
heart stroke blood pressure kidney cancer abdomen diarrhea
small intestine thyroid gland high cholesterol level

Body Parts	Disorders and Diseases

Read

This text is an entry extracted from a medical encyclopedia.

Obesity: An Issue to Consider

1. not needed

2. sportsperson

3. how long a person lives

4. explain

Obesity is a condition that develops when a person takes in more food calories than his/her body **burns up**, and when the body turns those excess¹ calories into **fat**. Overweight refers to an excess of body **weight** compared to set standards. The **extra** weight may come from muscle, bone, fat, or body water. Thus an athlete² may be overweight without being obese if his/her extra weight **consists of** muscle rather than fat tissue.

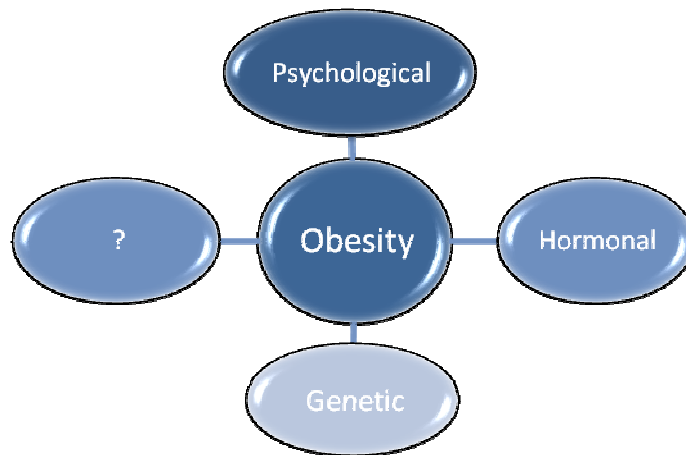
Some doctors think obesity is a disease, while others **maintain** that it is an unhealthy condition increasing risks of diabetes and other diseases. To this latter group, obesity is connected with many diseases or disorders that can shorten a person's life expectancy³ and lower one's quality of life. Some of these health problems include: Type II diabetes; high blood cholesterol levels; heart disease; stroke; high BP; **osteoarthritis**; sleep **apnea**; depression; and increased risk of breast or kidney cancer.

Causes and Symptoms

Obesity is usually the result of several factors together rather than a single cause. Although obesity can be described as an imbalance between food energy taken in and energy used up in exercise, eating and exercise are connected to other factors in complicated ways.

- **Genetic factors.** These factors, which account for⁴ 40%–70% of the **variations** in human body size, **affect** how well a person's body burns food and where the excess fat is stored. People whose fat is **stored** around the abdomen

have a higher risk of health problems than those whose extra weight is carried on the hips.



Causes of Obesity

- **Family environment.** A person whose parents eat a lot of high calorie foods is likely to **adopt** their eating habits.
- **Age.** People's bodies lose muscle tissue and gain fat as they age, and their calorie **requirements** drop; thus people who may not have been obese as young adults may become obese as they grow older.
- **Sex.** Men have more muscle tissue and less fat than women, and their calorie requirements for maintaining their weight are higher than women's.
- **Medical conditions.** People with [Cushing's syndrome](#), disorders of the thyroid gland, or depression are at increased risk of obesity.
- **Medication.** People who must take [corticosteroid drugs](#), antiseizure medications, or antidepressants may gain weight on these drugs.
- **Emotional factors.** Some people use food to soothe feelings⁵ when they are sad, angry, or bored.
- **Smoking.** People who stop smoking often gain weight because food tastes better after they stop. In addition, the nicotine in tobacco raises the rate at which the body burns calories, so the former smoker's body needs

Lucky men!

5. make feelings less serious

fewer calories to maintain its weight.

Treatment

Treatment of obesity is usually more complicated than simply placing people on a diet or telling them to get more exercise. The doctor must take into account other health conditions affecting the patients, their medications, occupation, and other lifestyle factors. For example, someone with osteoarthritis may need to do exercises that will not damage sore⁶ joints.

Morbidly obese people or those unable to lose weight by exercise or food intake may be treated by medications or surgery. The two major approved medications for weight loss are Meridia, which makes the person feel full more quickly during a meal, and Xenical, which lowers the amount of fat the body **absorbs** from the intestines. Both drugs have side effects, and weight loss is not great.

