

Unit  **The
Cardiovascular
System**



Pre-reading

The cardiovascular system consists of the heart, the blood, and the blood vessels. The major function of this system is to transport oxygen, nutrients, hormones, and cellular waste throughout the body. In addition, it serves as the highway for disease-fighting cells and proteins, and also as a messenger of the immune system. It also helps to regulate body temperature and maintain homeostasis. Anything that affects the integrity of the system can impair our health. Common cardiovascular system diseases include arteriosclerosis, heart attacks, strokes, coronary artery disease, hypertension, etc.

Throughout the year, what is the most likely time to have a heart attack? Will alcohol abuse raise the risk of strokes? How can high blood pressure affect our brain? How much do you know about blood types? You may get your answers from the following passages.



Text A



Holiday Is the Most Likely Time for a Heart Attack

- 1 We **romanticize** the holiday season so much that it's easy to forget how stressful the whole thing can be. Many of us travel, putting ourselves **at the mercy of** the Transportation Security Administration (TSA). We have to pick out presents, often for people we don't know well, and then we have to spend money buying them. We see family members whose politics we disagree with. We eat **oodles** of fat and sugar.
- 2 All this makes the period between Christmas and New Year's Day one of the most common times of the year to have a heart attack.
- 3 This is actually something **cardiologists** have known for a while—several studies examining **mortality** around the holidays have shown that your risk of dying, in general, is significantly higher around that time. They've also specifically looked at heart attacks and found the same thing. But dying of a heart attack is very different from the risk of having a heart attack.

New Words and Expressions

romanticize /rəʊ'mæntɪsaɪz/ *v.* to make something seem more attractive or interesting than it really is 使浪漫化
e.g. Don't romanticize this uninteresting and difficult work.

at the mercy of subject to the control or actions of a particular person or thing 受……支配
e.g. It's painful to live at the mercy of someone else.

oodles /'u:dlz/ *n.* a large amount of something 许多, 大量
e.g. She's made oodles of money in investments.

cardiologist /,kɑ:dɪ'ɒlədʒɪst/ *n.* a doctor who studies and treats heart diseases 心脏病科医师; 心脏病学家
e.g. His cardiologist put him through a bunch of tests.

mortality /mɔ:'tælɪtɪ/ *n.* the number of deaths in a particular situation or period of time 死亡率
e.g. The nation's infant mortality rate has reached a record low.

New Words and Expressions

understaffing /ˌʌndə'sta:fiŋ/ *n.* the condition when there are not enough people working 人手不足

e.g. Understaffing in the workplace is a big problem.

follow-up /'fɒləʊ ʌp/ *adj.* done in order to find out more or do more about something 后续的; 定期复查的

e.g. It is a follow-up study on children and poverty.

be short on to be lacking in 缺乏, 缺少

e.g. The president's speech was long on colorful phrases but short on solutions.

④ A recent study of overall mortality around the end of the year suggested that **understaffing** at hospitals and failure to have **follow-up** appointments during the festive season contribute to a patient's increased risk of dying. Emergency rooms may **be short on** nurses, and senior physicians who would otherwise be around to treat patients are probably taking time to be with their families. These very human, very reasonable aspects of medicine mean that the holidays can be deadly. Even if the same number of people had heart attacks at Christmas as did on any other random day of the year, you might see more deaths.

⑤ So researchers from Sweden decided to take a closer look. They published the resulting paper in the *British Medical Journal's* 2018 Christmas issue. Luckily, they had some great data to work with.

⑥ Anyone who got admitted to a Swedish hospital with symptoms resembling an acute heart problem between 1998 and 2013 was automatically enrolled in the Swede heart study. Researchers gathered detailed data about them: What time did their symptoms start? What was the eventual diagnosis? That way, cardiologists could figure out whether more people are having heart attacks around Christmas or if heart attacks are more deadly at that time of a year.

⑦ When the researchers compared all of these events, Christmas Eve turned out to be the most common time for a heart attack. A person's risk on that night is 37% higher than normal, with the absolute peak at 10 pm. The whole week between Christmas Eve and New Year's Day has

an elevated risk of heart attacks, and New Year's Day itself has an overall raised risk of 20%. And though this shouldn't come as a surprise, all of these risks were worse for people with factors that **predisposed** them to heart attacks in the first place, like being overweight or having high blood pressure.

