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**如**果你希望在享受英语阅读乐趣的同时又能增长知识、开拓视野，由外语教学与研究出版社与美国国家地理学会合作出版的“国家地理科学探索丛书”（英文注释版）正是你的选择。

“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。

# 国家地理科学探索丛书（第二辑）

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怎样坐飞机？  
奇趣水族馆  
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为什么眨眼睛？  
为什么打呵欠？

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# More Science of You

## 更多关于身体的科学



You may have already read about hiccups<sup>1</sup> and motion sickness<sup>2</sup> in the book *The Science of You*. But there is even more to say—so welcome to *More Science of You*.

There are big things going on in your body as you read this page. You are breathing. Your eyes are moving, and your stomach is probably still working on the last meal that you ate. It's important to learn how all these body systems<sup>3</sup> work. Sometimes, though, it's the little things that interest us the most.

1. hiccup 打嗝

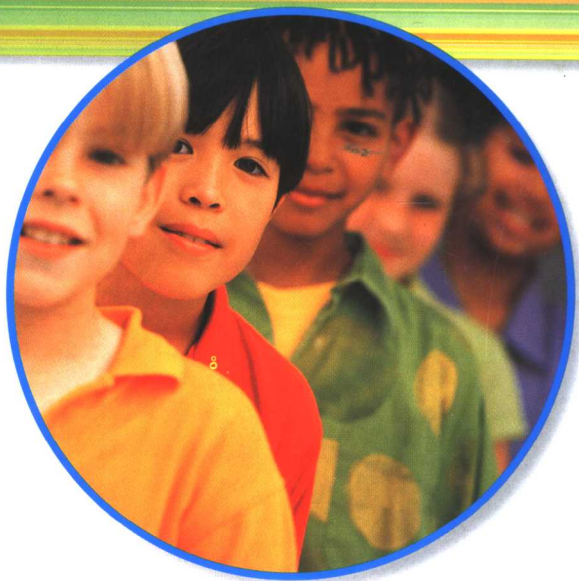
2. motion sickness 晕动病

3. body system 人体系统



Just like *The Science of You*, this book is about some of those things that you might wonder about. It answers the kinds of questions that pop<sup>1</sup> into your head when you least<sup>2</sup> expect them. Let's say, for example, you bump<sup>3</sup> your elbow<sup>4</sup> while getting into the car. In fact, you might be rubbing<sup>5</sup> your sore<sup>6</sup> "funny bone"<sup>7</sup> . . .

- |               |      |             |
|---------------|------|-------------|
| 1. pop        | v.   | (突然) 冒出     |
| 2. least      | adv. | 最少          |
| 3. bump       | v.   | 撞; 猛碰       |
| 4. elbow      | n.   | 肘           |
| 5. rub        | v.   | 按摩          |
| 6. sore       | adj. | 感到疼痛的       |
| 7. funny bone |      | (尺骨肘部的) 鹰嘴突 |



When you  
suddenly  
wonder . . .



# How many bones are in the human body?

## 人体有多少块骨头?



**There are quite a few. But believe it or not, babies have even more than you do!**

At birth, you have almost 300 soft bones in your body. But as you get older, some of these bones grow together to make bigger bones. By the time you are an adult, 206 bones will make up the skeletal system of your body.

Your bones do some important things. Bones support your body. Without them, you'd probably look a lot like a floppy<sup>1</sup> bean bag! Bones also protect your soft inner organs<sup>2</sup>. For example, your skull<sup>3</sup> protects your brain. And your rib cage<sup>4</sup> protects your heart and lungs<sup>5</sup>.

