

## How Sound Waves Are Produced

### READING TIP

When you see the word *push* or *pull*, think of force.

The disturbances in a sound wave are vibrations that are usually too small to see. Vibrations are also required to start sound waves. A vibrating object pushes and pulls on the medium around it and sends out waves in all directions.

You have a sound-making instrument within your own body. It is the set of vocal cords within the voice box, or larynx, in your throat. Put several of your fingers against the front of your throat. Now hum. Do you feel the vibrations of your vocal cords?

Your vocal cords relax when you breathe to allow air to pass in and out of your windpipe. Your vocal cords tense up and draw close together when you are about to speak or sing. The illustration below shows how sound waves are produced by the human vocal cords.

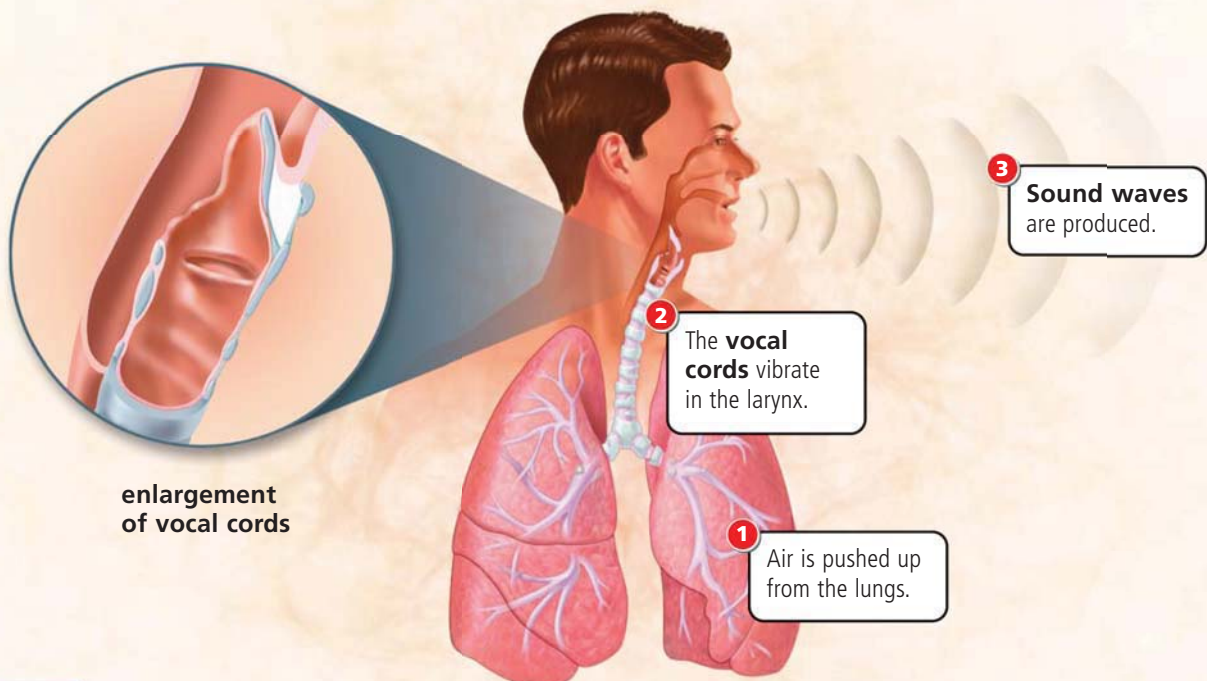
- 1 Your muscles push air up from your lungs and through the narrow opening between the vocal cords.
- 2 The force of the air causes the vocal cords to vibrate.
- 3 The vibrating vocal cords produce sound waves.



How do human vocal cords produce sound waves?

## How Vocal Cords Produce Sound

Sound waves are produced by vibrations.



What starts the vibrations in the vocal cords?