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美国之音
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医学英语
系列

Pulse

Pulse

生命脉搏

首度展现VOA电视节目精彩内容
美国知名医学专家教授特约讲解
内容丰富，深入浅出，经典实用
适合医科院校师生和中级英语读者

世界图书出版公司

VOA英语教学节目丛书　　王少如 主编

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前言

1620年11月，乘坐“五月花”号帆船远渡重洋的102个英国清教徒，历经66天的艰险漂泊，终于踏上了北美大陆。从此，来自欧洲的移民络绎不绝。他们在这块自由的土地上劳作生活，建立殖民地，后来又组成了独立的国家。星移斗转，沧海桑田，如今的美国已跃居世界列强之首。

作为一个移民国家，美国的语言就像它的人种一样，具有“大熔炉”的特点。美式英语兼收并蓄，除了继承原来英国英语的基本内容之外，又混杂了土著印第安人、非洲黑人和欧洲大陆国家的语言，且因地域辽阔而受到一些次文化社会阶层的影响。20世纪以来，随着现代美国的崛起，美式英语的应用已日益广泛。

美国之音(Voice of America, VOA)的英语教学节目，以其流行的美国语言、纯正的美式发音和丰富的教学内容，对中国广大的英语学习者、尤其是青年学生，产生着重要的影响，成为人们学习美式英语、练习听力和口语的有效途径。

奉献给读者的这套《VOA英语教学节目丛书》，由AA Culture & Publication(美亚文化出版公司)特别策划，经VOA授权上海世界图书出版公司出版。

本丛书继《流行美语》、《美国习惯用语》、《美语咖啡屋》、《美语会话》、《中级美语》和VOA特别英语系列等十二种之后，这次又推出医学英语系列三种《生命脉搏》、《健康快递》和《保健园地》，以后还将陆续推出其他系列的VOA英语广播电视节目。

这本《生命脉搏》(*Pulse*),是VOA近年来新制作的杂志型系列电视报道之一。它主要介绍与人的生命密切相关的各种医学现象,将深奥复杂的医学理论同人们日常的疾病症状结合在一起,由美国加州大学戴维斯分校医疗中心的专家教授主讲,配以VOA记者对病人的采访,深入浅出,经典实用。因此,本书尤其适合医科院校师生作为医学专业英语的教学辅导材料,也是具有中级英语程度的广大读者提高美式英语听说能力的基本读物。

目前,VOA英语广播节目已是大学英语4-6级考试的重要内容之一。本丛书选取最新播出的节目内容,配上VOA资深播音员的MP3原声光盘,将成为广大4-6级应试者迅速提高VOA听力的阶梯,同时也可供疏于应用的成年读者练习英语听力、口语和阅读之用。各书所附MP3原声光盘,可以在电脑、MP3播放机和具有MP3功能的手机、DVD等家用电器上播放学习。

本丛书在出版过程中,承蒙VOA台长David Jackson来函致贺,并得到VOA中文部主任William Baum (彭慕仁)、中文部节目推广及因特网主任纪锋和前主任陈光、上海世界图书出版公司总经理冯国雄、副总编辑陆琦及何耀萍、王丹等诸位鼎力相助,在此一并致谢!

愿《VOA英语教学节目丛书》成为读者学习美式英语的良师益友!

丛书编委会

2006年1月

VOA英语教学节目丛书

1.《**流行美语**》(*Popular American*),通过美国大学生和中国留学生的对话,从大学生活的不同场景中讲解美国年轻人常用的俚语,生动活泼,幽默轻松。

2.《**美语咖啡屋**》(*American Cafe*),以现场采访的形式,介绍美国年轻一代喜闻乐见的文化艺术和社会风俗,让读者在学习美语的同时了解美国的时尚文化。

3.《**美语会话**》(*English USA*),通过一名美国之音记者的外出采访活动,围绕美国现实社会中的不同热点和生活话题,介绍基本的美国日常会话。

4.《**美国习惯用语**》(*Words and Idioms*),专门介绍美国人日常的习惯用语及其出典,并以大量富有生活情趣的实例来说明其用法,内容广泛,经典实用。