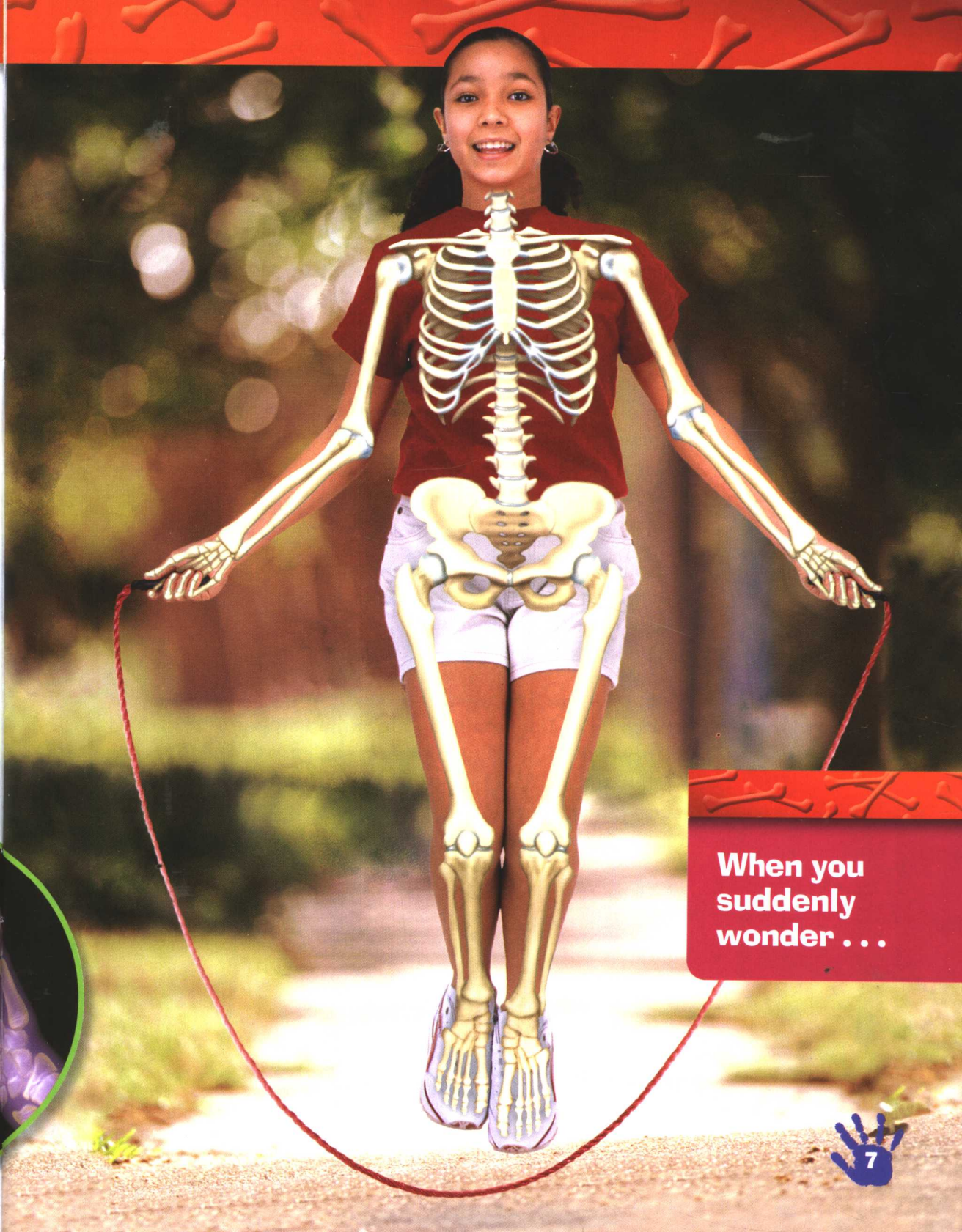
Bones also provide places for muscles<sup>6</sup> to attach<sup>7</sup>. Muscles, joints<sup>8</sup>, and bones work together so you can move.

Some body parts have more bones than you might think. Even though it feels like one piece, the average<sup>9</sup> adult skull is really made up of 29 bones. And there are 27 bones in your hand. In fact, you might be staring at your fingers trying to find all of these bones . . .

