

CHAPTER 17--ENVIRONMENTAL HAZARDS AND HUMAN HEALTH

Student: _____

1. A 2003 study by the Centers for Disease Control and Prevention indicated what percentage of Americans over the age of 6 had trace BPA levels in their urine above EPA thresholds.
 - A. 100%
 - B. 93%
 - C. 67%
 - D. 50%
 - E. 35%
2. Risk is expressed as a probability of suffering from all of the following, *except*
 - A. disease
 - B. economic loss
 - C. death
 - D. injury
 - E. prejudice
3. The five main types of hazards include all of the following, *except*
 - A. biological hazards
 - B. natural hazards
 - C. economic hazards
 - D. cultural hazards
 - E. chemical hazards
4. All of the following are considered to be cultural hazards, *except*
 - A. working conditions
 - B. drought
 - C. unsafe highways
 - D. poverty
 - E. criminal assault
5. All of the following are considered to be biological hazards, *except*
 - A. protozoa
 - B. parasites
 - C. diet
 - D. bacteria
 - E. fungi

6. All of the following are considered to be natural hazards, *except*
- A. driving
 - B. hurricanes
 - C. volcanoes
 - D. earthquakes
 - E. fires
7. A transmissible disease is *not* likely to be caused by a
- A. bacterium
 - B. hazardous chemical
 - C. virus
 - D. parasite
 - E. protozoa
8. All of the following are transmissible diseases, *except*
- A. diabetes
 - B. flu
 - C. measles
 - D. tuberculosis
 - E. HIV
9. All of the following are non-transmissible diseases, *except*
- A. heart disease
 - B. most cancers
 - C. tuberculosis
 - D. malnutrition
 - E. asthma
10. Which of the following infectious diseases is *not* among the five most deadly?
- A. pneumonia and flu
 - B. mumps
 - C. malaria
 - D. tuberculosis
 - E. HIV/AIDS
11. A global outbreak of an infectious disease is called a(n)
- A. threat
 - B. parademic
 - C. pandemic
 - D. epidemic
 - E. outbreak

12. Tuberculosis is caused by
- A. mosquitoes
 - B. flies
 - C. viruses
 - D. bacteria
 - E. protozoa
13. Which of the following *not* a reason the incidence of tuberculosis is increasing?
- A. too few TB screening and control programs
 - B. genetic resistance to antibiotics
 - C. weakened immune systems from the spread of AIDS
 - D. population growth, urbanization, and air travel
 - E. effects of global warming
14. All of the following are viral diseases, *except*
- A. malaria
 - B. AIDS
 - C. hepatitis B
 - D. influenza
 - E. West Nile
15. Four of the following are means of transmitting the HIV virus from person to person; one is not such a means. Choose the one that is not.
- A. unsafe sex
 - B. sneezing or coughing
 - C. exposure to unsafe blood
 - D. sharing needles by drug users
 - E. infected mothers passing the virus to offspring before or during birth
16. Malaria is spread by
- A. snails
 - B. flies
 - C. contaminated feces
 - D. certain types of mosquitoes
 - E. bacteria
17. During the mid-1900s, the spread of malaria decreased sharply as a result of all of the following, *except*
- A. draining swamplands
 - B. draining marshes
 - C. spraying breeding areas with DDT and other pesticides
 - D. using drugs to kill the parasites in the bloodstream
 - E. a new vaccine

18. Since 1970 the occurrence of malaria has
- A. remained at the same levels
 - B. increased then leveled off
 - C. greatly reduced
 - D. greatly increased
 - E. decreased then increased slightly
19. Ways to reduce the incidence of infectious diseases in less-developed countries includes all of the following, *except*
- A. reduce poverty
 - B. decrease malnutrition
 - C. reduce unnecessary use of antibiotics
 - D. increase antibiotic use in livestock
 - E. provide oral rehydration for diarrhea victims
20. The West Nile virus is transmitted to humans by
- A. mosquitoes
 - B. houseflies
 - C. birds
 - D. physical contact
 - E. coughing and sneezing
21. All of the following are practices that encourage the spread of diseases among animals and humans, *except*
- A. clearing or fragmenting of forests
 - B. expanding suburbs into fragmented woodlands
 - C. cutting down tropical forests displacing fruit bats
 - D. hunting wild game for food
 - E. eating meat from local farmers
22. The Lyme disease bacterium is passed onto humans directly from
- A. foxes
 - B. deer
 - C. white mice
 - D. field mice
 - E. ticks