5.《**中级美语**》(*Intermediate American English*),在日常会话的基础上,深入浅出地讲解英语语法,并配合句型练习和短文阅读,便于读者重温语法和训练听力。

6.《**美国大观·农业概览**》(*This is America & Agriculture Report*),全面介绍美国社会、政治、文化、生活等各领域内容,以及农业、畜牧业发展的现状和历史。

7.《**社会万象·新闻透视**》(*American Mosaic & In the News*),通过各类软新闻让读者了解美国的社会生活、文化娱乐、音乐艺术等,以及对各类新闻的背景报导。

8.《**建国史话·教育漫谈**》(*The Making of a Nation & Education Report*),生动描写美国历史上影响重大的人物和事件,以及学校教育、校园生活、家庭教养等。

9.《**精英荟萃·经济纵横**》(*People in America & Economics Report*),广泛介绍各行各业平民百姓中的杰出人士,以及企业动态、贸易、股市、就业、消费等经济信息。

10.《**科学新知·发展动向**》(*Science in the News & Development Report*),及时报导各类科技研究的新内容,以及各行业最新研究动态和日常生活的科研新信息。

11.《**探险揽胜·健康人生**》(*Explorations & Health Report*),重点叙述太空探测、航海探险、各地名胜、自然风光,以及最新医学研究和健康调查分析等。

12.《**VOA特别英语词汇手册**》(*VOA Special English Word Book*),收录1500余个在VOA特别英语节目中最常用的词汇,配以部分例句和简要的英文、中文两种解释,是学习特别英语不可缺少的工具书。

目　录

生命脉搏 1

Tonight the rage behind road rage... I'm Beth Ruyak and this is *Pulse*. Road rage is now a famous phrase, it's been in the headlines everywhere. Someone gets angry, gets behind the wheel and that combination of the anger and the vehicle become dangerous, sometimes even deadly. But where does the rage come from? Tonight, two very different experts look at that question and amazingly come up with the same answer.

There are certain things in life you can always count on. The 5 o'clock rush hour, the signals that you can never make it through, the red light brake light parade. Welcome to the daily grind, and unless you live in the sticks and drive a buggy it's something you're going to have to deal with. And dealing with it is what it's all about, because when you don't you get road rage.

Lou Solitske: "Something happened with an individual on the road and I don't know if he was upset with all cab drivers, or I did something that particularly upset him, but this guy was trying to run me off the road."

"He was just coming at me, he was shaking his fist, his face was all contorted, I didn't know if he had a weapon. At that time I didn't I have a phone with me to call 911 and report a demented driver, and I had to use my wits to finally get away from the guy."

You guessed it, Lou Solitske is a cab driver.

What Lou witnessed, we call road rage. And it is something Dr. Robert Hales, a psychiatrist at UC Davis Medical Center, has also seen as well.

Hales: "When people go into a rage, have a rageful episode, their blood pressure goes up considerably, heart rate increases, respiratory increase, they may have tingling or lightheadedness, and the key aspect is they aren't thinking either."

And that's the key, not thinking. When someone is in a rage, their mind does not process the actions which are taking place in the present, and they don't calculate the implications for the future. Simply put, the coherent, rational side of one's mind is gone, we've returned to being an animal, aggressive and ruthless. Add to the mix a few thousand pounds of metal, and you understand why road rage is different than any other form of rage.

The roots of rage can be traced back to our childhood, where the learning process is basically trial and error. As a child, we learn that when we have a tantrum, we will suffer the consequences. From repeated experiences, the mind learns what behaviors are, and are not tolerated as a member of society. Throw a tantrum, and it's, "time out" time again.

So what's the difference between a childhood temper tantrum and an adult suffering from road rage? As adults, through years of conditioning, we should know better that the actions we take could have dire consequences. Instead the brain disconnects.

Hales: "In some cases people will often describe a sort of out of body experience, observing themselves in this terrible situation, or acting out a rageful situation, so what's called dissociation sometimes happens too."

It is this lack of thought during a rage that fascinates Dr. Hales and his colleagues. And while rage can be explained in certain people with physical or psychological disorders, or people who are chemically addicted, it is hard to determine what makes the average Joe or Jane motorist snap.

