

## LABORATORY EXERCISE 54 BREATHING AND RESPIRATORY VOLUMES AND CAPACITIES



### Critical Thinking Application Answer

Aging results in some natural loss of elasticity of the lungs as well as the muscles (diaphragm and intercostal muscles) used in breathing. This can be measured by a vital capacity test.

### Laboratory Report Answers

#### **PART A**

- |    |                      |     |                      |
|----|----------------------|-----|----------------------|
| 1. | ventilation          | 8.  | visceral pleura      |
| 2. | atmospheric          | 9.  | surfactant           |
| 3. | 760                  | 10. | elastic recoil       |
| 4. | atmospheric pressure | 11. | less                 |
| 5. | phrenic              | 12. | internal intercostal |
| 6. | increases            | 13. | abdominal wall       |
| 7. | external intercostal |     |                      |

#### **PART B**

- |    |   |    |   |    |   |    |   |
|----|---|----|---|----|---|----|---|
| 1. | a | 3. | e | 5. | d | 7. | c |
| 2. | g | 4. | f | 6. | h | 8. | b |

#### **PART C**

- |    |  |    |                    |
|----|--|----|--------------------|
| 1. | (experimental results)                         | 3. | Answers will vary. |
| 2. | a. Answers will vary.                          |    |                    |
|    | b. Answers will vary.                          |    |                    |
|    | c. A measurement of residual volume is needed. |    |                    |