23. The top toxic substances in terms of human and environmental health include all of the following, *except*
- A. lead
 - B. mercury
 - C. vinyl chlorides
 - D. DDT
 - E. PCBs
24. The effects of neurotoxins can result in all of the following, *except*
- A. behavioral changes
 - B. learning disabilities
 - C. hair loss
 - D. attention deficit disorder
 - E. death
25. DDT, PCBs, atrazine, bisphenol-A, and phthalates are all examples of
- A. insecticides
 - B. hormonally active agents
 - C. estrogens
 - D. androgens
 - E. plastic additives
26. Teratogens
- A. are fatal to humans in low doses
 - B. cause birth defects
 - C. are harmful because they are irritating to skin or lungs
 - D. cause infections
 - E. cause allergic reactions
27. Birth defects can be caused by all of the following, *except*
- A. alcohol
 - B. angel dust
 - C. benzene
 - D. formaldehyde
 - E. iodized sodium chloride
28. Carcinogens cause
- A. genetic defects
 - B. birth defects
 - C. cancer
 - D. chronic health effects
 - E. allergic reactions

29. The system responsible for defense against disease and harmful substances is the
- A. circulatory system
 - B. endocrine system
 - C. immune system
 - D. excretory system
 - E. skeletal system
30. Specialized cells, tissues, and organs that secrete hormones are part of the
- A. digestive system
 - B. endocrine system
 - C. excretory system
 - D. circulatory system
 - E. immune system
31. More than 100 studies have found a number of adverse effects from exposure to very low levels of BPA, including all of the following, *except*
- A. brain damage
 - B. meningitis
 - C. prostate disease
 - D. breast cancer
 - E. obesity
32. This term refers to the amount of a substance a person ingests, inhales, or absorbs through the skin.
- A. toxicity
 - B. biomagnification
 - C. persistence
 - D. response
 - E. dose
33. ____ relates to the increase in the amount of a potentially toxic substance as it passes through food chains and webs.
- A. Toxicity
 - B. Biological magnification
 - C. Persistence
 - D. Response
 - E. Dose
34. The term that is given to the damage that occurs from exposure to a chemical or other agent is
- A. toxicity
 - B. biomagnification
 - C. persistence
 - D. response
 - E. dose

35. The ability of a substance to cause injury, illness, or death to a living system, is
- A. toxicity
 - B. biomagnification
 - C. persistent
 - D. response
 - E. dose
36. This term refers to a substance's resistance to breakdown.
- A. toxicity
 - B. biomagnification
 - C. persistence
 - D. response
 - E. dose
37. An immediate or rapid harmful reaction to exposure to a chemical, ranging from dizziness to death, is
- A. bioaccumulation
 - B. acute response
 - C. persistence
 - D. chronic response
 - E. dose
38. In 2003, the U.S. Environmental Protection Agency (EPA) proposed that in determining risk, regulators should assume children have ____ times the exposure risk of adults to cancer-causing chemicals.
- A. 5
 - B. 10
 - C. 15
 - D. 25
 - E. 100
39. Of the 100,000 registered synthetic chemicals in commercial use, only ____ have been adequately tested to determine whether they are carcinogens, teratogens, or mutagens.
- A. 2%
 - B. 4%
 - C. 10%
 - D. 12%
 - E. 15%

40. Toxicity is rated according to the amount of a substance that is necessary to kill 50% of humans, given in milligrams per kilogram of body weight. Supertoxic has an LD50 of
- A. less than 5 mg/kg
 - B. 5-50 mg/kg
 - C. 50-500 mg/kg
 - D. 500-5000 mg/kg
 - E. 5000-15000 mg/kg
41. A person experiencing dizziness after using a strong household cleaner is showing
- A. a chronic effect
 - B. a subchronic effect
 - C. an acute effect
 - D. a subacute effect
 - E. superacute exposure
42. A person experiencing liver damage after a lifetime of alcohol abuse is showing
- A. a chronic effect
 - B. a subchronic effect
 - C. an acute effect
 - D. a subacute effect
 - E. superacute exposure
43. Which statement is *true*?
- A. All chemicals are unsafe.
 - B. Natural chemicals are safe, and synthetic chemicals are deadly.
 - C. Synthetic chemicals are deadly, and natural chemicals are safe.
 - D. Some chemicals, whether synthetic or natural, are safe and others are deadly.
 - E. All chemicals are safe except those that cause cancer.
44. In terms of number of premature deaths per year and reduced life span, by far the greatest risk is
- A. AIDS
 - B. poverty
 - C. smoking
 - D. malaria
 - E. industrial chemicals
45. Cigarette smoking is the world's most preventable major cause of premature death among adults, resulting in one death every ____ seconds.
- A. 2
 - B. 4
 - C. 6
 - D. 8
 - E. 10