Part of the problem stems from the fact that we're running out of room on the road. There are more drivers on the road today than ever

before, yet in the last 10 years the actual amount of drivable roadway has grown only 1 percent. This congestion is only going to get worse as we continue to spread out in our futile attempt to get away from it all.

Besides congestion we are also living busier lives. We spend more time doing things we don't like to do, and less time doing the things we love. As a result, many attempt to make up the time difference by rushing the commute. You may shave off minutes, but you pile on the stress.

Some other interesting, theories about the roots of road rage deal with the lifestyle choices we make. Some feel that the popularity of sport utility vehicles play a part. These big and powerful vehicles may give drivers a "take no prisoners" combative attitude. Others blame the tube. Unless you were raised in a cave you have witnessed thousands of examples of dangerous driving, without seeing the real life consequences.

But how do we conquer rage? All the experts agree that combating stress is the key to remedying road rage. And whatever you do, never take your personal problems out on to the road.

Lou Solitske: "Maybe they had a fight with their wife or had words with their boss and they carry that inside of them, and when some minor incident occurs on the road, suddenly that's like the straw that breaks the camel's back, and they start flipping out!"

So hit the brakes, cool off, and think. Slow down your life. Leave plenty of time to get to your destination.

Got your cell phone? It can be a lifesaver if you encounter rage on the road. When you feel threatened by another driver, dial 911, avoid eye contact, leave plenty of defensive room around your car, and drive to a police station if you can.

And one more piece of advice for you hotheads, you might want to take doctor's orders and count to ten.

Hales: "When you are actually counting you will think how stupid it is that you are getting angry, and thinking about why I am getting so angry, it

allows the body time to shift from emotion's or cognition's to thoughts. You still may be angry, but you will think about it rather than act on it."

Lou Solitske: "Think about what you're doing! Think! Running that person off the road might feel good at the time, but vehicular manslaughter is not going to look good on a resume! Think before you act, think! Before you get mad, call Lou. Just pull it over, call Lou, I'll get you home, your car will be okay, and you won't be in jail."

He means it. Lou's been driving his yellow cab for eleven years and says even with all he deals with he wouldn't change his job for the world. Also, he's hoping to have a book of his poetry and short stories published soon... So if you need some help, give Lous a call and remember to tip well... We'll be right back with more *Pulse*.

Cherry phosphates and vanilla cokes at the drugstore... There's a whole lotta kids out there right now saying, huh?? what's she say?? You go to the drugstore now and you can get everything from videos to shampoo to fishing equipment. Oh, and then there's the pharmacy... Guess what? The pharmacy is going high tech.

It's the computer driven pharmacy of the future, and it's already in use at the UC Davis Medical Center's outpatient clinic.

But how does this all work? To find out let's follow a prescription through the pharmacy, from start to finish.

The process begins when a patient presents a doctor's prescription to a technician. This is the moment when high-tech takes over.

The prescription is entered on a computerized order form that generates two bar codes. One with the prescription number, and the other with the type of drug the doctor has prescribed. The bar codes are scanned into the system and used as a virtual fingerprint the rest of the way.

The original prescription form is also scanned, so it's always on file electronically. This allows pharmacists to always refer to the original

prescription, so there never is confusion as to what the doctor ordered.

This image of the original form is the first of many accuracy checks built-in to the system. Pharmacy technicians make sure the drug called for on the prescription slip is the same one listed on the bar code.

Why all the safeguards? Because when it comes to medicines, even a small mistake can be a fatal mistake. UC Davis Pharmacy technicians are trained to check and re-check throughout the process, to ensure that no mistakes are made, and the computer system helps with that.

The next stop is the actual filling of the prescription. However, before a technician can do that work, he must present another bar code to the system, a third bar code.

It's a personal ID, so the computer knows who exactly is doing the work. Built-in computerized accountability, no unauthorized access here.

The technician has labeled the bottle in advance. The label is matched-up to make sure it's the same drug being dispensed by the machine. When he's satisfied, he gives the order to fill it.

Which the system completes in less than five seconds.