- |             |             |        |
|-------------|-------------|--------|
| 1. floppy   | <i>adj.</i> | 松软的    |
| 2. organ    | <i>n.</i>   | 器官     |
| 3. skull    | <i>n.</i>   | 颅骨; 头骨 |
| 4. rib cage |             | 胸腔     |
| 5. lung     | <i>n.</i>   | 肺      |
| 6. muscle   | <i>n.</i>   | 肌肉     |
| 7. attach   | <i>v.</i>   | 使附着    |
| 8. joint    | <i>n.</i>   | 关节     |
| 9. average  | <i>adj.</i> | 一般的    |

**X-ray of human hand**





**When you  
suddenly  
wonder . . .**



# How do fingernails grow?

## 手指甲是怎样生长的?



**Some people clip<sup>1</sup> them. Some people bite them. But fingernails just keep growing back.**

Fingernails are made of a special kind of hardened skin cell. They are also full of a protein<sup>2</sup> called keratin<sup>3</sup>. They grow from a root that is below your skin at the base of your nail. As new cells are added to the base, your nail is pushed upward toward your fingertip. But by the time you can see your nail, the cells are no longer alive. That's why it doesn't hurt when you bite or clip your nails.

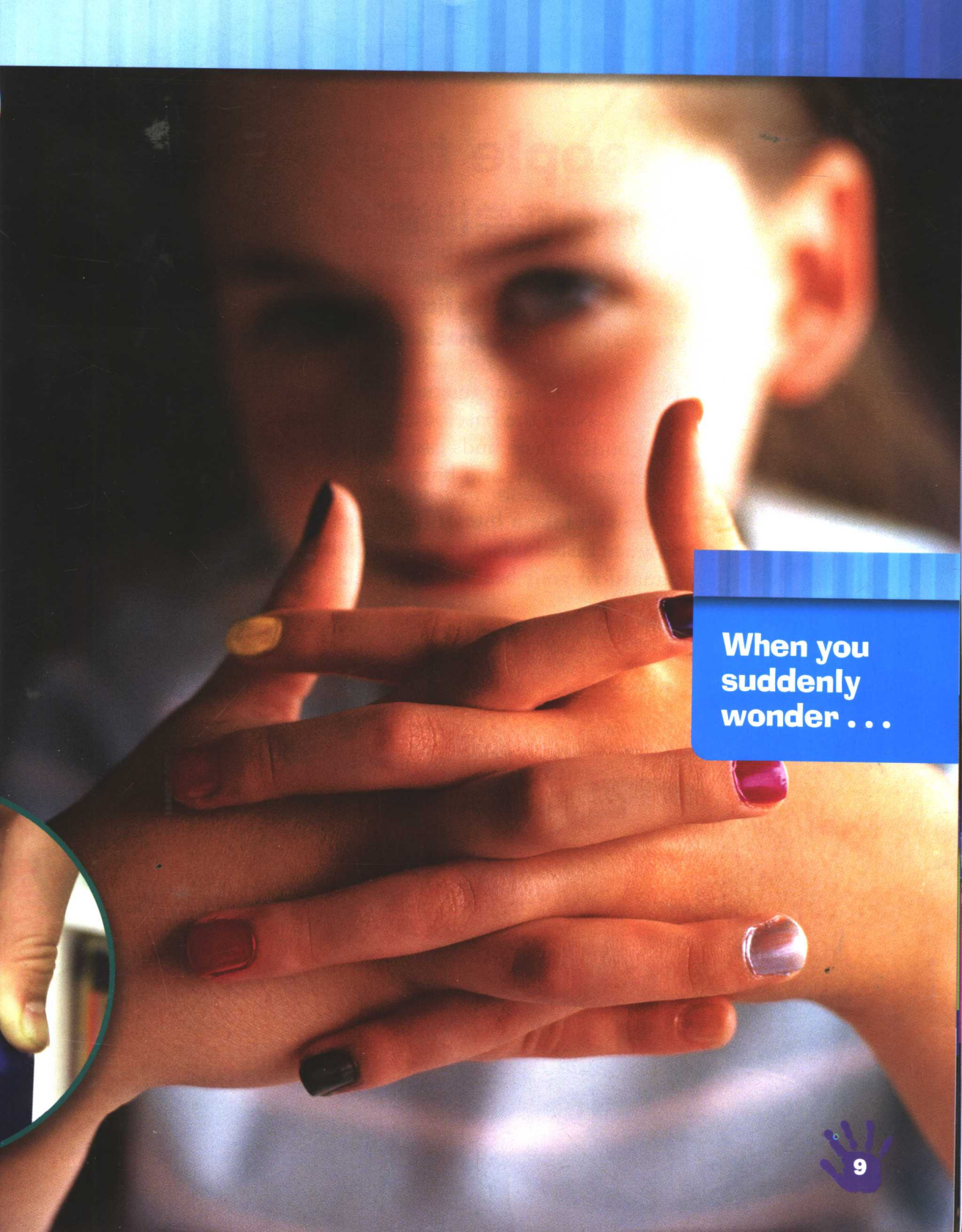
Although they are made of the same substance<sup>4</sup>, fingernails grow faster than toenails. Fingernails also grow faster on longer fingers. So the nails on your short little pinky finger are usually the slowest to grow.