Weight-loss surgery (bariatric surgery) is usually limited to people with a BMI over 40 or those with a BMI over 35 combined with type 2 diabetes, sleep apnea, or heart disease. There are two basic types of surgery for weight loss, restrictive and malabsorptive. Restrictive procedures work by closing off part of the stomach so that the person cannot eat as much without feeling full. In malabsorptive procedures, the surgeon creates a bypass around the part of the small intestine where most of the calories in the food are absorbed. This type of surgery lowers the patient's food intake and the amount of calories the body absorbs. The different types of operations have different and substantive⁷ long term effects on eating—thus some call it 'behavioral surgery.' They can produce complications like **bloating**, **nausea**, and diarrhea. Also, the patient will need to see the doctor periodically for the rest of his/her life.

6. painful

To what extent has reading this text changed your understanding of the causes of obesity? To know, you may compare your answers with those to exercise B in the check up.

7. very important

Source: *U.X.L Encyclopedia of Diseases and Disorders (2009)*

Medicine Notes

apnea: the stopping of breathing

bloating: swelling

corticosteroid (drugs): a drug which reduces inflammation

Cushing's syndrome: a condition in which the adrenal cortex produces too many corticosteroids

osteoarthritis: a disease of elderly people with inflamed joints which become stiff and painful

nausea: a feeling that you want to vomit

Digest What You Read

A. Do the following statements agree with the information given in the text? Write

TRUE *if the statement agrees with the information*

FALSE *if the statement contradicts the information*

NOT GIVEN *if there is no information on this*

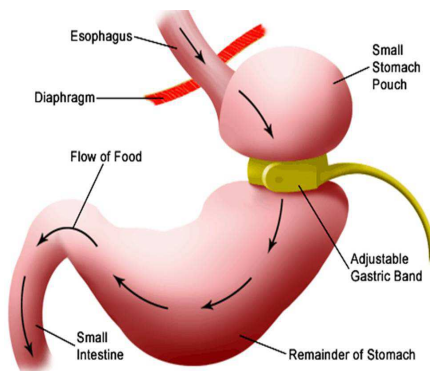
Then correct the false sentences.

- 1. In obese people, the body turns all calories into fat.
- 2. The amount of fat tissue in an overweight athlete is more than muscle tissue.
- 3. Among other factors, eating is still considered the main cause of obesity.
- 4. The risk of heart problems in obese people changes in relation to the location of the stored fatty tissues.
- 5. Depression is both a likely cause and effect of obesity.
- 6. Both Xenical pills and malabsorptive surgery lead to weight loss by influencing the amount of food absorption.
- 7. Genetic factors may lead to obesity as they affect a person's calorie burn up.

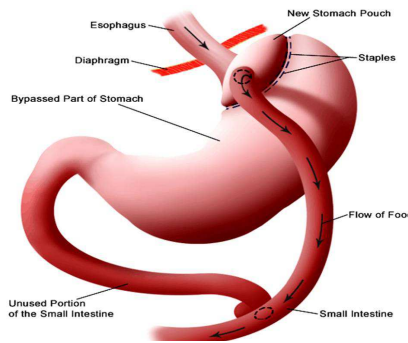
B. Match each patient's complaint with the right diagnosis on the left side of the table.

Patients' Complaints	Doctor's Diagnosis
<ol style="list-style-type: none"> 1. I am a heavy smoker. I am underweight. 2. I had a weight-loss operation a month ago. I don't feel well. 3. Since I've lost my child, I'm too nervous to eat. But, still I'm gaining weight. 4. I'm too fat and I suffer from type 2 diabetes. How can I lose weight? 	<ol style="list-style-type: none"> a. I recommend you a bariatric surgery. b. It's common. Feelings of nausea or diarrhea may stay with you even longer. c. Nicotine makes you burn off more calories. d. Your sadness may be the cause of your weight gain.

C. Pair Work. Which weight-loss surgery does each picture show?



1.



2.

Reading Strategy: Scanning

Scanning is a technique you often use when, for example, you are looking up a word in the telephone book or dictionary or even when you read a patient's case history. You scan when you need specific information in a text, so instead of rereading the entire text, you move your eyes quickly over it.

Think about what to scan for in order to find specific information:

To find...

- Names
- Dates
- Statistics
- Specific words


Scan for ...