46. How much of the American population is either overweight or obese?
- A. one-quarter
 - B. one-third
 - C. one-half
 - D. two-thirds
 - E. three-fourths
47. Which of the following is *not* one of the factors that cause people to see a technology or product as being more or less risky than experts judge it to be?
- A. fear caused by overestimating the risk
 - B. degree to which we have personal control over the risk
 - C. degree to which a risk is catastrophic rather than chronic
 - D. degree to which the risky item gives instant gratification
 - E. degree to which the risk is caused by the government
48. Smokers have how much higher risk of suffering from Alzheimer's disease?
- A. 80%
 - B. 70%
 - C. 60%
 - D. 50%
 - E. 40%
49. In the human body hormones operate at very low levels controlling sexual reproduction, growth, development, learning ability, and behavior.
- True False
50. Bisphenol A (BPA) is a naturally occurring hormone produced by the human body.
- True False
51. A study published in 2007 by the Centers for Disease Control and Prevention indicated that 93% of humans over 6 years of age had trace levels of BPA in their urine that exceeded the current threshold level set by EPA.
- True False
52. Hormone mimics can cause human males to become feminized, have smaller penises, lower sperm counts, and hermaphroditism.
- True False
53. Determining how much harm a particular hazard can cause is called risk management.
- True False

54. A nontransmissible disease is caused by something other than a living organism.
True False
55. AIDS is a pandemic.
True False
56. People with AIDS are 30 to 50 times more likely to develop active tuberculosis.
True False
57. Viruses respond well to antibiotics.
True False
58. Diseases that have been absent in human populations for 20 or more years and then reappear, are called emergent diseases.
True False
59. It takes an average of 3 to 5 years for an HIV infection to progress to AIDS.
True False
60. Over the course of human history, malarial protozoa probably have killed more people than all the wars ever fought.
True False
61. Teratogens are chemicals that cause cancer.
True False
62. Estrogen mimics and hormone blockers are sometimes called gender benders because of their possible effects on sexual development and reproduction.
True False
63. One significant source of mercury emissions into the atmosphere is from coal-burning power plants.
True False
64. One out of every twelve women of child bearing age in the United States has enough mercury in her blood to harm a developing fetus.
True False

65. Some chemicals released to the environment are hormone disrupters and are probably responsible for lower sperm counts in human males.

True False

66. Research has indicated that long-term exposure to some chemicals may disrupt the body's immune, nervous, and endocrine systems.

True False

67. Of all the PCBs made in the United States, only 20% remain in the environment.

True False

68. Estimating human exposure to chemicals and their effects is very difficult because of the many variables involved.

True False

69. All chemicals in commercial use were screened for toxicity before they were deemed acceptable for use.

True False

70. In terms of the number of premature deaths per year and reduced life span, the greatest risk, by far, is malaria.

True False

71. Fear causes people to overestimate risks and worry more about unusual risks than they do for common, everyday risks.

True False

72. We tend to be far more frightened of everyday risks, such as diabetes or smoking, than about plane crashes.

True False

73. A widely used estrogen mimic is _____, a chemical building block in certain hardened plastics.

74. A 2007 study by the Centers for Disease Control and Prevention indicated that _____ of Americans over the age of 6 had levels of BPA in their urine above the current threshold level set the EPA.

