The toxic action of a health hazard can be divided into acute (short-term) effects and chronic (long-term) effects.

**Acute Health Effects**

*Acute health effects* are quickly seen, usually after exposures to fairly high levels or concentrations of hazardous substances. For example, fiberglass can immediately cause itchiness and skin irritation; an extremely loud noise can result in temporary or even permanent hearing loss.

A lethal concentration of carbon monoxide, CO (1200 ppm) is considered to be *Immediately Dangerous to Life and Health (IDLH)*; a worker exposed to this acute amount of CO can lose consciousness and die.

**Lethal Concentration (LC)** - An indication of the lethality of a given substance or type of radiation.

**LC<sub>50</sub>** - Is the concentration of a material, which causes the death of 50% (one half) of a group of test animals. The LC<sub>50</sub> is one way to measure the short-term poisoning potential (acute toxicity) of a material.

**Skin rashes, red dry skin and dermatitis are examples of acute health effects.**

*Skull & cross-bone symbol is used to warn of an acute toxicity hazard; Globally Harmonized System.*
The toxic action of a health hazard can be divided into acute (short-term) effects and *chronic (long-term)* effects.

### Chronic Health Effects

**Chronic effects** usually develop slowly. For example, if you breathe small amounts of asbestos fibers, you won’t even notice them. There are no acute effects. But if you inhale asbestos month after month, year after year, you greatly increase your chances of getting asbestos disease, such as lung cancer. This is a chronic effect.

Other examples of chronic health effects include hearing loss and cumulative trauma disorders; these are examples of physical health hazards.

### Chronic Health Effects and Long-Term Disability

Most health effects experienced in construction are typically chronic; this makes it difficult to associate where the exposure occurred. For example, a worker in their later years presents with a chronic health effect. The exposures that may have caused the damage could have occurred very early in his working life.

*Chronic health hazard symbol; Globally Harmonized System.*

*Worker with chronic health problems; he needs oxygen.*

**Chronic effects referred to most frequently are:**

- Cancer
- Asbestosis
- Mesothelioma
- Silicosis
- Occupational Hearing Loss
- Cumulative Trauma Disorder