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EVERYDAY SCIENCE

生活中的科学

The
Science of

YOU

为什么眨眼睛？

KATE BOEHM JEROME (美) 著

外语教学与研究出版社

FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS

京权图字: 01 - 2005 - 2798

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国家地理科学探索丛书(英文注释版)由美国北极星传媒有限公司策划并授权外语教学与研究出版社在中华人民共和国境内(不包括香港、澳门特别行政区及台湾省)独家出版、发行。

图书在版编目(CIP)数据

为什么眨眼睛? = The Science of You/(美)杰罗姆(Jerome, K.B.)著. —北京:外语教学与研究出版社, 2005.6

(国家地理科学探索丛书: 注释版. 生活中的科学)

ISBN 7 - 5600 - 4850 - 1

I. 为… II. 杰… III. 英语—语言读物 IV. H319.4

中国版本图书馆 CIP 数据核字(2005)第 046419 号

出 版 人: 李朋义

责任编辑: 余 军

美术编辑: 孙莉明

出版发行: 外语教学与研究出版社

社 址: 北京市西三环北路 19 号 (100089)

网 址: <http://www.fltrp.com>

印 刷: 北京画中画印刷有限公司

开 本: 740×975 1/16

印 张: 1.5

版 次: 2005 年 6 月第 1 版 2005 年 6 月第 1 次印刷

书 号: ISBN 7 - 5600 - 4850 - 1

定 价: 5.90 元

* * *

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“国家地理科学探索丛书”（英文注释版）第二辑分为8个系列，共46本，内容涉及自然科学和社会研究，除对本套丛书第一辑已包含的“生命科学”、“物理科学”、“地球科学”和“文明的进程”4个系列进行了补充外，又推出了4个新的系列——“生活中的科学”、“科学背后的数学”、“专题研究”以及“站在时代前沿的科学家”。

这套丛书秉承《国家地理》杂志图文并茂的特色，在书中配有大量精彩的图片，文字地道易懂、深入浅出，将科学性和趣味性完美结合，称得上是一套精致的小百科全书。特别值得一提的是本套丛书在提高青少年读者英语阅读能力的同时，还注重培养他们的科学探索精神、动手能力、逻辑思维能力和沟通能力。

本套丛书既适合学生自学，又可用于课堂教学。丛书各个系列均配有一本教师用书，内容包括背景知识介绍、技能训练提示、评估测试、多项选择题及答案等详尽的教学指导，是对课堂教学的极好补充。

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藏书章

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北京 BEIJING

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The Science of You

关于身体的科学



You already know that you are an amazing¹ person. But it's not just your wonderful personality². Your body itself is a remarkable³ machine.

Lots of information has been written on the subject of “you.” The big picture of how your body systems⁴ work together is important to understand. But sometimes the details⁵ interest us the most.

- | | | |
|----------------|-------------|-----------|
| 1. amazing | <i>adj.</i> | 了不起的 |
| 2. personality | <i>n.</i> | 个性 |
| 3. remarkable | <i>adj.</i> | 不平常的, 非凡的 |
| 4. body system | | 人体系统 |
| 5. detail | <i>n.</i> | 细节; 详情 |



This is a book about some of the little things that you might wonder about your body. It answers the kinds of questions that pop¹ into your head when you least² expect it. Let's say, for example, you are on your way to get a haircut . . .

- | | | |
|----------|------|---------|
| 1. pop | v. | (突然) 冒出 |
| 2. least | adv. | 最少 |



**When you
suddenly
wonder . . .**

Why don't haircuts hurt?

为什么剪头发时不觉得疼?