- capital letters
- numbers and capital letters
- numbers and symbols
- capital letters, letter combinations, *italic* or **bold** words


D. Scan *Obesity: An Issue to Consider* to answer these questions. Before you scan, decide what you should scan for in each case.

1. What disorders and diseases are mentioned in the text?
2. What percentage of variation in human body size is because of genetic factors?
3. What are four of the medications mentioned in the text?


E. In one minute, scan the following ads and descriptions for drugs to find the ones related to weight loss. Underline the clues.



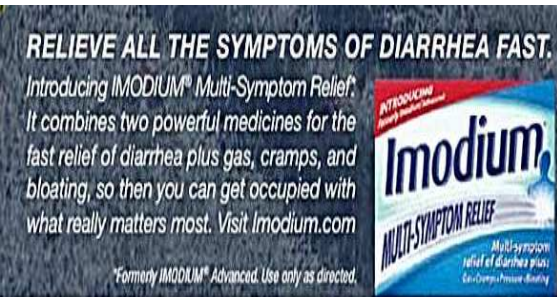
- An FDA-approved prescription weight-loss drug
- For extreme obesity



- over-the-counter (OTC) version of Xenical
- weight loss product
- 50% more weight loss than dieting alone



- high blood pressure medication
- helps blood vessels relax
- angiotensin II



RELIEVE ALL THE SYMPTOMS OF DIARRHEA FAST.
 Introducing **IMODIUM® Multi-Symptom Relief**.
 It combines two powerful medicines for the fast relief of diarrhea plus gas, cramps, and bloating, so then you can get occupied with what really matters most. Visit Imodium.com
*Formerly IMODIUM® Advanced. Use only as directed.

Vocabulary Shot

Vocabulary strategy: Collocation

Collocation is a pair or group of words that are often used together. They are an important part of learning the vocabulary of a language. Here are some examples of collocations:

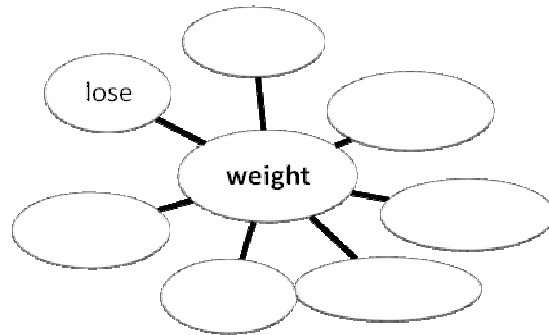
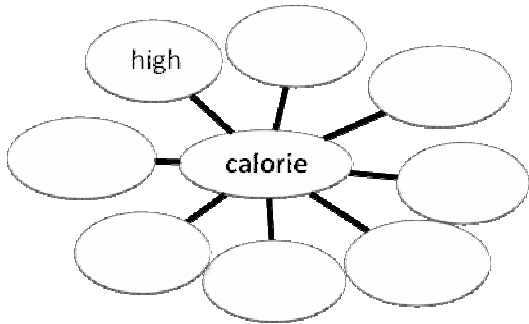
Nouns and verbs: *She will **undergo** a **surgery** next month.*

Noun and noun: *The doctor prescribed him some **diet pills**.*

One strategy for learning collocations is **word mapping**. Using this technique, you can place the collocations of a word in a visual shape, for example, a diagram.

A. Complete the word maps with the words in the box. Use some words more than once.

gain extra maintain high loss body excess lose
 requirement take in burn up absorption food



Now, fill in the blanks with the collocations in the webs.

1. People trying to weight by dieting know it is difficult to change eating habits.
2. Chop foods like chocolate into smaller pieces. It will seem like you are having a lot of them.
3. To lose a kilogram of fat, you need to 8000 calories.
4. Some ethnic groups are more sensitive to the effects of weight gain.

C. Word Family. Pair Work. Look back at *Obesity: An Issue to Consider* to find the word families and complete the table. Use your dictionary if necessary.

Noun	Verb	Adjective	Adverb
variation			
	affect		
	consist		
store			
procedure			
adoption			

D. Use the information in the table above to complete the sentences.

1. To lose weight, obese people may need to new eating habits.
2. Xenical weight gain by decreasing the amount of fat the body absorbs.