Most people value<sup>5</sup> their fingernails when they need to scratch<sup>6</sup>. But fingernails do more than stop an itch. Many scientists think nails help protect the ends of our fingers. Fingernails also help us grip<sup>7</sup> and pick up things. In fact, your nails might be helping you pop<sup>8</sup> open a tasty can of your favorite soft drink . . .

- |              |    |        |
|--------------|----|--------|
| 1. clip      | v. | 剪; 修剪  |
| 2. protein   | n. | 蛋白质    |
| 3. keratin   | n. | 角蛋白    |
| 4. substance | n. | 物质     |
| 5. value     | v. | 看重     |
| 6. scratch   | v. | 抓; 搔   |
| 7. grip      | v. | 抓牢     |
| 8. pop       | v. | 发出砰的响声 |







**When you  
suddenly  
wonder . . .**



# How do people taste food?

## 为什么能尝出滋味?



**One lick<sup>1</sup> of your tongue and you know if it's yucky<sup>2</sup> or good. How does this little muscle in your mouth give you so much information?**

The surface of your tongue is covered with thousands of tiny bumps<sup>3</sup>. Near the base of these bumps are special cells called taste buds<sup>4</sup>. Taste buds can detect<sup>5</sup> four basic kinds of taste: sweet, sour, salty, and bitter.

When you take a bite of food, the food spreads over your tongue. Taste buds detect chemicals<sup>6</sup> in the food and send signals<sup>7</sup> to your brain.

- |              |             |       |
|--------------|-------------|-------|
| 1. lick      | <i>n.</i>   | 舔     |
| 2. yucky     | <i>adj.</i> | 令人厌恶的 |
| 3. bump      | <i>n.</i>   | 隆起物   |
| 4. taste bud |             | 味蕾    |
| 5. detect    | <i>v.</i>   | 感觉到   |
| 6. chemical  | <i>n.</i>   | 化学物质  |
| 7. signal    | <i>n.</i>   | 信号    |



**Salty**



**Sour**

Your tongue isn't the only thing sending messages to your brain about the food in your mouth. Your nose also gets into the act. When you smell something, nerves<sup>1</sup> in your nose send messages to your brain. Your brain uses information from both your nose and your tongue to figure out what something tastes like. That's why things may taste different to you when your nose is stuffy<sup>2</sup> with a cold.