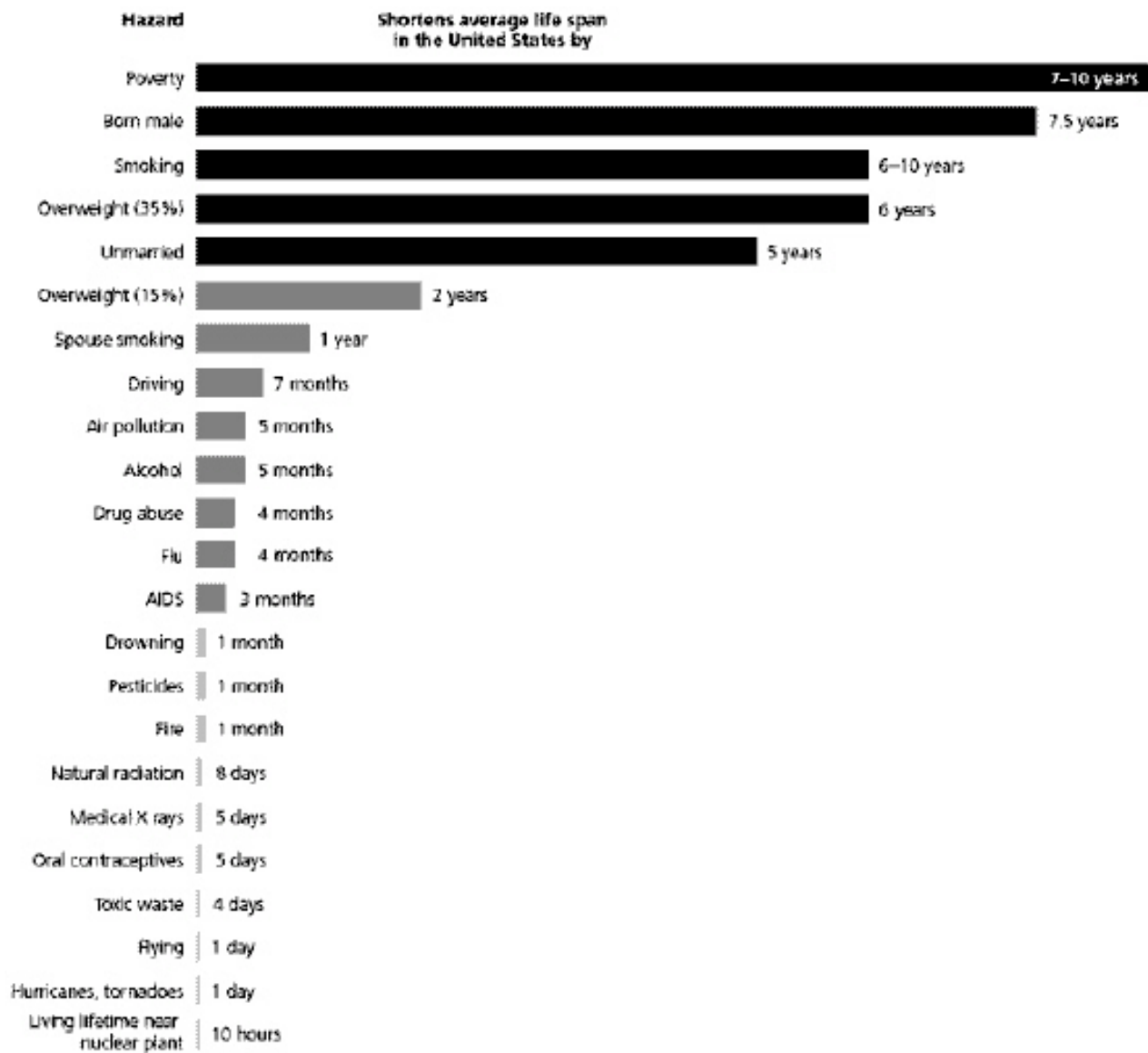
75. A _____ is the probability of suffering harm from a hazard that can cause injury, disease, death, economic loss, or damage.
- _____
76. _____ involves deciding whether or how to reduce a particular risk to a certain level and at what cost.
- _____
77. A _____ is an organism that can cause disease in another organism.
- _____
78. A _____ is an infectious disease that can be transmitted from one person to another.
- _____
79. A large-scale outbreak of an infectious disease in an area or country is called a(n) _____.
- _____
80. The overuse of _____ can cause bacteria to develop genetic resistance.
- _____
81. A bacterium known as _____ or MRSA has become resistant to most common antibiotics.
- _____
82. One of every _____ persons on the planet is infected with the TB bacterium.
- _____
83. The biggest viral killer is the _____ virus.
- _____
84. _____ are diseases that were newly discovered or have been absent in human populations for at least 20 years.
- _____
85. The human immunodeficiency virus has a(n) _____, which makes it hard to detect and easy to spread.
- _____

86. _____ has reduced the life expectancy of the 750 million people living in sub-Saharan Africa from 62 to 47 years.
- _____
87. Over the course of human history, _____ have probably killed more people than all the wars ever fought.
- _____
88. _____ in reproductive cells can be harmful if they are passed on from parents to offspring.
- _____
89. The EPA estimates that about one of every 12 women of childbearing age in the U.S. has enough _____ in her blood to harm a developing fetus.
- _____
90. _____ is a measure of the harmfulness of a substance - its ability to cause injury, illness, or death to a living organism.
- _____
91. A substance's resistance to breakdown is the _____.
- _____
92. One approach to determine the toxicity of a chemical is to determine the dose necessary to kill _____% of a group of test animals.
- _____
93. The damage to health resulting from exposure to a chemical is called the _____.
- _____
94. An immediate allergic reaction to a bee sting would be a(n) _____ to a toxin.
- _____
95. In terms of the number of premature deaths per year and reduced life span, the greatest risk by far is _____.
- _____

96. _____ is the world's most preventable major cause of suffering and premature death among adults.

