Mucus Encyclopedia Article

Mucus

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Mucus

Mucus is a slippery secretion produced by a variety of slightly different types of mucous cells. It is protein based and has several molecular types of structures depending on the specific function. Mucus is found in the respiratory, digestive and reproductive systems. It is a viscous fluid composed of water, mucin, inorganic salts, epithelial cells, and **leukocytes**, all held in suspension.

In the **respiratory system**, mucus is found along the lining of the nasal cavities. Its function is to trap dust, **bacteria**, and other airborne contaminants. Once trapped, tiny **cilia** move the mucus down and into the **pharynx**. Deeper into the respiratory system, the **bronchi** and **alveoli** are covered in epithelial cells that constantly produce mucus. Leukocytes, cells of the **immune system**, are contained in the mucus and act as an antibacterial agent in the mucus. In this region the cilia move the mucus up and out of the respiratory system. This constant production of mucus is a first line of defense of the body. Many smokers irritate or destroy the mucus-producing goblet cells. After prolonged exposure the mucus and immune enhancing function of mucus is reduced or destroyed.

The digestive system uses mucus in quite different ways. Mucus is secreted in the mouth and assists in the **swallowing** and passage of food through the esophagus. In the stomach, mucus contains more bicarbonate and coats the gastric surface. This provides a barrier between the gastric acid and **enzymes** and the mucus neck cells of the epithelial surface. In addition to the stomach, mucus lines the entire intestinal tract and provides lubrication for digesting food as it passes along the intestines. It also serves as a type of binding agent for indigestible wastes.

The female reproductive system has several types of mucus. They are called G, L, and S types of mucus. Each type has a varied mix of the typical suspension molecules found throughout all mucus. Recent studies relate viscosity with function during reproduction. In other words, the texture of the mucus aids in **sperm** migration and exclusion into the uterus. Some researchers believe this function may prevent unhealthy sperm from entering the uterus. Mucus also forms a plug at the opening of the cervix during **pregnancy** keeping the cervical canal sealed. This helps prevent contamination by bacteria and other agents.