Not all creatures<sup>3</sup> have taste buds in their mouths. Houseflies<sup>4</sup> and mosquitoes have taste buds on their feet. They can taste something as soon as they land on it! In fact, you might be waving<sup>5</sup> a pesky<sup>6</sup> insect<sup>7</sup> away from your food . . .

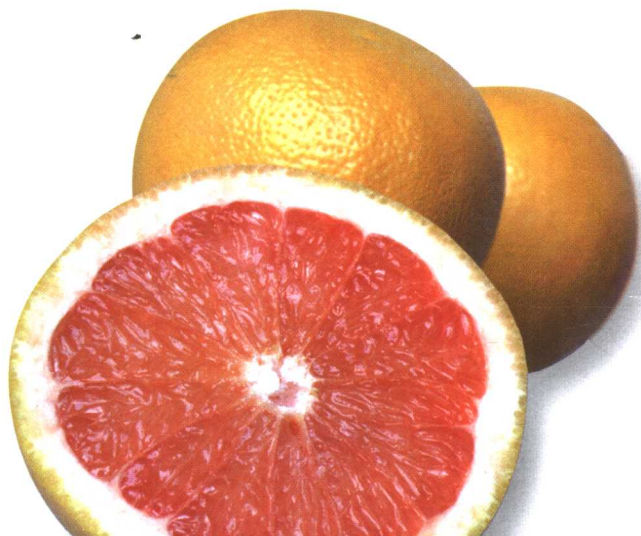
- |             |             |         |
|-------------|-------------|---------|
| 1. nerve    | <i>n.</i>   | 神经      |
| 2. stuffy   | <i>adj.</i> | (鼻) 塞的  |
| 3. creature | <i>n.</i>   | 动物      |
| 4. housefly | <i>n.</i>   | 家蝇      |
| 5. wave     | <i>v.</i>   | 挥手 (驱赶) |
| 6. pesky    | <i>adj.</i> | 讨厌的     |
| 7. insect   | <i>n.</i>   | 昆虫; 虫   |



**Sweet**



**When you suddenly wonder . . .**



**Bitter**



# Why do mosquito bites itch?

## 为什么被蚊子叮了会痒?



**You feel the stab<sup>1</sup> and slap<sup>2</sup> the bug away. Too late. Another itchy bite will soon swell up<sup>3</sup>.**

Believe it or not, not all mosquitoes feed on people. Generally, the ones that go for people are female<sup>4</sup>. In fact, some female mosquitoes need to eat a blood meal before they lay their eggs.

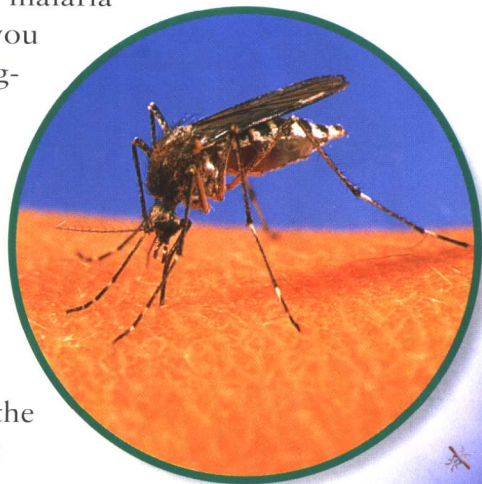
When a mosquito bites, it uses a long mouth tube<sup>5</sup>, called a proboscis<sup>6</sup>, to poke<sup>7</sup> through your skin. Normally when your skin is broken, your blood begins to thicken, or clot<sup>8</sup>, and form a scab<sup>9</sup>. But the mosquito quickly puts some of her saliva<sup>10</sup> into your body. This saliva keeps your blood from clotting. Then it's easier for the mosquito to suck up<sup>11</sup> your blood.