97. Most people have a greater fear of things over which we do not have _____.

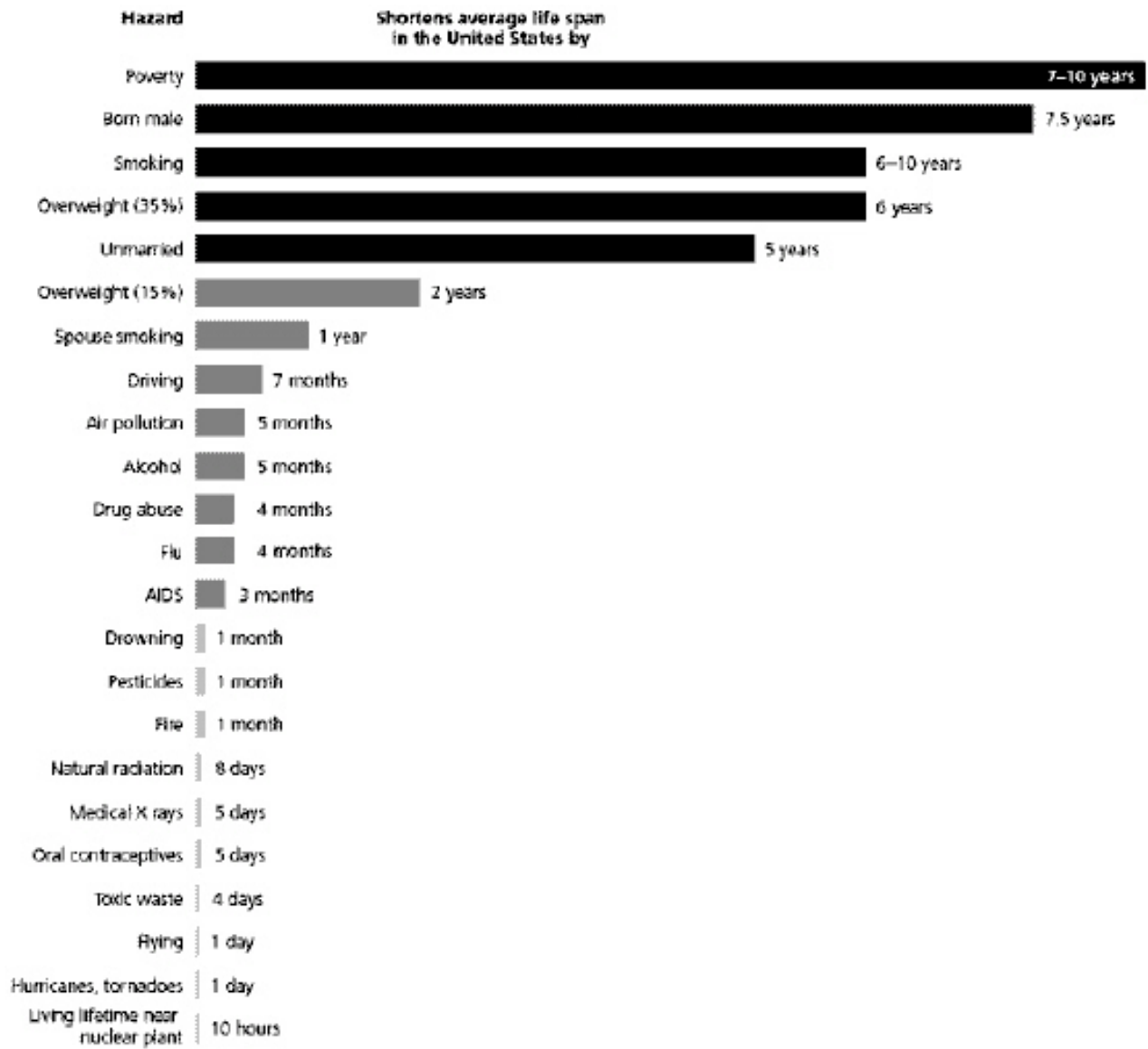
98.



Use the Figure above to answer the following question(s).

If the average life expectancy of a person living in the United States is 80 years, what would that person's life expectancy be if they lived in poverty?

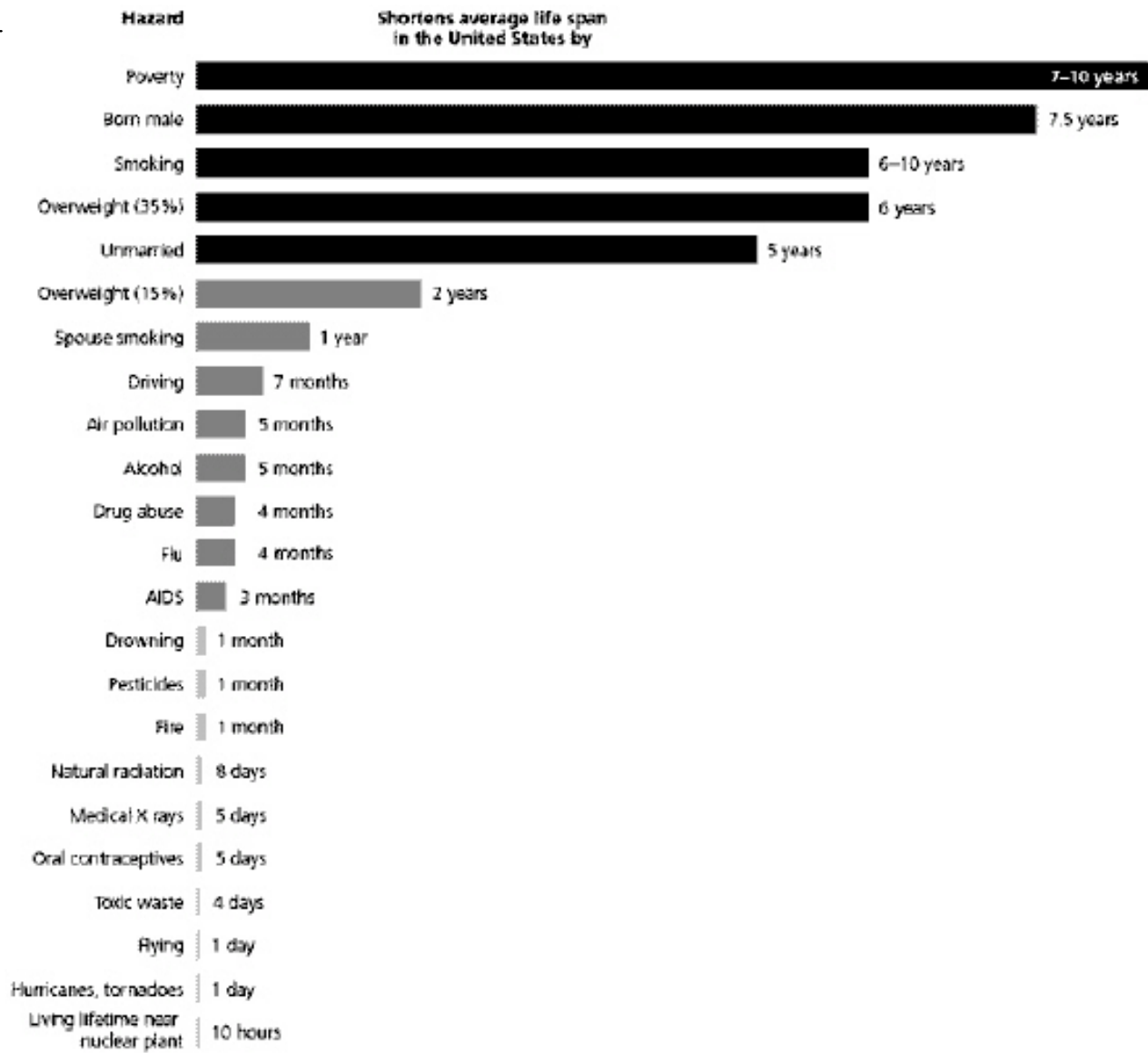
99.



