

# “The Night Harry Stopped Smoking”

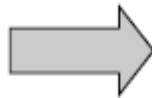
An anti-smoking musical comedy for children in one act

By John Davies and Ross Dabrusin

Presented by

Opera San José

of San José, California



*A Comprehensive Study guide for Students and Teachers*

## *The Story*

Harry falls asleep in his chair one night with a cigarette in his hand. He wakes to find himself inside his own lung! He meets the crew trying to keep his body clean--nerve cells Fred and Ginger, ciliary cells Sid and Cilia, Pumper his heart, and a whole bunch of lung sacs called alveoli. Their message: his smoking is making them sick!

## *The Setting*

Harry's living room, then the inside of Harry's lung.

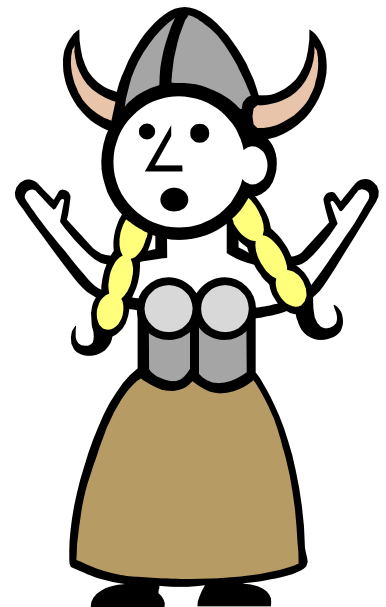
Duration: Approximately 35 minutes

## *The Cast*

**Harry, a smoker**.....Kenneth Mattice/Bill Welch  
**Ginger, nerve cell inside Harry's lung**..... Laura Twelves  
**Fred, nerve cell inside Harry's lung**.....Daniel Cilli  
**Sid, ciliary cell in Harry's lung**..... Isaac Hurtado/Christopher Bengochea  
**Celia, ciliary cell in Harry's lung**.....Michele Detwiler  
**Pumper, Harry's heart**.....Carlos Aguilar  
**Alveoli Captains:** Isaac Hurtado, Christopher Bengochea, Michele Detwiler  
**Alveoli** (*al-VEE-oh-li*: Sierra Thompson, Sydney Thompson, Rachel and Joseph Hurtado  
**Pianists:**.....Bruce Olstad/Veronica Agranov-Dafoe  
**Stage Director:**.....Douglas Nagel  
**Choreographer:**.....Alex Perez

## **What's Opera, Doc?**

Opera is all the arts wrapped up in one splendid package—music, dance, drama with stage settings, costumes and an orchestra. Opera sings a story. In a movie, characters say and do things. In an opera, characters sing their passions – joy, sorrow, hope, and despair. They do this without microphones and speakers to amplify their voices. They are “athletes of the voice” – trained to sing notes that will project throughout the theater without any electronic devices.



One major difference between operas and musicals is that the action in musical theatre is usually spoken, with songs describing a character's feelings about the situation. In opera, everything is sung. Musical theater performers use small microphones in their clothing or hair to amplify their voices.

An excellent website on lung function and smoking damage, with games and puzzles:

[http://www.lung.ca/children/grades4\\_6/tobacco/index.html](http://www.lung.ca/children/grades4_6/tobacco/index.html)

The Night Harry Stopped Smoking Teacher Fact Sheet

Definition of terms and consequences of tobacco use:

1. Trachea (windpipe) – tube which delivers air from the voice box into the bronchial tubes; dirty mucous collects in this tube causing a person to cough.
2. Bronchial tubes – tubes which branch off the trachea and deliver air to the bronchioles; dirty mucous collects in these tubes, causing them to become infected and inflamed, resulting in a disease called bronchitis; (person has difficulty breathing).
3. Bronchioles – tiny (microscopic) air tubes found branching off the bronchial tubes; cilia that line these tubes die, causing mucous to build up; coughing will cause air sacs (alveoli) to break, resulting in a disease called emphysema, (person has great difficulty breathing and can eventually die from suffocation).
4. alveoli (air sacs) – tiny (microscopic) sacs found at the end of each bronchiole; this is where oxygen moves into the blood and carbon dioxide moves out of the lungs; loss of cilia in the bronchioles makes it difficult to remove the dangerous chemicals that a person inhales when he/she smokes; when these chemicals remain in the air sacs for a long period of time, it is believed to lead to lung cancer
5. Cilia (sweepers) – little hair cells that line the respiratory system, from nose down to the bronchioles; they clean the incoming air; smoking slows and then destroys these hair cells; this causes the body to lose its cleaning ability, often resulting in “smokers cough”.
6. mucous – thick fluid which lines the respiratory system; traps dirt and bacteria as air enters the body; dirty mucous collects in the windpipe bronchiole tubes and bronchioles; leads to difficulty in breathing, coughing and respiratory disease.
7. Nerve cell – special cells that allow the brain to communicate with the body; nicotine causes the heart to speed up unnecessarily, leading to heart disease.
8. Heart (pumper) – a strong muscle that pumps blood throughout the body; nicotine causes the heart to speed up, leading to high blood pressure, heart attacks and strokes.
9. Blood vessels – tubes that carry blood to all parts of the body; nicotine causes the blood vessels to become hard and rigid, leading to high blood pressure, heart attacks and strokes.
10. Tobacco – a plant which produces leaves that can be smoked, chewed or sniffed; when burned, various agents can harm the body or cause various diseases
11. nicotine – a stimulant drug found in tobacco; it speeds up various parts of the body, causing unnecessary functioning faster than normal; leads to heart disease in excessive amounts.

# Lung Anatomy

## HOW OUR LUNGS WORK

Our lungs bring fresh oxygen into our bodies and remove carbon dioxide and other gaseous waste products.

As we breathe air in, we use the muscles of our rib cage and especially the major muscle called the **diaphragm** to pull air into our lungs. As we breathe air in, the diaphragm contracts or tightens and flattens, allowing air to be sucked into the lungs.

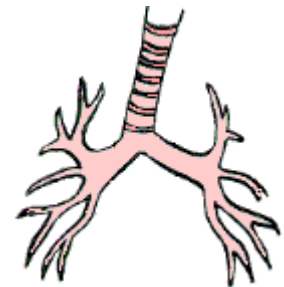
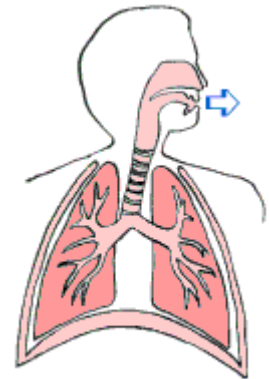
The diaphragm and the rib cage muscles relax and air is expired passively (in other words, the muscles do no work when we breathe out.)

Air, containing the oxygen our bodies need, is inhaled through the mouth and the nose. The **mucus membranes** in our mouth and nose warm and moisten the air, as well as trap particles of foreign matter.

The air passes through the throat into the **trachea** or windpipe.

The trachea divides into the left and right **bronchi**. Like a branch, each bronchus divides again and again, becoming narrower and narrower.