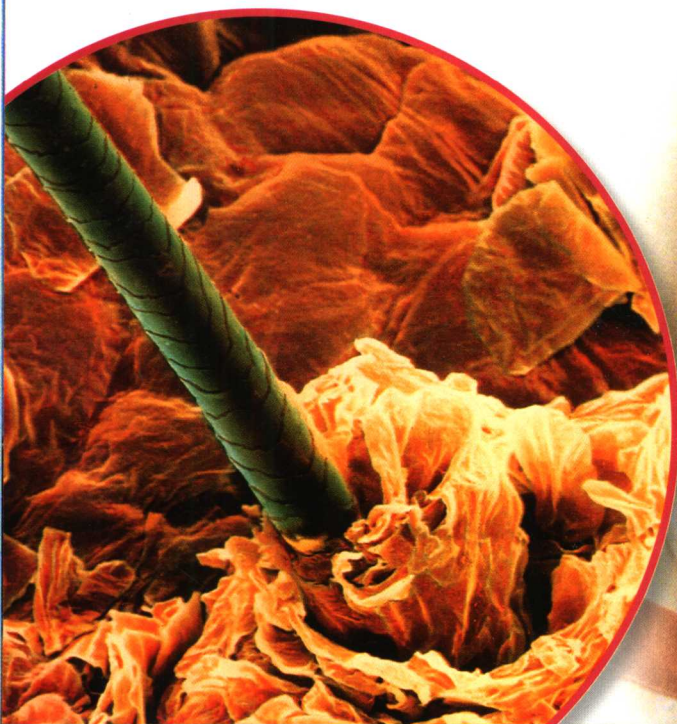


Snip¹, snip—the scissors fly around your head. Your hair grows from living cells². But the hair that's cut is not alive. What's the story here?

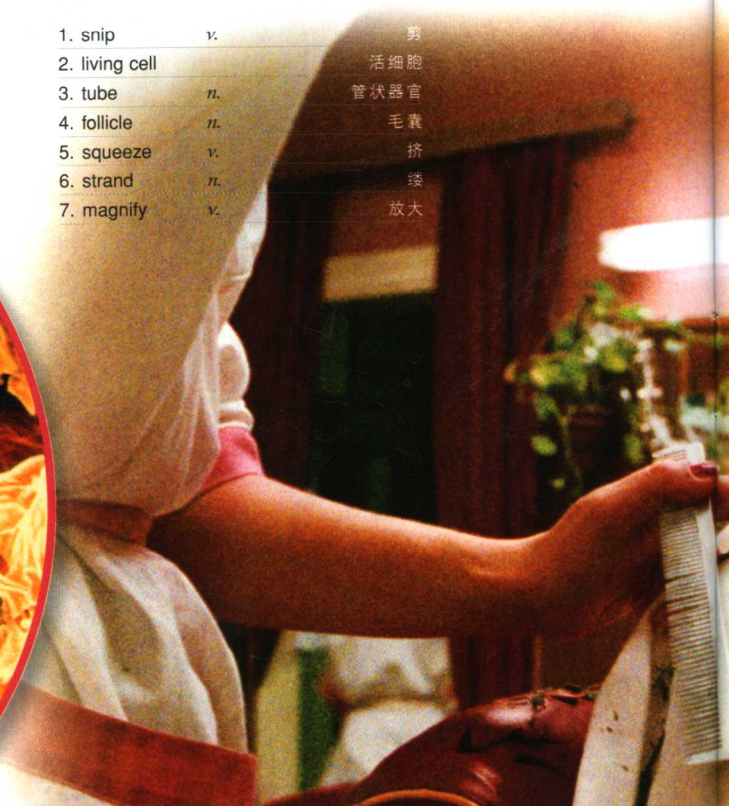
Each hair on your head grows from a root that is under your skin. The root produces hair cells in a special tube³ called a follicle⁴. When new hair cells are made at the root, they push older hair cells up the follicle.

As older hair cells move toward the surface of your skin, they change. They squeeze⁵ together and harden. Then they die. The strand⁶ of hair that comes out of your head does not have living cells in it. That's why a haircut doesn't hurt!

Hair follicle (magnified⁷)



1. snip	v.	剪
2. living cell		活细胞
3. tube	n.	管状器官
4. follicle	n.	毛囊
5. squeeze	v.	挤
6. strand	n.	缕
7. magnify	v.	放大



You probably have about 100,000 hairs on your head right now. Hair strands constantly¹ grow, fall out², and then start to grow again. It usually does this in different stages³. That's why you don't lose all of your hair at once.

People like to change their hair colors and styles. Sometimes the results are very interesting. In fact, you might be wide-eyed and staring at one of these creations⁴ . . .

- | | | |
|---------------|-------------|--------|
| 1. constantly | <i>adv.</i> | 不断地 |
| 2. fall out | | 脱落 |
| 3. stage | <i>n.</i> | 阶段 |
| 4. creation | <i>n.</i> | 创造, 创作 |



When you
suddenly
wonder . . .

Why do people blink?