Use the Figure above to answer the following question(s).

How many of the top 12 hazards are related to lifestyle choices?

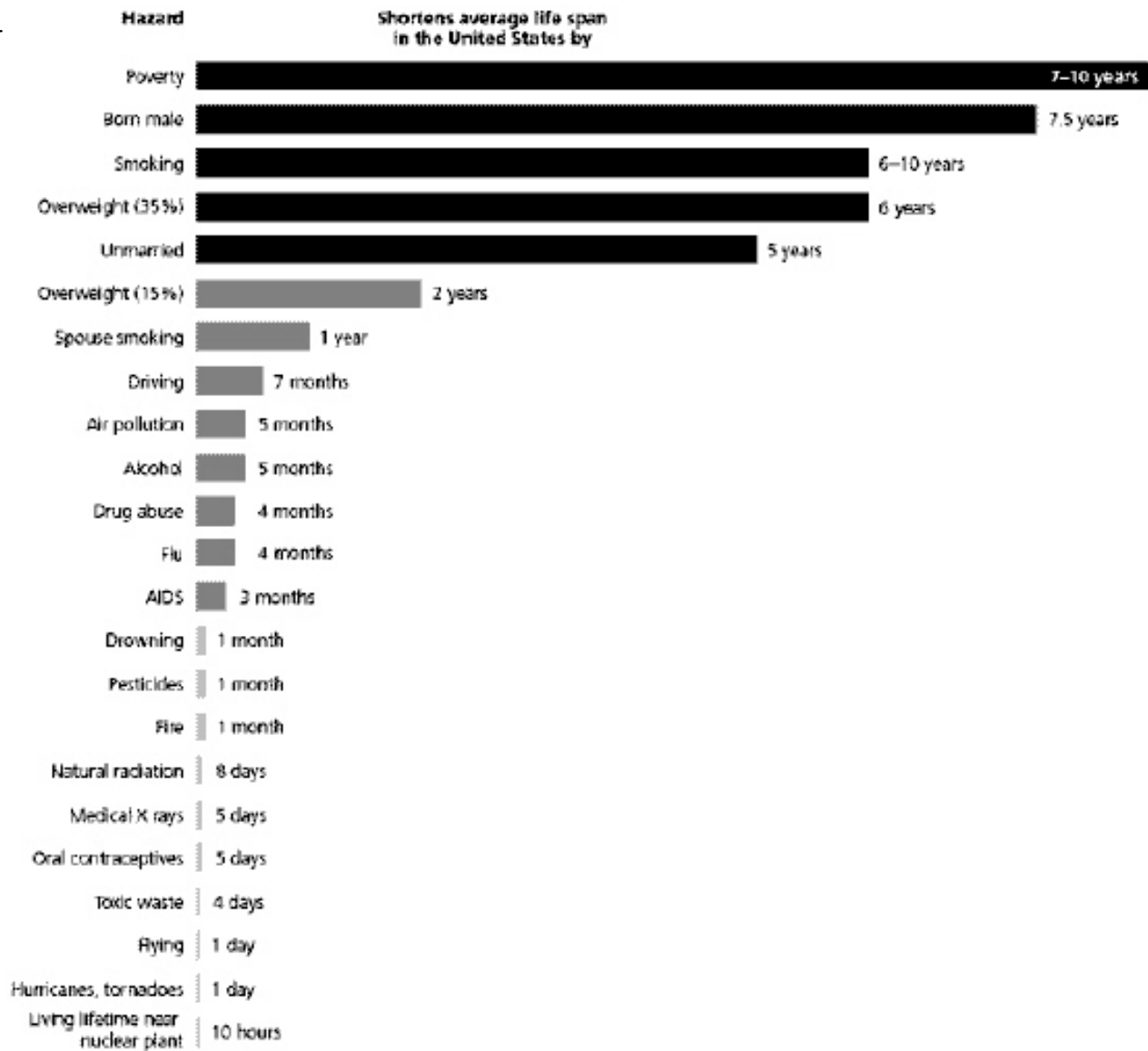
100.