- |             |             |       |              |           |          |
|-------------|-------------|-------|--------------|-----------|----------|
| 1. stab     | <i>n.</i>   | 刺; 刺痛 | 6. proboscis | <i>n.</i> | (昆虫等的) 喙 |
| 2. slap     | <i>v.</i>   | 拍打    | 7. poke      | <i>v.</i> | 戳; 刺     |
| 3. swell up |             | 肿起来   | 8. clot      | <i>v.</i> | 凝结       |
| 4. female   | <i>adj.</i> | 雌性的   | 9. scab      | <i>n.</i> | 痂        |
| 5. tube     | <i>n.</i>   | 管状器官  | 10. saliva   | <i>n.</i> | 唾液       |
|             |             |       | 11. suck up  |           | 吸出       |



Mosquito saliva can carry diseases, such as malaria<sup>1</sup> and West Nile virus<sup>2</sup>. But there are things you can do to protect yourself. Pants and a long-sleeved shirt can keep the bugs off you. Insect sprays<sup>3</sup> also help keep the bugs—and the itch—away.

The itch of a mosquito bite is not from the bug itself. It's caused by your body's reaction<sup>4</sup> to the mosquito's saliva. Some people respond<sup>5</sup> more strongly than others. This means they might be more allergic to the saliva. In fact, you might be thinking about allergies . . .



- |                    |    |        |
|--------------------|----|--------|
| 1. malaria         | n. | 疟疾     |
| 2. West Nile virus |    | 西尼罗河病毒 |
| 3. insect spray    |    | 喷雾杀虫剂  |
| 4. reaction        | n. | 反应     |
| 5. respond         | v. | 作出反应   |

**When you  
suddenly  
wonder . . .**



# Why do people sneeze?

## 为什么会打喷嚏?



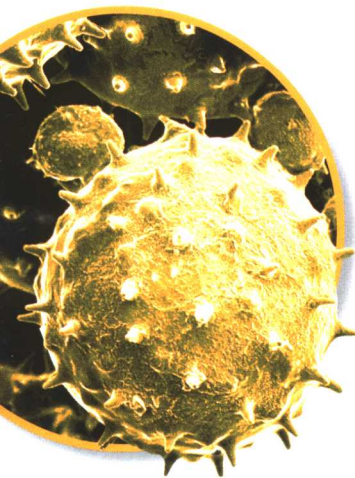
**One ACHOO can send air speeding from your nose at 44 meters per second. What could trigger<sup>1</sup> such a big response?**

Many things make us sneeze. Dust and the common cold cause lots of sneezes. Some people also suffer from allergies. This means they sneeze when they are around certain things that bother<sup>2</sup> them, such as pollen<sup>3</sup> and pets.

A sticky film<sup>4</sup> and tiny hairs line the inside of your nose. They trap<sup>5</sup> particles<sup>6</sup> found in the air you breathe. This can bother nerve endings<sup>7</sup> in your nose. Messages get fired off<sup>8</sup> to the brain. Then your brain makes you sneeze to try to get rid of the “junk<sup>9</sup>” in your nose.

A sneeze is a reflex action<sup>10</sup>. That means you don't have to think about it to do it—but a lot of muscles have to work together to make it happen. Muscles in your chest, throat, and eyes are some of the main ones that get involved<sup>11</sup>.

Do you sneeze when you walk into bright sunlight? No one is sure what causes this kind of sneeze. But just like other sneezes, it's one you can't control. In fact, you might be thinking about other reflex actions . . .



**Pollen**

- |                   |    |        |
|-------------------|----|--------|
| 1. trigger        | v. | 引发     |
| 2. bother         | v. | 打扰; 烦扰 |
| 3. pollen         | n. | 花粉     |
| 4. film           | n. | 薄膜     |
| 5. trap           | v. | 捕捉     |
| 6. particle       | n. | 微粒; 颗粒 |
| 7. nerve ending   |    | 神经末梢   |
| 8. fire off       |    | 发出     |
| 9. junk           | n. | 垃圾     |
| 10. reflex action |    | 反射作用   |
| 11. involve       | v. | 使参与    |