Mechanism of respiratory system pdf

Your lungs work with the respiratory system to allow you to take the fresh air, get rid of stale air, and even talk. Let's prepare a tour of the lungs! Find these lungs your lungs in your chest, and are so large that they take most of the space there. You have two lungs, but they are not the same size as your eyes or nostrils. Instead, the lungs on the left side of the body are slightly smaller than the lungs on the right. This extra space on the left leaves room for your heart. Your lungs are protected by a chest that consists of 12 sets of ribs. These ribs are connected to the spine in the back and bypass the lungs to keep them safe. Under the lungs is the diaphragm (say: DY-uh-fram), a domed muscle that works with lungs to allow you to inhale (breathe) and exhale (exhale) air. You can't see your lungs, but it's easy to feel them in action: Put your hands on your chest and breathe very deeply. You will feel that your breasts are getting a little bigger. Now exhale the air and feel your breasts return to their normal size. You just felt the power of your lungs! Look inside the lungs outside, light pink and a little soft like a sponge. But inside contains a real lowdown on the lungs! At the bottom of the trachea (say: TRAY-kee-uh), or trachea, there are two large tubes. These tubes are called basic stem bronchus (say: BRONG-kye), and one head remains in the left lung, while the other is directed straight to the right lung. Each basic stem bronchi (say: BRONG-kuss) - the name for only one of the bronchus - then branches in the tubes, or bronchi, which get smaller and even smaller still like branches on a large tree. The smallest tubes are called bronchiols (say: BRONG-kee-oles), and in each lung there are about 30,000. Each bronchiol is about the same thickness as hair. At the end of each bronchiol is a special area that results in a cluster of tiny air bags called alveoli (say: al-VEE-o-lie). There are about 600 million alveoli in your lungs, and if you stretched them out, they would cover the entire tennis court. That's the load of alveoli! Each alveoli (say: al-VEE-oh-luss) - what we call only one of the alveoli - has a mesh coating of very small blood vessels called capillaries (say: KAP-ill-er-ees). These capillaries are so small that the cells in the blood need to build one file just to get through them. Every time you inhale air, dozens of body parts work together to help get that air out there without even thinking about it. As you breathe, your diaphragm contracts and aligns. This allows it to move down so that your lungs have more room to grow more as they fill up with air. And the aperture isn't the only part that gives your the room they need. Your rib muscles also lift your ribs up and out to give your lungs more At the same time, you inhale air through your mouth and nose, and the air heads down the trachea, or trachea. On the way down the trachea, tiny hair called lashes (say: SILL-ee-uh) move gently to keep the mucus and dirt out of your lungs. The air then passes through a series of branches in the lungs, through bronchi and bronchioles. Thank you, Alveoli! The air finally gets into 600 million alveoli. As these millions of alveoli fill up with air, the lungs become larger. These are alveoli that allow oxygen from the air to pass into your bloodstream. All cells in the body need oxygen every minute of the day. Oxygen passes through the walls of each alveoli into the tiny capillaries that surround it. Oxygen enters the bloodstream in tiny capillaries, hooking the ride on red blood cells and traveling through layers of blood vessels to the heart. The heart then sends oxygen-rich (oxygenated) blood into all the cells of the body. Waiting for an exhalation When it's time to exhale (exhale), everything happens in the opposite direction: Now it's the turn of the diaphragm to say: Move it! Your aperture relaxes and moves upwards, pushing air out of your lungs. Your rib muscles become relaxed and your ribs move again, creating less space in your chest. By now your cells have used the oxygen they need, and your blood carries carbon dioxide and other waste that should leave your body. Blood returns through capillaries and waste gets into the alveoli. Then you breathe them backwards as they come in - air passes through the bronchioles, from the bronchi, from the trachea, and finally through the mouth and nose. The air you breathe contains not only waste and carbon dioxide, but also warm! As the air passes through your body, it raises heat along the way. You can feel this heat by putting your hand in front of your mouth or nose as you exhale. What is the temperature of the air that comes out of your mouth or nose? With all this traffic, you may be wondering why things don't get stuck as the lungs fill up and empty! Fortunately, your lungs are covered with two really slick special layers called pleural (say: PLOO-ral) membranes. These membranes are separated by a liquid that allows them to slide easily while inhaling and exhaling. Time to talk your lungs are important for breathing . . . and also for the conversation! Above the trachea (trachea) is a larynx (say: LAIR ink), which is sometimes called a voice box. Through the voice box are two tiny ridges called vocal cords that open and

close to make sounds. When you exhale air from the lungs, it passes through the trachea and larynx and reaches the vocal cords. If the vocal cords are closed and the air flows between them, the vocal cords vibrate and sound is made. The amount of air you blow out of your lungs determines loud will sound and like like You can make a sound. Try inhaling very deeply and saying the names of all the kids in your class - how far can you get without taking the next breath? Next time you're outside, try screaming and see what's going on - screaming requires a lot of air, so you'll need to breathe more often than if you only spoke the words. Experiment with the different sounds and air that it takes to make them - when you giggle, you release your breath into short pieces, but when you burp, you let the air in your stomach be swallowed in one long! When you hiccup, it's because the diaphragm moves in a funny way that makes you breathe air suddenly, and that air hits your vocal cords when you're not ready. Love your lungs your lungs is amazing. They let you breathe, talk to a friend, scream at a game, sing, laugh, cry and more! Keeping your lungs looking and feeling healthy is a smart idea, and the best way to keep your lungs pink and healthy is not to smoke. Smoking is not good for any part of your body, and your lungs especially hate it. You can also show your love for the lungs by exercising! Exercise is good for every part of your body, and especially for the lungs and heart. Review: KidsHealth Medical Experts Your Lungs work with a respiratory system to allow you to take the fresh air, get rid of stale air, and even talk. Let's prepare a tour of the lungs! Find these lungs your lungs in your chest, and are so large that they take most of the space there. 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