Use the Figure above to answer the following question(s).

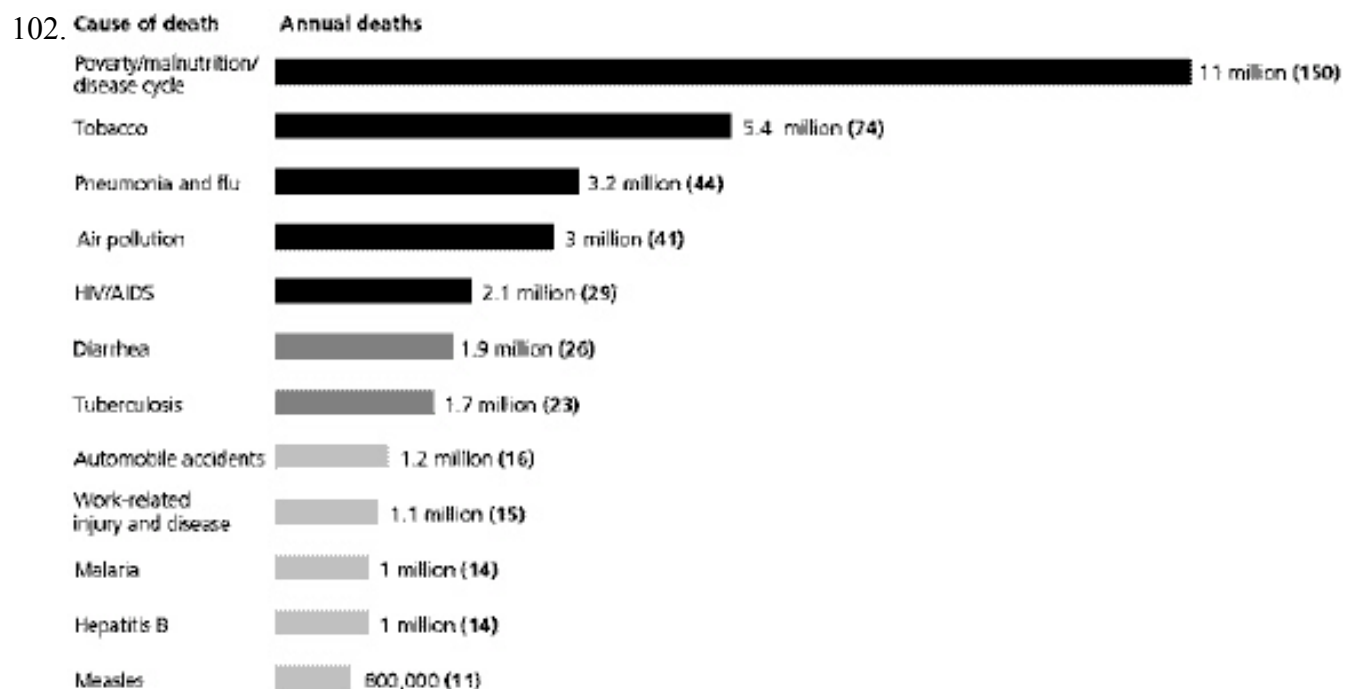
Is your life expectancy shortened more by smoking or being unmarried?

101.