为什么会眨眼睛？



Go ahead. Stare eye-to-eye with a friend. Try not to blink. You may win the contest, but it's only a matter of time before you blink again!

Blinking spreads tears over your eyes. Tears protect your eyes and keep them from drying out¹. When you are calm, you may blink about 20 times a minute. If you are upset or excited, however, you might blink 100 times a minute. Luckily, the average² blink lasts less than a second. So you don't even notice all those little moments of darkness.

The tears that spread during a blink come from special glands³ under your upper eyelids⁴. Usually, just enough tears are made to keep your eyes moist⁵. But sometimes you can get a real flood.

(注释见第9页)

When you are very upset, you cry. Then tears flood⁶ your eyes and can overflow⁷ onto your face. Sometimes dust or other material gets into your eyes. Then your eyes fill with tears to wash the harmful substance⁸ away. Blinking fast often helps the tears do their job.

When you blink, your eyes close for a split second⁹. But when you're scared¹⁰ you might squeeze them shut for a long time. Think about a ride on a roller coaster¹¹. You can close your eyes so you don't see what's coming next. But there's no fooling your stomach. It feels like it just flipped¹². In fact, you might be starting to feel dizzy¹³ . . .



1. dry out		干透
2. average	<i>adj.</i>	一般的；通常的
3. gland	<i>n.</i>	腺
4. upper eyelid		上眼睑
5. moist	<i>adj.</i>	湿润的
6. flood	<i>v.</i>	充满
7. overflow	<i>v.</i>	溢出

8. substance	<i>n.</i>	物质
9. split second		一刹那
10. scared	<i>adj.</i>	害怕的
11. roller coaster		过山车
12. flip	<i>v.</i>	翻动
13. dizzy	<i>adj.</i>	晕眩的

When you suddenly wonder . . .

What causes motion sickness?