8 The upshot is this: Stress triggers heart attacks and it seems that the most common time of a year for that stress to manifest is the holiday season. People who have risk factors for heart problems should try to take it easy. Get someone else to shovel snow, avoid travel on peak days, and try to keep your eating habits as close to normal as possible. If you must expose yourself to holiday **stressors**, be aware of the signs of an oncoming heart attack. It couldn't hurt to ask your family members to **read up on** when and how they should perform **cardiopulmonary resuscitation**.

New Words and Expressions

predispose /ˌpriːdɪs'pəʊz/ *v.* to make someone or something more susceptible or liable to something 易患 (某疾病); 使倾向于

e.g. Some people are genetically predisposed to diabetes.

stressor /'stresə/ *n.* something that causes a state of strain or tension 导致紧张的事物

e.g. Constant noise can be a stressor.

read up on to read a lot about something in order to learn about it 仔细研究; 熟读

e.g. I need to read up on my British history.

cardiopulmonary resuscitation

/ˌkɑːdiəʊ'pʌlmənəri rɪˌsʌsɪ'teɪʃn/ an emergency procedure consisting of external cardiac massage and artificial respiration 心肺复苏

e.g. Cardiopulmonary resuscitation can help save a life during a cardiac or breathing emergency.

(575 words)

(Source: Chodosh, S. 2019. Of Course the Most Likely Time to Have a Heart Attack Is on a Holiday. 12–18. From Popular Science website.)

Task One

Decide whether the following statements are true (T) or false (F) according to the text.

1. _____ It's unlikely to forget how stressful the whole thing can be during the holiday season.
2. _____ Dying of a heart attack is very different from the risk of having a heart attack.
3. _____ Heart attacks occur rarely on Christmas Eve.
4. _____ Failure to have follow-up appointments contributes to patients' decreased risk of dying.
5. _____ Being overweight and having high blood pressure are predisposing factors for heart attacks.

Task Two

Fill in the blanks with the words given below. Change their forms if necessary.

resemble	trigger	resoundingly	romanticize	shovel
follow-up	random	manifest	elevate	mortality

1. I have to get out and _____ snow on the driveway.
2. The twin brothers strongly _____ their father in appearance.
3. A total of 60 patients were _____ divided into two groups.
4. Patients usually have to wait for 20 days before receiving a routine _____ visit.
5. The crowd was large and _____ supportive.
6. The illness first _____ itself as severe stomach pains.
7. The pandemic has shown new and _____ risks since early December.
8. For those who _____ trains, only first-class passengers travel in comfort.
9. The infant _____ rate is much higher in the poorest areas of the country.
10. It has been shown that certain sea foods can _____ an asthma attack.

Task Three

Paraphrase the following sentences from text A.

1. We romanticize the holiday season so much that it's easy to forget how stressful the whole thing can be. (Para. 1)

2. These very human, very reasonable aspects of medicine mean that the holidays can be deadly. (Para. 4)

3. Stress triggers heart attacks and it seems that the most common time of a year for that stress to manifest is the holiday season. (Para. 8)



Can Alcohol Abuse Increase Stroke Risks?

New Words and Expressions

chronic /'krɒnɪk/ *adj.* lasting for a long time; difficult to cure or get rid of (尤指疾病) 慢性的
e.g. A chronic illness or disability lasts for a very long time.

abuse /ə'bjʊ:s/ *n.* the use of something in a way that is wrong or harmful 滥用
e.g. He was arrested because of abuse of power.

moderate /'mɒdrɪt/ *adj.* not very large or very small, very hot or very cold, very fast or very slow, etc. 适量的
e.g. A moderate amount of stress can be beneficial.

consumption /kən'sʌmpʃn/ *n.* the act of using energy, food, or materials (能量、食物或材料的) 消耗
e.g. Gas and oil consumption always increases in cold weather.

① **Chronic** heavy drinking can negatively affect every aspect of a person's life. This is especially true in the case of an individual's health. Alcohol **abuse** is known for contributing to a number of health conditions that can range from the mild to the life-threatening. One of these conditions is the increased risk of strokes.

