



Name \_\_\_\_\_ Date \_\_\_\_\_

Mosquitoes are not generally dangerous to people on their own—apart from irritating itches. However, mosquitoes are vectors for several deadly diseases, including malaria, yellow fever, and dengue fever. A vector is an organism that carries and transmits a germ or disease to another organism. Mosquitoes transmit these diseases by picking up a virus in one "blood meal" and passing it along in the next.

On August 20, 1897, British doctor Ronald Ross proved that malaria could be spread by mosquitoes. Ross was practicing medicine in Secunderabad, Andhra Pradesh, India, and began studying the disease after he himself fell ill with it.

Ross' groundbreaking experiment had four major phases. First, Ross let uninfected mosquitoes feed on a patient already sick with the disease. Second, he tested the mosquitoes, showing they were now infected. In the third phase, he let an uninfected mosquito feed on an infected bird, then on an uninfected one. Finally, in the fourth phase, he tested the second bird, showing it had become infected after the mosquito bite. Ross won the 1902 Nobel Prize in Medicine for this important discovery.

Malaria is a tropical disease, mostly affecting people who live in hot and humid areas. Every year, about 216 million people suffer from the disease, and about 655,000 die.

Once a person is infected, the parasites travel through the bloodstream to the liver. Then, the parasites multiply inside the red blood cells which break open within 48 to 72 hours. This infects more red blood cells. The first symptoms usually occur 10 days to 4 weeks after infection. Sometimes they can appear as early as 8 days or as long as a year after infection.

Some symptoms include bloody stools, chills, coma, convulsion, fever, headache, muscle pain, sweating and vomiting. During a physical examination, the doctor may find an enlarged liver. The treatment includes a patient having to be admitted. The doctor will usually give some kind of medication, but the medication depends on where the patient was when they got infected. Other treatments usually include an IV and breathing support. The outcome is expected to be good on most cases.

One major problem is that in some parts of the world, mosquitos that carry malaria have developed resistance to insecticides. They have also developed resistance to some antibiotics.

The best way to prevent getting malaria is to contact a health care provider before traveling to a tropical place. The treatment may need to begin as long as 2 weeks before traveling to the area and continue after you leave the area.



Name \_\_\_\_\_ Date \_\_\_\_\_

Use the words from the Word Box to complete the sentences below.

irritates	proved	infected	tropical	humid
resistance	admit	antibiotics	suffer	symptoms

1. It really \_\_\_\_\_ me when people suck their teeth.
2. Don't let him \_\_\_\_\_ anymore. Give him some medicine so he doesn't feel the pain.
3. If you go in the room with that sick person, you may get \_\_\_\_\_ too.
4. The \_\_\_\_\_ for the flu are a high fever and loss of appetite.
5. A lot of people do \_\_\_\_\_ training in the gym.
6. The police \_\_\_\_\_ the clerk stole the money from the bank.
7. The nurse had to \_\_\_\_\_ Karen for a high fever.
8. When a person gets sick, they have to take \_\_\_\_\_ to get the virus out.
9. Most of the \_\_\_\_\_ countries are near the equator.
10. It gets really \_\_\_\_\_ in the summer.
11. I know you took my bag because I saw you, so just \_\_\_\_\_ it.



Name \_\_\_\_\_ Date \_\_\_\_\_

1. What is the Nobel Prize? \_\_\_\_\_

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2. What does the liver do? \_\_\_\_\_

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3. What do the red blood cells do? \_\_\_\_\_

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4. Where do people catch malaria? \_\_\_\_\_

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5. How can someone prevent catching malaria? \_\_\_\_\_

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6. What are the symptoms for malaria? \_\_\_\_\_

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7. Why did Ross win the Nobel Prize? \_\_\_\_\_

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8. What is a parasite? \_\_\_\_\_

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9. Where are the tropics? \_\_\_\_\_

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**NOBEL PRIZE** - first awarded in 1901 by the Swedish inventor Alfred Nobel  
- awarded in Stockholm, Sweden for discoveries in physics  
chemistry, medicine, literature and peace  
- each winner receives a gold medal, a diploma and  
US\$1.2 million dollars

**LIVER** - largest organ in the abdomen  
change food into energy, clean poisons from the blood,  
found in the right upper abdomen

**RED BLOOD CELLS** - transport the oxygen from inhaled air to all parts of the  
body  
- pick up the carbon dioxide and transport it back to  
the lung, then we exhale it when we breathe out

**PARASITE** - an animal or plant that gets nutrients by living on or in another  
species  
- parasite gets all nutrients from the host organism

**TROPICS** - between the Tropic of Cancer and Tropic of Capricorn