Working with chemicals always involves the risk of exposure. The health risk is dependent upon the toxicity of the chemical, the types of effects and the various *routes of entry*.

**Routes of Entry**

*Inhalation* is the primary route of entry for hazardous chemicals in the work environment. Nearly all materials that are airborne can be inhaled.

*Absorption* through the skin is another route of entry. The skin is the largest organ of your body and a common exposure site for liquid and airborne chemicals. Absorption through the skin can occur quite rapidly if the skin is cut or abraded. Intact skin is an effective barrier to many hazardous materials.

*Ingestion* - toxic materials can be swallowed and enter the body through the gastrointestinal tract. In the workplace, people can unknowingly ingest harmful chemicals when you eat, drink, or smoke in a contaminated work areas.

*Injection* occurs when a sharp object punctures the skin, allowing a chemical or infectious agent to enter your body. For example, injection can occur when a contaminated object such as a rusty nail punctures the skin.

**Respiratory System (Inhalation)**

The respiratory system is the major route of exposure for airborne chemicals. Once air contaminants are inhaled into your respiratory system, they may harm the tissues of the respiratory tract or lungs; cause serious scarring (local effect); and/or be dissolved in the blood and transported throughout the body (systemic effect).

The most serious damage is caused by contaminants that penetrate deep into the lower regions of the lung (alveoli).