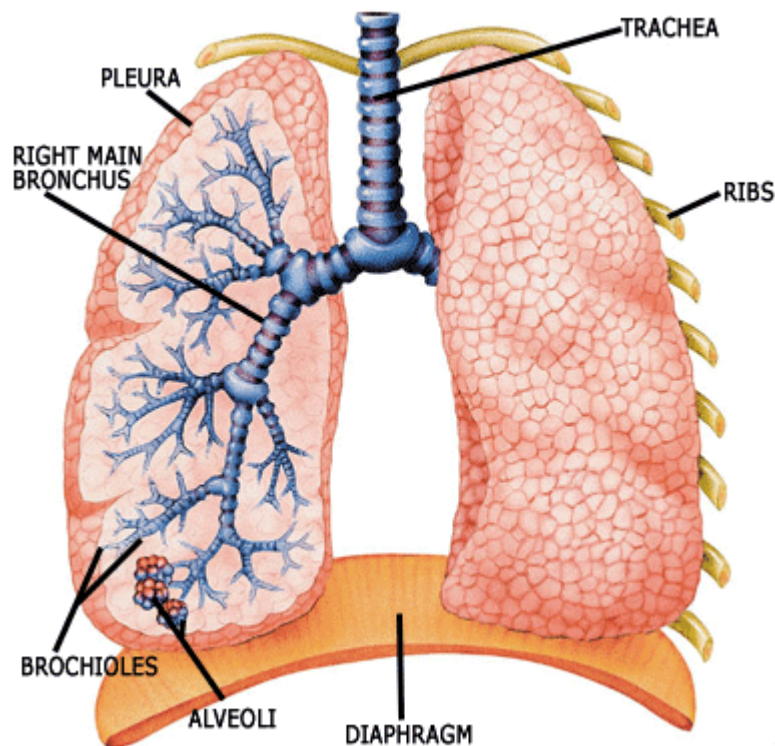
The smallest airways end in the **alveoli**, small, thin air sacs that are arranged in clusters like bunches of balloons. When you breathe in by enlarging the chest cage, the "balloons" expand as air rushes in to fill the vacuum. When you breathe out, the "balloons" relax and air moves out of the lungs.



Tiny blood vessels surround each of the 300 million alveoli in the lungs. Oxygen moves across the walls of the air sacs, is picked up by the blood and carried to the rest of the body. Carbon dioxide or waste gas passes into the air sacs from the blood and is breathed out.



## 😊 Your lungs the respiratory system



Take a deep breath...without the OXYGEN you breathe in, you would quickly die. Your LUNGS make sure that air you breathe in can be picked up by blood cells and sent to many other cells in the body. The lungs are sort of like a train station that blood cells pass through to pick up oxygen and deliver to the rest of your body. Humans have two lungs for breathing. Breathing is controlled by the brain automatically, without even having to think about! Both lungs expand and contract, and fill with oxygen as we breathe, but the lungs cannot fill by themselves - they use a strong muscle just below the lungs called the DIAPHRAGM. The diaphragm pulls and pushes the lungs to fill with oxygen, and then helps them to get ready for your next breath. Inside the lungs tiny tubes (called BRONCHIOLES) are even smaller air sacs (called ALVEOLI) fill with oxygen when you take a breath. Blood rushes by these air sacs and picks up oxygen from them. Kind of like an oxygen piggyback ride! The blood delivers this oxygen throughout your body to cells that work to keep you healthy. When the blood runs out of oxygen, they head back to the lungs to pick up more oxygen!

# Tobacco Questionnaire

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Pick the correct answer for each question.

1. Smoking is harmful only if you smoke for a long time -- 20 to 30 years or more.

- True
- False

2. If you smoke a pack a day for one year, it will cost you about:

- \$50
- \$1000
- \$1,500
- \$3,000

3. Nicotine in tobacco is highly addictive.

- True
- False

4. Spit tobacco is a safe and non-addictive alternative to cigarettes.

- True
- False

5. Which of the following chemicals are found in cigarette smoke?

- Ammonia (used to clean toilets)
- Cyanide (used to kill rats)
- Formaldehyde (used to preserve dead frogs)
- All of the above