3. Although obesity surgery is a successful treatment, surgical have serious complications.
4. In athletes, extra weight does not fat tissue but muscle tissue.
5. Do complications of weight loss operations considerably from patient to patient?
6. The risk of health problems in obese people increases based on where their fat is



To maintain something has got two different meanings in the passage:

1. *"Some doctors think that obesity itself should be defined as a disease, while others maintain that it should be considered more broadly as an unhealthy condition."* (Paragraph 2)
2. *"Men have more muscle tissue and less fat than women, and their calorie requirements for maintaining their weight are higher than women's "* (Paragraph 3)

In the first sentence, maintain means *insist or claim* while in the second sentence, it means *make something continue at the same level or preserve*.

E. Decide if *maintain* means 'claim' or 'preserve' in the following sentences.

1. The nurse maintained she was not in the room when the patient had the heart attack.
2. Doctors and nurses should build and maintain a good relationship with the patients.
3. Critics maintain that the reforms in the health care system are not efficient.

Grammar Injection

- A. Look at these online news headlines and underline 'who' did the action or 'what' caused it.**

Extra hours in front of the TV

Alcohol-Obesity Link Explored

\$ 3 Million Targeted to Study
Obesity Among Kids

Teen dieting affected by mothers' attitudes on
weight

Is the agent mentioned in all headlines? If not, choose the possible reasons.

- a. Because the action is more important than the agent.
- b. Because the agent is more important than the action.
- c. Because the agent is unknown or unspecified.
- d. Because the agent is irrelevant or not important.
- e. Because the agent is understood.

B. Three of the headlines are *reduced passive* structures in which the verb 'be' is omitted.

Rewrite them in full passive form and in active construction. You may guess the agents.

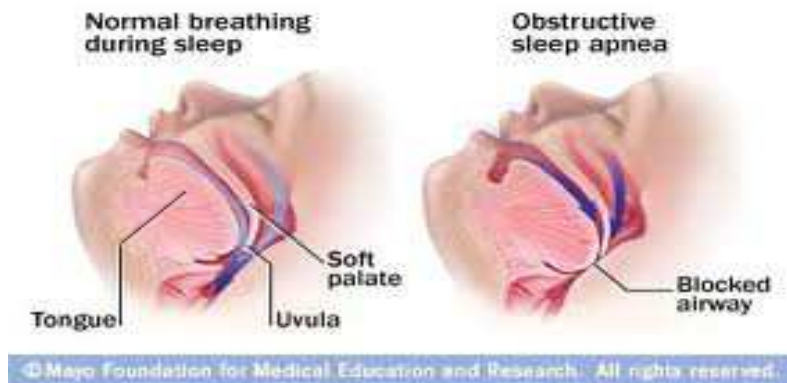
C. Read this case summary about an obese girl. Underline the active and passive verbs and explain the reasons for their use.

An 11-year-old obese girl was referred for weight management with her family. Prior to beginning treatment, the family underwent medical, behavioral, and psychosocial assessments by a pediatrician, nurse, dietitian, exercise specialist, and psychologist. The patient's BMI at intake was 29.9. She also had a high waistline measure. Several obesity-related co-morbidities were identified including mildly high blood pressure, high total and LDL cholesterol, and low HDL cholesterol. While fasting glucose was normal, insulin was high; acanthosis nigricans was observed at the neck. Family medical history indicated obesity and hypertension in both maternal and paternal families. A comprehensive lifestyle behavior assessment was completed. Vegetable and fruit intake and physical activity were relatively healthy, but records highlighted several opportunities to make healthier choices.

Reading 2

Check up

A. In your idea, how does sleep apnea relate to obesity?



B. Take 1 minute to scan *The Dream Diet* on pages 73-75 to find the following information.

Names of hormones

People's names

Body parts and organs

Read

This is an article taken from an online popularized medical magazine.

The Dream Diet

Lose weight while sleeping as medical research suggests links between sleep and weight. Researchers say the quantity and quality of your sleep may influence hormones related to your appetite¹. While doctors have known many hormones are affected by sleep, David Rapoport, MD², director of the New York University

1. a desire for food
2. a doctor of medicine

3. happy,
pleased



4. a minor illness

5. trouble,
disorder

Sleep Medicine Program says it wasn't until recently that appetite entered the picture thanks to research on leptin and ghrelin. Doctors say both hormones, affecting our appetite, may be influenced by our sleep.

