

RESULTS

The volume of air trapped in the bag is measured in liters and for all practical purposes represents a person's lung volume, though a small portion of air always remains in the lungs. Comparisons can be made between person's lung volumes and such factors as height, age, physical activity, and habit of smoking.

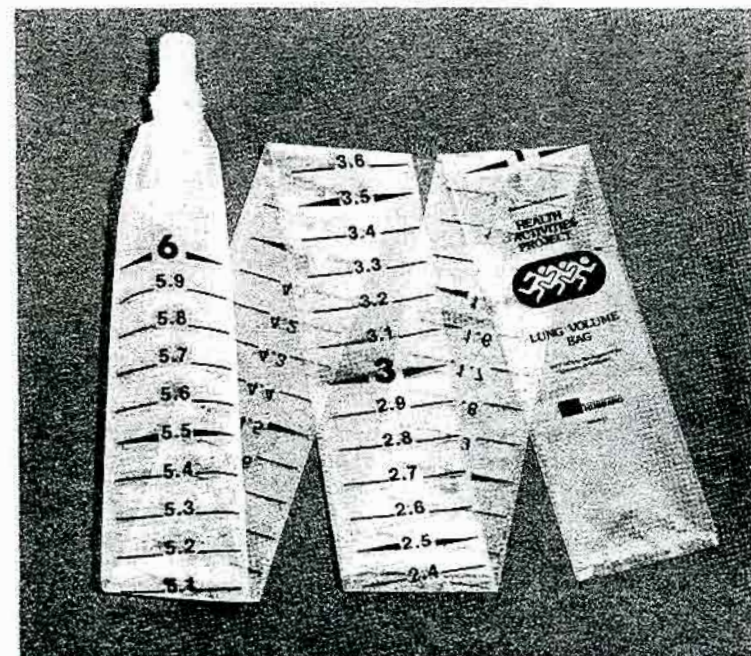
LUNG VOLUME KIT

OVERVIEW

The lung volume bag is used to measure vital capacity, the volume of air a person can expel after taking the deepest possible breath.

MATERIALS

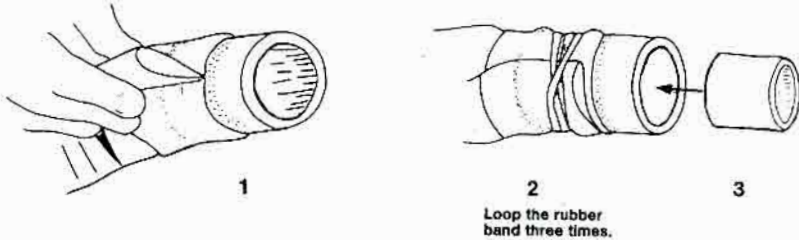
- 4 Lung Volume Bags
- 4 Mouthpiece Holders
- 4 Mouthpieces
- 4 Rubber Bands



PROCEDURE

1. To assemble the materials

- insert the mouthpiece holder (the holders are of a larger diameter than the mouthpieces) into the end of the lung volume bag.
- fold the bag neatly around the holder to insure the airtightness of the bag—leaving about one inch of holder protruding from the bag. (See Illustration 1.)
- loop a rubber band three times around the folded part of the bag to securely fasten the bag to the holder. (See Illustration 2.)
- use a disinfectant such as a dilute bleach solution or 70% alcohol solution to sterilize the mouthpiece; then rinse it in water and dry it with a clean paper towel.
- insert the disinfected mouthpiece into the holder that is attached to the bag as shown in Illustration 3.



2. To take the measurement

- make sure that the bag is entirely empty of air by flattening it against your thigh with one hand and pulling it through with the other. (See Illustration 4.)
- hold the bag near your mouth, take the deepest breath possible, place the mouthpiece in your mouth, and blow **all** of your one breath into the bag.
- grasp the bag just below the holder, and twist it to trap the air **immediately** after you have finished exhaling your breath into the bag.
- then wrap the bag tightly around your hand until the bag becomes stiff. (See Illustration 5.)
- read the volume from the scale on the bag.