6. More than 80% of smokers start before they turn:

- 18 years old
- 21 years old
- 25 years old

7. How many young people become new smokers each day?

- 1,000
- 2,000
- 3,000

8. Tobacco kills more people each year than which of the following causes of death?

- Illegal drugs
- Car crashes
- AIDS
- All of the above

9. Within two days of quitting smoking, your sense of taste and smell are greatly improved.

- True
- False

10. What is the number one source of pollution on California beaches?

- Oil slicks
- Hospital waste
- Cigarette butts

## Quiz Answers

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- 1. False.** The physical damage from smoking sets in almost immediately -- even within a year after you start. Teen smokers cough and wheeze more. They produce more phlegm (yuck!). They have lungs that are damaged and actually smaller. They have weaker hearts. They perform worse in physical fitness tests and competitive sports. And they get sick and miss school more often.
- 2. \$1000.** It will cost you about \$1000 in one year if you smoke a pack of cigarettes each day. Think of what you could do with all that dough: Play 2,000 video-arcade games; or talk on the phone to your friend in another state for more than 100 hours! It's boring, we know, but if you put \$1000 every year in a bank account earning 5 percent interest, you'd have \$34,719.25 after 20 years. That's some serious cash!
- 3. True.** Nicotine in cigarettes has been shown to be highly addictive. About two-thirds of young smokers say they want to quit smoking, and seven in 10 say they regret having started. Three out of four teens who are daily smokers say they keep smoking because it's really hard to quit. When they do try to quit, they suffer the same withdrawal symptoms ("the crazies") as adults who try to quit. And nicotine addiction can fool you: Only 5 percent of teen smokers think they will definitely be smoking in 5 years, but close to 75 percent end up still smoking 7-9 years later.
- 4. False.** Spit tobacco (snuff and chewing tobacco) is not a safe and non-addictive alternative to cigarettes. Using spit tobacco can cause cracked lips, bleeding gums, and sores of the mouth that never heal. It can stain your teeth a yellowish-brown color and give you bad breath. Worst of all, use of spit tobacco can cause mouth cancer and other kinds of cancer. It also may play a role in heart disease and stroke. Like cigarettes, smokeless tobacco contains nicotine, and nicotine is addictive. One "dip" of smokeless tobacco can deliver as much nicotine as several cigarettes.
- 5. All of the above.** Scientists estimate that there are more than 4,000 known chemical compounds in cigarette smoke. More than 40 of these are known to cause cancer in people or animals. Spit tobacco, even though it is not smoked, contains high concentrations of cancer-causing chemicals called nitrosamines, plus at least a half dozen other chemicals that cause cancer.
- 6. 18 years old.** More than 80% of adult smokers started before they turned 18, and by that time more than half of them were already smoking daily. Among high school seniors who use spit tobacco, about three in four had tried it by grade 9. Hardly anyone starts using tobacco as an adult. So if you make it through your teens tobacco-free, chances are great you'll be tobacco-free for life.
- 7. 3,000.** Each day 6,000 young people will take their first puff on a cigarette and 3,000 will become regular smokers. That's more than a million new smokers each year. One out of three of them will die from a disease caused by their smoking. Unless we do something to stop this trend, 5 million young people who are alive today will die from using tobacco.
- 8. All of the above.** Each year smoking kills more people than AIDS, alcohol, drug abuse, car crashes, murders, suicides, and fires -- combined! More than 400,000 people die from smoking each year -- one out of every five deaths in the U.S. That's the same as three fully loaded jumbo jets crashing each day with no survivors!
- 9. True.** Within two days of quitting smoking, your sense of taste and smell can be greatly improved. There are other immediate benefits of quitting. The levels of carbon monoxide and nicotine in your body go down quickly. Your heart and lungs will begin to repair the damage done by smoking. You'll begin to breathe easier. Your smoker's cough will begin to disappear. And you'll soon notice a boost in your energy and stamina.
- 10. Cigarette butts.** Littering beaches and the countryside is only one way that cigarettes harm the environment. Nearly 12.5 million acres of forest -- more than 10 Grand Canyons -- are destroyed each year to provide trees to cure tobacco. That's about a tree every two weeks for the average smoker. Secondhand smoke is another environmental menace. It fills the air with many of the same poisons found in the air around toxic waste dumps. And it's deadly: Secondhand smoke kills about 3,000 nonsmokers each year from lung cancer.