Leptin and ghrelin control feelings of hunger and fullness, explains Michael Breus, PhD, of the Atlanta School of Sleep Medicine. Ghrelin, produced in the gastrointestinal tract, increases appetite, while leptin, produced in fat cells, sends a fullness **signal** to the brain. So what's the connection to sleep? "When you don't get enough sleep, it lowers leptin levels, so you don't feel as satisfied³ after eating. It also makes ghrelin levels rise, so your appetite is increased, and you want more food," says Breus. The two combined can lead to overeating and weight gain.

Eating and Sleep Apnea

Having done studies on weight gain and sleep, researchers suggest getting more sleep might reduce obesity, but the relationship is not so clear because of the ailment⁴ "sleep apnea". People with sleep apnea may stop breathing for up to a minute, sometimes hundreds of times while sleeping, says Dominic Roca, MD, director of the Center for Sleep Medicine at Stamford Hospital. The disruption⁵ in breathing prevents them from getting deep sleep.

So how does sleep apnea influence weight gain? First, says Roca, patients with sleep apnea are more likely to be obese. However, they do not have the low leptin levels connected with being overweight but have abnormally high leptin levels. What's more, when their apnea is treated, leptin levels drop -- and somehow that helps them lose weight.

So why may low leptin cause weight gain in some people but weight loss in

others? One theory says that it may not be the leptin level that matters so much as a person's individual response to it. People with apnea may not be affected by the fullness signal leptin sends to the brain. Another theory says the **overall** response to leptin may be more individual than we think. Our environment, diet, exercise, stress, and genetics may influence the leptin and ghrelin production, and our response to them. "I think we are likely to find that bad sleep matters but that it's likely to be bad sleep plus some other problems," maintains Breus.

Until doctors do know more, most experts agree that if you are dieting, getting more sleep is not a bad idea, particularly if you sleep six hours or less a night. But talk to your doctor if you already sleep a lot and feel even more tired because you may be one of the people with undiagnosed sleep apnea.

Source: WWW. Webmd.com/sleep-disorders/guide/lose-weight-while-sleeping

Digest What You Read

A. Correct the following sentences.

1. Typically, lack of sleep affects both leptin and ghrelin in the same way.
2. There is a straightforward relation between sleeping more and losing weight.
3. The quantity of sleep is much more important than the quality of sleep.
4. Generally, less ghrelin plus more leptin equals weight gain.

B. Answer the following questions.

1. How does apnea affect your sleep?
2. How does the level of leptin in people with sleep apnea differ from that in others?

3. What makes the research on the relation between sleep and weight complicated?
4. What do Rapoport and Breus think of the research on the relation between weight and sleep?

Vocabulary Shot

A. Pair Work. To find the right collocations, match the beginning of each sentence on the left with its ending on the right.

- | | |
|---|--|
| 1. This drug does not influence hormone | a. signal to the brain. |
| 2. Hormones which control feelings of | b. response to hormones varies from person to person. |
| 3. Unlike Ghrelin, Leptin sends a fullness | c. fullness are affected by sleep. |
| 4. Disorders like sleep apnea prevent people from getting deep | d. levels , the company says. |
| 5. Medical research says that the overall | e. sleep which may lead to obesity. |

Translation

Translate the following abstract part of a case report into Persian. Pay special attention to the following question:

- Are all the passive structures translated into passive in Persian?

Abstract

Obesity is simply defined as a condition in which there is an excess of body fat. It is also defined as a BMI greater than or equal to 30kg/m². Obese patients are at risk of early death, mainly from diabetes, coronary heart disease and cerebrovascular disease. This case is about a middle aged man who moved into the clinic breathless. He was obese, a known hypertensive and

diabetic (type II) patient with congestive cardiac failure. He was managed accordingly and discharged after 3 weeks with advice on weight control measures.

Adapted from: *Medikka Journal of the University of Nigeria Medical Students*

Self-check

Assess your progress in this unit. Tick (✓) the statements which are true about you.

- I can scan texts for specific general and medical information.
- I can expand my vocabulary with word families.
- I can connect words with their collocations in word maps.
- I can recognize different meanings of words with multiple meanings in texts.
- I can recognize active and passive structures in texts.
- I can say why active and passive structures are used in texts.