The dispensing machines are set up for the drugs that are most frequently prescribed. There are two groups. The larger trays hold the most common medications in the system, and the smaller trays hold some of the second most-common group. Anything else is still done the old-fashioned way.

The machines are crucial to the speed of the operation. These computer driven counting marvels, linked to data crunching computers, create a safer and speedier way to do the job.

But what happened to our prescription? It's almost ready to go. But first, it's handed to a pharmacist, who is getting involved in the process for the first time.

The pharmacist grabs the bottle and pulls up its data on the computer. Does the information on the label match the dosage information and the

computerized picture of the drug?

If the answer is yes, the patient is notified that his prescription is ready. If you have always wanted your name in lights, now is your chance.

Bill Callan: "The system will automatically,upon checking the last prescription, display his name on an announcer board that's available in the waiting area or the cafeterias."

They're basically computerized bulletin boards. And when you see your prescription, all you need to do is get in line and wait your turn. You'll be handed your medications, asked if you require a consultation, and out the door you go.

The average time is seven minutes. Although when it's busy there can be a backlog and the process can, understandably, take a little longer. Either way, it's still faster and more accurate than the old-fashioned way.

This high-tech system means that the prescription process is more efficient than ever before. For the patient, that means more safety and more security, because the pharmacist can be more accurate. It also means convenience, because orders can be filled in record time.

Eventually the UC Davis Pharmacy sees itself filling 15 hundred to 17 hundred prescriptions by computer every day. By comparison, your corner druggist can fill only about 100.

The pharmacy's goal is to fill eighty percent of its prescriptions with the computer system. The rest, the other twenty percent, will be done the old-fashioned way.

In your salad, on a banana split, in a pastry, easy to collect, delicious to eat. You'll crack up when you figure out what we're talking about... It's the latest news about nuts.

There are all kinds of examples that prove the old saying "mother knows best"...and now there's new research that shows that grandma's no slouch either! Remember that grandma always had a bowl of nuts on the

table? Turns out, those nuts are loaded with more disease-fighting, cholesterol lowering, age-defying properties than you can shake a stick at.

That's because nuts are high in antioxidants or chemicals that neutralize harmful oxygen particles in the body. What does that mean? Well, look at the one thing that makes grandma nuts...grandpa's old rusting car. Oxygen has interacted with other environmental elements to begin a slow deterioration process on the metal. Well, oxidants work much the same way in the body. They occur naturally internally, but are also found environmentally in cigarette smoke, air pollution and ultraviolet light. To counteract the damage, your body needs a fresh coat of internal wax if you will...known better to scientists as antioxidants.

Suzanne Teuber: "Basically antioxidants absorb or quench chemicals that are harmful to the body and the body has its own defense system to absorb or quench these little chemicals. But the body's system is not completely efficient."

Dr. Suzanne Teuber is a UC Davis Medical Center researcher investigating the healthful aspects of walnuts. Virtually all nuts are storehouses of antioxidants, but walnuts are kings of these chemicals, providing more oxidant-deterring properties than any other nut. Now if you're worried about the high fat content in walnuts, think of it as the good fat.

Suzanne Teuber: "These fats are polyunsaturated and in a very favorable ratio actually for the prevention of heart disease so that they are not a fat to be avoided. They are a fat that can be added to the diet and enjoyed."

How can this tasty morsel help crack the shell on American's number one killer? Well, heart disease and high cholesterol often go hand in hand, but the antioxidant qualities of walnuts have been shown to actually lower cholesterol levels. That's why when given the choice of high fat nuts or fat free antioxidant supplements, walnuts are far more effective at reducing the risk of heart disease.

Suzanne Teuber: "These other antioxidant compounds that are found

naturally in the nut again are more powerful I think it's far more healthy to eat whole foods, and nuts are just a great whole food."

So... why aren't all fats created equal? Dr. Sidika Kasim-Karakas is also a researcher looking at the effects eating walnuts can have on the body.

Sidika Kasim-Karakas: "When we talk about fats, we always think it's a bad thing but it seems that high unsaturated fats is the source of problems but polyunsaturated fats is not."

