

Now, let's look at some health messages. The next three questions are about the following advertisement for an imaginary drug called Gritagrel.



**Gritagrel™**

**50%**  
**reduction in**  
**strokes**

Gritagrel is a new pill to prevent strokes. People taking Gritagrel had half as many strokes as people taking placebo (i.e. sugar pill).

Like any medicine, Gritagrel can have side effects. The most common side effects are: headache (5%) and stomach ache (1%)

1. Which would best help you to determine **how much** a person could benefit from Gritagrel? (Circle one)
  - a. How often people experience side effects
  - b. The chance of stroke for people who do not take Gritagrel
  - c. How many people take Gritagrel
  - d. How recently Gritagrel was developed
2. Which would best help you to decide whether **you** will benefit from Gritagrel? (Circle one)
  - a. How many people were in the study
  - b. Age and sex of people in the study
  - c. Whether a doctor confirmed that people had strokes
  - d. Who paid for the study
3. Which additional piece of information would be the best evidence that Gritagrel helped people? (Circle one)
  - a. Gritagrel lowered antioxidant levels
  - b. Fewer people died for any reason in the Gritagrel group than in the placebo group
  - c. Many doctors prescribe it
  - d. Fewer people died from strokes in the Gritagrel group than the placebo group

**Your doctor says there is a 10% risk of dying from pneumonia.**

4. Which information best helps you understand whether this risk **applies to you?** (circle one)
- a. Most people who die from pneumonia are 75 years or older
  - b. More than 110,000 people get pneumonia each year
  - c. Pneumonia is one of the most common reasons for hospitalization
  - d. About 15,000 people die from pneumonia each year
5. To better understand how much of a threat pneumonia is to your health, which information is most helpful? (circle one)
- a. How much money is spent on pneumonia research
  - b. Whether pneumonia is more common in the US than Europe
  - c. Your chance of dying of other important diseases
  - d. Celebrities who have had pneumonia

**A new study finds that there were 30 deaths among people who eat broccoli regularly compared to 100 deaths among people who don't eat broccoli at all.**

6. According to this study, which statement best describes how eating broccoli relates to death?
- a. Lowers the risk of death
  - b. Doesn't change the risk of death
  - c. Raises the risk of death
  - d. Can't tell from this information

**Mr. Roe needs surgery: 9 in 1000 people die from this surgery.**

7. How would you describe the surgery?
- a. Very risky
  - b. Risky
  - c. Slightly risky
  - d. Not risky

**Mrs. Smith is told she has a 1 in 296 chance of dying from cancer and a 1 in 407 chance of dying from a stroke.**

8. Which is bigger, Mrs. Smith's chance of dying from a stroke or cancer?
- a. Stroke
  - b. Cancer
  - c. Chances are the same

**Mr. Doe is a 75-year-old who smokes.**

9. What is your best guess about how his chance of dying from prostate cancer compares to his chance of dying from lung cancer in the next 10 years? He is...
- 10 times more likely to die of lung cancer than prostate cancer
  - Equally likely to die of lung cancer as of prostate cancer
  - 10 times more likely to die of prostate cancer than lung cancer

**About 51,000 Americans will be diagnosed with melanoma (the most serious skin cancer) this year.**

10. What is your best guess about an American's chance of being diagnosed with melanoma in the next year?
- 51,000
  - 51,000 divided by the number of Americans
  - Don't know how to figure this out

**Mrs. Jones is told she has a 28 in 1,000 chance of dying from cancer and a 59 in 1,000 chance of dying from a stroke.**

11. Mrs. Jones's doctor now tells her that a new pill, **STROKE**, will lower her chance of dying from stroke by 50%. Another pill, **CANCER** will lower her chance of dying from cancer by 50%.

She can only take 1 pill. Assuming the 2 pills are equally safe and cost the same, which do you suggest she take if her goal is to lower her chance of dying?

- STROKE pill
  - CANCER pill
  - Either pill is okay
12. Mrs. Jones decides to take the CANCER pill. Now, what is her chance of dying from cancer?
- 0 in 1,000
  - 7 in 1,000
  - 14 in 1,000
  - 21 in 1,000

Please read the following news story about Dr. Womba's study.

## Promising new drug hailed\*

Washington, DC -- Researchers announced the results of a long awaited study of Argentex, a drug designed to prevent prostate cancer. In the study, 1000 men age 45 to 75 were randomly assigned to take either Argentex or a sugar pill called a placebo. The men were followed for 4 years. Only 3 of the men taking Argentex developed prostate cancer. Lead scientist Bernard Womba described the findings as "extremely promising" and predicted the drug would be in wide use shortly.

*\*Not a real drug*

13. Which question would you most like to ask Dr. Womba?
- Who paid for the study?
  - Has Argentex been shown to work in animals?
  - What was the average age of the men in the study?
  - How many men taking the sugar pill developed prostate cancer?

**Mr. Newman is a healthy 40 year old man who does not smoke.**

What is your best guess about his chance of..... (circle one answer on each line)

14. ....dying from a heart attack in the next 10 years	1 in 1000	5 in 1000	30 in 1000	80 in 1000	250 in 1000
15. ... dying for any reason in the next 10 years	1 in 1000	5 in 1000	30 in 1000	80 in 1000	250 in 1000
16. ...dying for any reason in the next 20 years	1 in 1000	5 in 1000	30 in 1000	80 in 1000	250 in 1000

**In a new study, people either took pill X or placebo (a sugar pill).  
3% of people taking placebo died; 1% of people taking pill X died.**

17. Which statement is correct about how pill X changes the chance of death?
- Lowers by 66%
  - Lowers by 33%
  - Raises by 33%
  - Raises by 66%
18. Which statement is correct about how pill X changes the chance of death?
- 2 more deaths per 100 people
  - 1 more death per 100 people
  - 1 fewer death per 100 people
  - 2 fewer deaths per 100 people
19. Suppose that 500 people had taken pill X, and 500 people had taken placebo in the new study. Which of the following is correct?

	<b>Number of people who died</b>	
	<b><u>who took placebo</u></b>	<b><u>who took pill X</u></b>
a.	15	5
b.	1	3
c.	3	1
d.	5	15

**Mr. Smythe needs surgery: 991 in 1000 people survive this surgery.**

20. How would you describe the surgery?
- Very risky
  - Risky
  - Slightly risky
  - Not risky