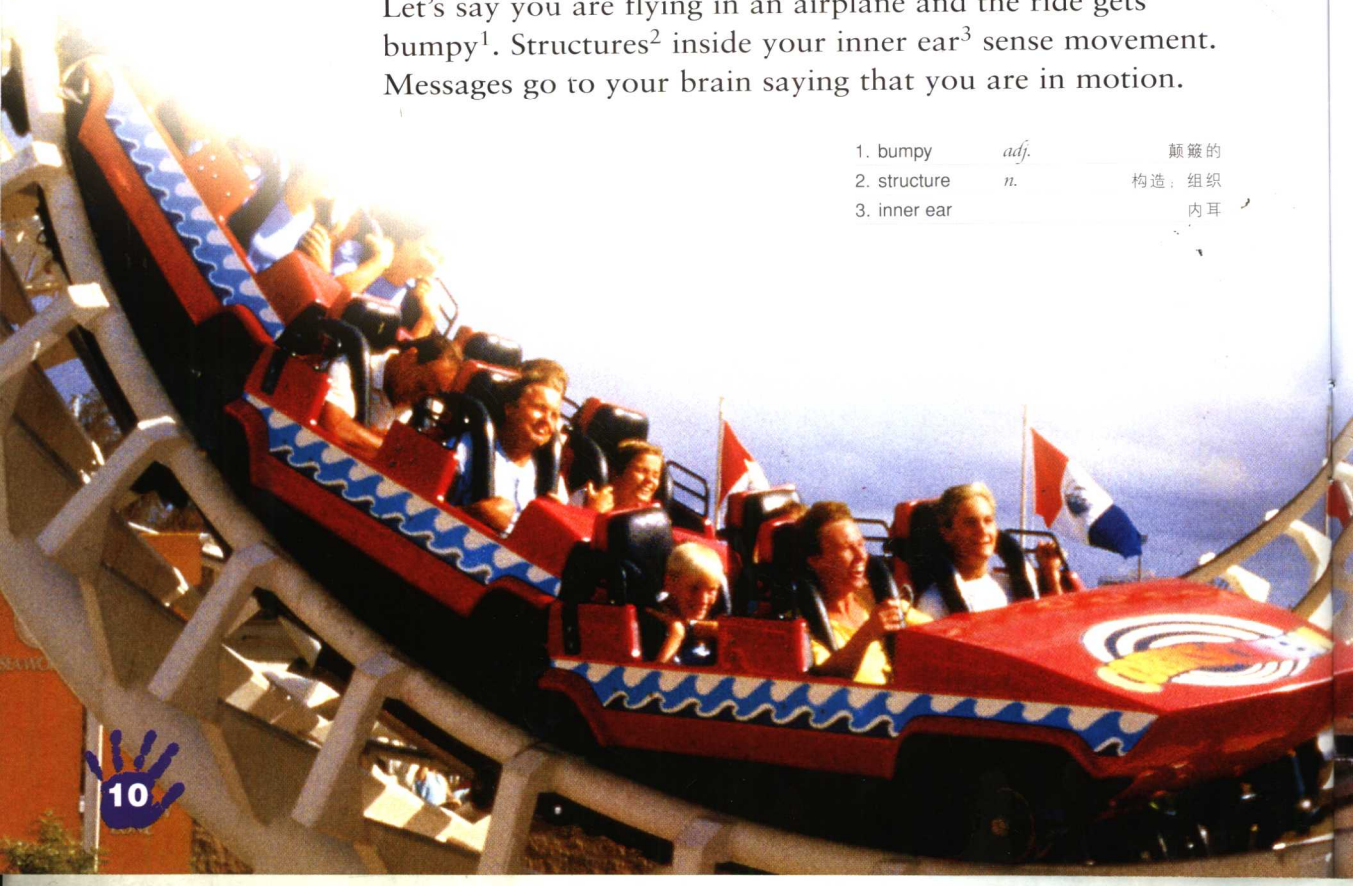
引发晕动病的原因是什么？

The roller coaster is making lots of turns. Your stomach starts to roll. Uh-oh, you think you're going to ...

Just what is it about a moving vehicle that sometimes makes you feel so sick? You may be surprised to learn that the problem doesn't start in your stomach. It's in your head!

The trouble begins when your brain gets different messages. Let's say you are flying in an airplane and the ride gets bumpy¹. Structures² inside your inner ear³ sense movement. Messages go to your brain saying that you are in motion.

- | | | |
|--------------|-------------|-------|
| 1. bumpy | <i>adj.</i> | 颠簸的 |
| 2. structure | <i>n.</i> | 构造；组织 |
| 3. inner ear | | 内耳 |



However, sometimes what you feel is not the same as what you see. Inside the plane, your eyes see that the seats and walls are not moving. Your eyes send messages to your brain that you are still. Your brain can't make sense of the different information. That's when you may begin to feel sick.

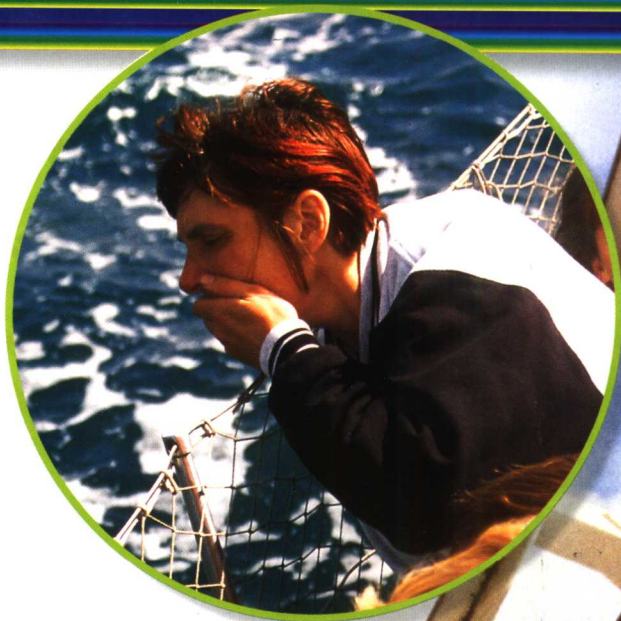
Usually you can get used to the motion. Over time, your brain begins to make sense of things again. Your stomach settles down¹. In fact, you may be feeling cool and collected². . .

1. settle down

平静下来

2. collected *adj.*

镇定的



**When you
suddenly
wonder . . .**

Why do people sweat?

为什么会流汗?