# The Night Harry Stopped Smoking Tobacco Matching Worksheet

Name \_\_\_\_\_

Room \_\_\_\_\_

Directions: Put the letter of the correct answer from below, in the space provided.

- \_\_\_\_\_ 1. Tube which delivers air from the voice box into the lungs
- \_\_\_\_\_ 2. Tiny cells that are killed when a person smokes
- \_\_\_\_\_ 3. Tiny air sacs that break when a person smokes, causing a disease called emphysema.
- \_\_\_\_\_ 4. Special cell that works faster when a person smokes; causes other parts of the body to work faster.
- \_\_\_\_\_ 5. Tubes which carry blood to all parts of the body; they become very stiff with smoking
- \_\_\_\_\_ 6. A type of drug; a stimulant.
- \_\_\_\_\_ 7. Tiny tubes that have air sacs at one end; become filled with dirty mucous when a person smokes.
- \_\_\_\_\_ 8. A muscle that pumps blood throughout the body; is overworked when a person smokes.
- \_\_\_\_\_ 9. A plant that can be burned, chewed or sniffed
- \_\_\_\_\_ 10. When this tube swells as a result of smoking, the disease is called bronchitis

- a. arteries and arterioles
- b. nerve cell
- c. windpipe or trachea
- d. heart
- e. nicotine
- f. bronchioles
- g. alveoli
- h. cilia
- i. tobacco
- j. bronchial tube

*[answers on next page]*

## The Night Harry Stopped Smoking Tobacco Matching Answers

\_\_\_c\_\_\_ 1. Tube which delivers air from a. blood vessels  
the voice box into the lungs

c. nerve cell

\_\_\_h\_\_\_ 2. Tiny cells that are killed when  
a person smokes c. windpipe

\_\_\_g\_\_\_ 3. Tiny air sacs that break when a person d. heart  
smokes, causing a disease called  
emphysema. e. nicotine

\_\_\_b\_\_\_ 4. Special cell that works faster when a f. bronchioles  
person smokes; causes other parts of  
the body to work faster. g. alveoli

\_\_\_a\_\_\_ 5. Tubes which carry blood to all parts h. cilia  
of the body; they become very stiff  
after a person smokes. i. tobacco

\_\_\_e\_\_\_ 6. A type of drug; a stimulant.

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become filled with dirty mucous when a  
person smokes.

\_\_\_d\_\_\_ 8. A muscle that pumps blood throughout the  
body; is overworked when a person smokes.

\_ i \_\_\_ 9. A plant that can be burned, chewed or sniffed  
so that the drug in it can affect the body.

\_\_\_J\_\_\_ 10. When this tube swells as a result of smoking,  
the disease is called bronchitis.

# TOBACCO MATH WORKSHEET

Name \_\_\_\_\_ Room \_\_\_\_\_

## **The Night Harry Stopped Smoking Tobacco Math Worksheet** **Smoking is Expensive – To Your Wallet and Your Life!**

**For this work sheet use these facts calculated for example:**

- A pack of cigarettes costs \$4.00
- There are 20 cigarettes in a pack
- There are 10 packs in a carton
- You lose 14 minutes of life for every cigarette smoked

1. Harry smokes 5 cigarettes a day. How long will one pack last?
2. About how much will it cost Harry to smoke each week?
3. Ashley smoked a pack a day in the month of June. (30 days) How much did it cost for the month?
4. If it takes 1 week for Bill to smoke 10 cigarettes, how much money will he spend in one year?
5. Ashley wants to buy a new purse, which will cost her approximately \$16.00. If she stops smoking and uses that money for the purse, how many days will it take her to buy the purse?

1. 4 days
2. approximately \$8
3. \$120
4. \$96
5. 4 days