**Affects of Smoking on the Respiratory System**

The oxygen content in the atmosphere is vital to all living organisms. The quality of oxygen dictates the working of the metabolism, nutrient burn-down and energy release. The latter is critical to growth, reproduction and the very sustenance of life. The breathing in of oxygen and release of carbon from food during metabolism is accomplished through the respiratory system. The system works like an apparatus to handle and process the inhalation of oxygen and exhalation of water vapor and carbon dioxide.

Function of the Respiratory System

The respiratory system comprises the nasal cavity, larynx, trachea, bronchi, throat and the lungs. Normally, the oxygen from the air is inhaled through the nose and guided towards the lungs, via the nasal cavity. The layer of tiny hair in the nose keeps dust and foreign bodies from reaching the lungs. The oxygen travels through the nose to the pharynx and enter the passage for air thereafter.

From the trachea, the air is taken to the bronchi, bronchioles and finally the alveoli. The alveoli have capillaries. While this process is in action, another intricate system within the human anatomy conducts a simultaneous task. The blood that leaves the heart chambers with impure blood passes through the alveoli, exchanging the carbon dioxide concentrated blood for that charged with oxygen. This energized blood then rejuvenates every cell in the body.

Effects of Smoking on the Respiratory System

The addiction for tobacco is actually one related to the nicotine and tar content in the tobacco. The craving only gets more aggravated with indulgence and becomes very painful, emotionally and physically, when an attempt is made to give it up. Nevertheless, the damage caused by the habit has far-reaching effects and even after going through smoking cessation withdrawals, it takes the respiratory tract years to totally rehabilitate.

Smoking cigarettes causes cancer of the mouth and throat and lung cancer. Research reveals that it also causes chronic bronchitis and makes breathing difficult. Women smoking cigarettes during pregnancy are known to have miscarriages and premature deliveries. Governments around the world are trying to implement the smoking ban and encourage citizens to give up the vice. The statutory warning: 'Cigarette smoking is Injurious to health' accompanies every cigarette pack and is supposed to work as a motivator to stop smoking.

One breath comprises a complete inhalation and exhalation. The lungs are never completely empty; there is always some air retained within. An adult normally takes 16 breaths per minute when awake and anything between six and eight when asleep. The chest cavity is a protective frame around the two lungs and heart. The internal movements around breathing contribute towards the health of the respiratory system. The quality of the air you breathe and the working of the associated, processing organs are affected by allergies, cold and flu viruses, bacterial infections and pneumonia. The condition of this vital system further deteriorates with smoking and pollution. No artificial structure or machines can ever replace the respiratory system.

What Happens When you Smoke

Smoking introduces tar particles into the respiratory system and not only stains the teeth and fingernails, but also leaves a residue on the delicate lung tissue. Carcinogen benzopyrene in tar is a cancer trigger.
Although carbon monoxide is an odorless gas, it is fatal for inhalation because it replaces vital oxygen in the blood. Since it binds with hemoglobin faster and better than oxygen, the result is a reduced quantity of oxygen reaching important organs like the heart and brain.
Hydrogen cyanide is another toxic substance that enters the respiratory system through smoking. It damages the lung-clearance-system and facilitates the build up of hydrocarbons, nitrous oxides and oxidizing agents within the lungs. The reactive chemicals damage the blood vessels and the heart, leading towards heart disease and stroke.
The tender linings of the nasal and tracheal passage get irritated easily due to the hot smoke of tobacco. Hence it is common for smokers to suffer frequent throat inflammation.
Hair-like cilia along the nasal passage and trachea get clogged due to the 4000 harmful chemicals produced by the combustion of tobacco, causing the cilia to lose their fluidity. It has been observed that smoking one cigarette can impede the fluidity of cilia by up to 20 minutes.
This lack of fluidity causes mucus build-up and irritation along the throat, leading to what is termed as 'smoker's cough'.
Tar contained in most cigarettes is a sticky substance and forms a lining along the nasal and tracheal passage damaging the cilia. Tar also sticks to the tender surface of the alveoli in the lungs reducing it's surface contact with blood vessels.

Smoking facts reveal that all these inhalants cause damage to the trachea, larynx and lung function. Long term effects include narrowing of the lung airways, increased risk of lung infection, high blood pressure, blood prone to clotting, increased risk of stroke, damage to the immune system and reduced bone density.
Read more at Buzzle: <http://www.buzzle.com/articles/how-does-smoking-affect-the-respiratory-system.html>