To prove her point, Dr. Karakas assembled 18 people with above normal cholesterol levels. For 4 weeks, they ate whatever they liked followed by six weeks of their normal diets with the addition of about two ounces of walnuts. Surprisingly, even with the addition of fat and calories, the participants' cholesterol levels got slightly better. But the most astonishing results were yet to come.

Sidika Kasim-Karakas: "When we added the low-fat plus the walnuts, added the walnuts back on the low fat diet, we got the very best results. The cholesterol reduced from 230 down to 209, almost a 10% drop."

But 10% was only the average drop. 51 year old Ben Kusaka began the study with his cholesterol in the dangerously high range.. By the time his last blood sample had been drawn, all that had changed.

Ben Kusaka: "It started out at about 288 and dropped down to about 180 from what I remember."

An acceptable cholesterol level may not be the only benefit Ben gets from eating walnuts. There's new evidence that nuts might protect against cancer, rheumatoid arthritis, polycystic ovarian disease, insulin resistance, even the aging process.

All the doctors say that nuts alone will not solve a high cholesterol problem. You have to go back to that old well balanced diet and lots of exercise thing. But research does continue on other foods that might have the same effect, like olive oil... If only they could come up with a

cholesterol reducing burger, hmmm, more *Pulse* in a moment.

Let's talk a bit about blood. Volunteers donate enough in the United States every year to fill your gas tank three hundred twenty times a day for a year. And it's still not enough. So when's the last time you donated blood? Chances are never because only one in five people who are eligible to donate blood actually does. Why not? Well maybe you didn't know where it goes after it leaves your arm.

Every three seconds someone in America needs blood. About forty thousand pints are used each day. But before a single drop enters the vein of an accident victim or surgery patient, it circulates through a system of tests that begin with the blood donor.

A potential donor's first, and perhaps most important test involves a highly technical instrument: the pen! Before you even see a needle, you would fill out a questionnaire and are screened to see if giving blood would be dangerous, or if you are in high risk groups.

The rest is easy, really. Just bare your arm. The only down side is you may feel a little light headed because the donation process depletes the body of blood sugar. Unless it's replenished quickly, some people could faint. Soooo... A little something sweet to boost your blood sugar and you're out the door.

So, what actually happens to the red stuff? Well, technically it's called a — well it's just called a blood bag. And before it goes anywhere it gets an ID badge. Actually, it is assigned a bar code, just like the ones grocery stores use. But instead of price information, this unique code provides quick, accurate donor information. This bag is marked for life and easily identifiable from registration through transfusion.

Now it gets interesting. Some of the blood is put into viles and tagged, with the same bar code, for testing. The rest is stored in the refrigerator at one to six degrees Celsius. That's about thirty eight to forty three degrees

fahrenheit, which is about the average temperature of most household refrigerators.

The specimen viles are taken to the processing area and prepared for twelve tests: four, for hepatitis; three, for AIDS; two, for leukemia; and one each for syphilis, c-m-v virus, and a type test. Reading the results is a simple visual check. A clear specimen with nothing remaining is negative. Test passed!

The last step, the labeling station, where a computer reads the all important bar code and pops up information about test completion and results. If everything checks out, this machine prints an out date and a new addition to the blood supply has arrived.

Now it's on to the heart of the operation, hospital services. This is where tested blood is stored, waiting to be shipped to area hospitals to be used. Technicians take inventory daily. They have direct contact with hospitals and based on surgery schedules, time of year, and anticipated use, they take orders, fill them and deliver this life saving cargo when and where it is needed most.

No! They're not heading out for a picnic. That ordinary looking ice chest is really a mobile refrigerated blood storage unit. And it really is just an ordinary, store bought Coleman cooler. Add a little ice for the trip and you have a simple, but practical tool in the high-tech, scientific world of blood donation.

And talk about your modern conveniences. There's even a drive-up window for quick pick-ups by hospitals with urgent needs — there will be no fries with that order.

Our blood supply is safer today than it has ever been before. Fourteen million units of blood are donated each year in the U.S. it, in turn, gets processed into about twenty seven million blood components like plasma, the liquid portion of blood that carries protein and clotting factors. And platelets, colorless blood cells used to repair injured blood vessels. A