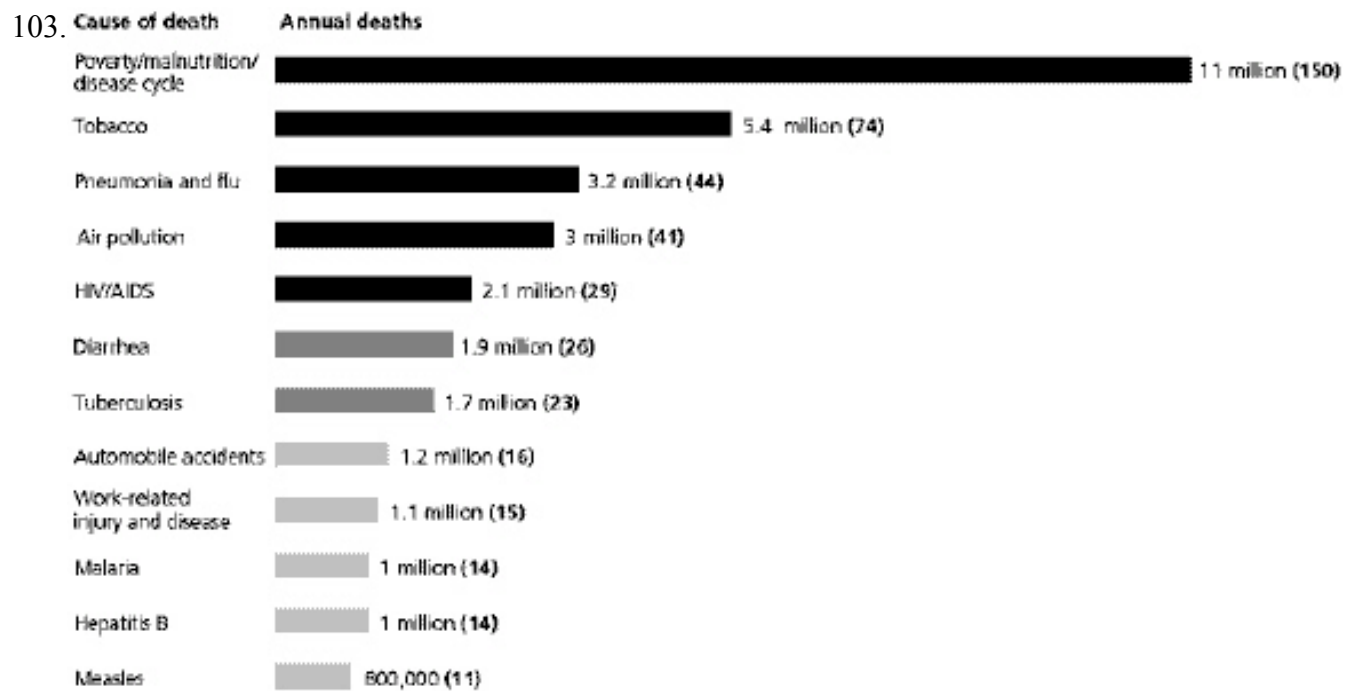
Use the Figure above to answer the following question(s).

Is your life expectancy shorted more by driving or by drug abuse?



Use the Figure above to answer the following question(s).

If the leaders of the world wanted to have the greatest impact on the number of deaths per year, what cause should they address first?



Use the Figure above to answer the following question(s).

If you wanted to reduce your risk of dying, would you be better off by getting a much safer automobile or by getting a flu shot?

CHAPTER 17--ENVIRONMENTAL HAZARDS AND HUMAN HEALTH *Key*

1. B
2. E
3. C
4. B
5. C
6. A
7. B
8. A
9. C
10. B
11. C
12. D
13. E
14. A
15. B
16. D
17. E
18. D
19. D
20. A
21. E
22. E
23. D
24. C
25. B
26. B
27. E
28. C
29. C

- 30. B
- 31. B
- 32. E
- 33. B
- 34. D
- 35. A
- 36. C
- 37. B
- 38. B
- 39. A
- 40. A
- 41. C
- 42. A
- 43. D
- 44. B
- 45. C
- 46. D
- 47. E
- 48. B
- 49. TRUE
- 50. FALSE
- 51. TRUE
- 52. TRUE
- 53. FALSE
- 54. TRUE
- 55. TRUE
- 56. TRUE
- 57. FALSE
- 58. TRUE
- 59. FALSE
- 60. TRUE
- 61. FALSE
- 62. TRUE
- 63. TRUE

- 64. TRUE
- 65. TRUE
- 66. TRUE
- 67. FALSE
- 68. TRUE
- 69. FALSE
- 70. TRUE
- 71. TRUE
- 72. FALSE
- 73. bisphenol A *or* BPA
- 74. 93%
- 75. risk
- 76. Risk management
- 77. pathogen
- 78. Transmissible diseases *or* Contagious diseases
- 79. epidemic
- 80. antibiotics
- 81. methicillin resistant staphylococcus aureus
- 82. three
- 83. influenza *or* flu
- 84. Emergent diseases
- 85. long incubation period
- 86. AIDS
- 87. malaria protozoa
- 88. Mutations
- 89. mercury
- 90. Toxicity
- 91. persistence
- 92. 50
- 93. response
- 94. acute response
- 95. poverty
- 96. Cigarette smoking
- 97. personal control *or* control

98. 70 to 73 years

99. 9 (smoking; overweight 35%; unmarried; overweight 15%; spouse smoking; driving; alcohol; drug abuse; AIDS)

100. smoking

101. driving

102. poverty/malnutrition/disease cycle

103. a flu shot