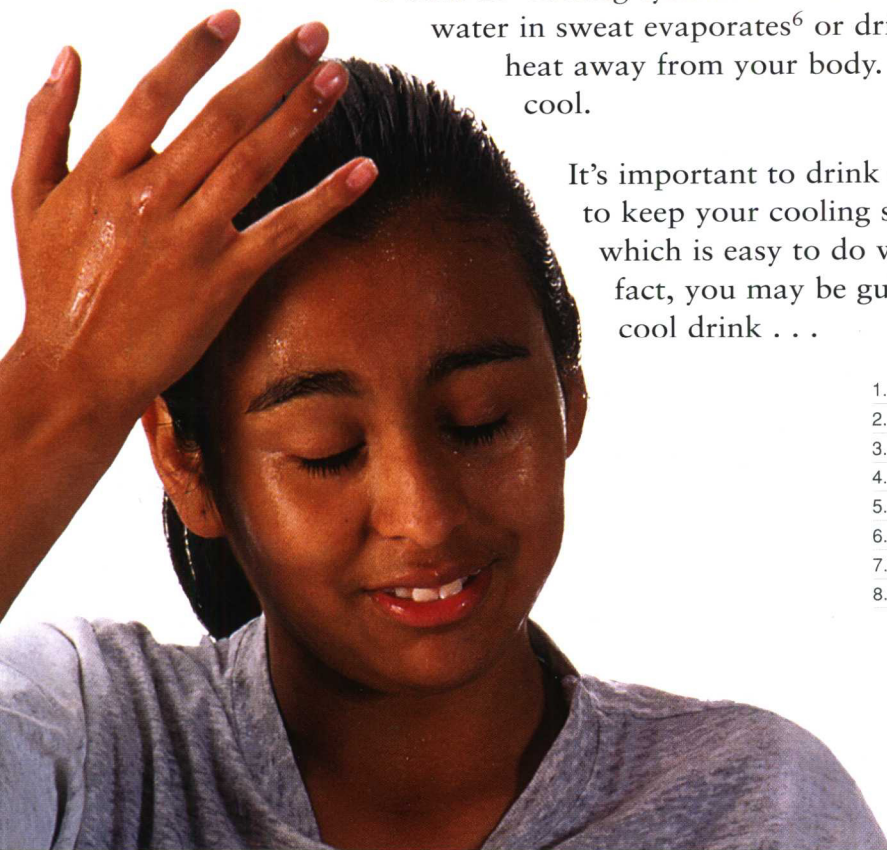


You're skateboarding¹ down the path. It's a hot summer day. It looks like you've been swimming. But you haven't. You're just soaking² wet with sweat!

You have about two million sweat glands all over your body. These sweat glands have tiny tubes that bring sweat from within your skin to the surface of your body. Why? It helps rid³ your body of heat.

When you exercise really hard, your body temperature rises. It's important to get rid of that extra⁴ heat. So your body has a built-in⁵ cooling system. How does it work? Well, as the water in sweat evaporates⁶ or drips⁷ off of you, it carries heat away from your body. This helps you to stay cool.

It's important to drink enough water every day to keep your cooling system working well, which is easy to do when you're thirsty. In fact, you may be gulping⁸ down a large, cool drink . . .



- | | | |
|---------------|------|-------|
| 1. skateboard | v. | 玩滑板 |
| 2. soak | v. | 浸; 浸透 |
| 3. rid | v. | 摆脱 |
| 4. extra | adj. | 多余的 |
| 5. built-in | adj. | 内在的 |
| 6. evaporate | v. | 蒸发 |
| 7. drip | v. | 滴下 |
| 8. gulp | v. | 大口地饮 |



**When you
suddenly
wonder . . .**

What causes hiccups?

为什么会打嗝?



You are sitting quietly in class. Suddenly a loud “hic¹” bursts² from your mouth. You hold your breath³ but the hiccups keep coming.

They are a common problem, but scientists really don't know why we get the hiccups. Sometimes they start when we eat too much or drink too fast. Other times they seem to appear for no good reason.

So what causes these annoying⁴ little sounds? It all starts with the diaphragm⁵. The diaphragm is a large muscle⁶ under the lungs⁷ in your chest. It lets you breathe in and out. When the diaphragm moves down, your lungs fill with air. When your diaphragm moves up, your lungs push air out.

1. hic	<i>int.</i>	呃
2. burst	<i>v.</i>	突然发出
3. hold one's breath		屏息
4. annoying	<i>adj.</i>	恼人的
5. diaphragm	<i>n.</i>	膈; 隔膜
6. muscle	<i>n.</i>	肌肉
7. lung	<i>n.</i>	肺