② Studies in the past have suggested that **moderate** drinking may decrease the risk of certain health conditions like strokes and some other diseases. However, more recent research has shown that even the low level of alcohol **consumption** may increase the risk of certain types of strokes.

③ What is a stroke? A stroke, sometimes referred to as a "brain attack", occurs when the blood supply to the brain is suddenly cut off. When the brain stops receiving the blood flow and oxygen, brain cells may begin to die. The duration a person suffers from a stroke will determine the extent of lasting damage.

④ How a stroke will impact an individual depends on what part of the brain is affected by the stroke. Common symptoms of a stroke include sudden weakness, trouble with speaking,

difficulty in walking, and loss of **sensation**. A stroke can also be completely painless or only cause a headache.

5 Warning signs of a stroke include sudden numbness on one side of the body, trouble with seeing in one or both eyes, severe headaches, trouble with understanding speeches or speaking, and trouble with walking or problems with **coordination**. Signs of a stroke typically occur suddenly and seemingly **out of nowhere**. Getting medical help immediately is **imperative** to reduce the damage caused by a stroke.

6 Can alcohol cause a stroke? Alcohol, especially alcohol abuse, can significantly increase a person's risk of strokes. In fact, a recent study found that one to two drinks a day can increase the risk of strokes by 10% to 15%. Four or more drinks a day can increase the risk of strokes by up to 35%.

7 The more alcohol a person drinks, the higher his or her risk of developing a stroke. Additionally, research has found that even moderate amounts of alcohol can increase the risk of strokes. According to some studies, there is no safe amount of alcohol to consume when it comes to lowering the risk of strokes.

8 Drinking alcohol after a stroke is not recommended for most people. Alcohol use and abuse can increase the risk of another stroke. People who drink alcohol after a stroke are also **susceptible** to a number of other potential negative effects. Drinking alcohol after a stroke may:

New Words and Expressions

sensation /sen'seɪʃn/ *n.* the ability to feel things physically 触觉；感觉能力

e.g. The pain was so bad that she lost all sensation.

coordination /kəʊ,ɔ:di'neɪʃn/ *n.* the ability to use the different parts of your body together efficiently 协调

e.g. To improve hand-eye coordination, practice throwing and catching balls.

out of nowhere appearing suddenly, without warning 突然冒出来；莫名其妙地出现

e.g. A huge bear appeared out of nowhere and roared and threatened us.

imperative /ɪm'perətɪv/ *adj.* very important and needing immediate attention or action 紧急的，迫切的

e.g. It is imperative to continue the treatment for at least two months.

susceptible /sə'septɪbl/ *adj.* very likely to be influenced, harmed or affected by somebody or something 易受影响的；易感动的

e.g. Walking with weights makes the shoulders very susceptible to injury.

New Words and Expressions

medication /,medi'keɪʃn/ *n.* a drug or another form of medicine that you take to prevent or to treat an illness
药物

e.g. Many flu medications are available without a prescription.

thinner /'θɪnə/ *n.* a substance that is added to paint, varnish, etc. to make it less thick 稀释剂

e.g. Do not use gasoline as a cleaning agent or as paint thinner.

vulnerability /ˌvʌlnərə'bɪlɪti/ *n.* the quality or state of being exposed to the possibility of being attacked or harmed, either physically or emotionally
易损性；脆弱性

e.g. His vulnerability makes him even more lovable.

- Increase the risk of dangerous side effects of **medications** taken to reduce the risk of another stroke such as blood **thinner**.
- Increase a person's **vulnerability** to the negative effects of alcohol.
- Contribute to weight gain, which can increase the risk of another stroke.
- Worsen depression or other mental conditions that commonly occur after a stroke.

9 It's important to speak with a doctor if you plan to drink after you have had a stroke. Additionally, if you were abusing alcohol before developing a stroke, cutting down or seeking treatment might be the best way to prevent another stroke. If you or your loved one is struggling with alcohol abuse or addiction, getting help may help lower your risk of developing a stroke and other dangerous health conditions. To learn more about how alcohol abuse can increase the risk of a stroke, you'd better consult a specialist.

(570 words)

(Source: Anon. 2021. Alcohol and Stroke—Can Alcohol Abuse Increase Stroke Risk?. 06–24. From Vertava Health website.)