

PERSONAL SAFETY

BLEEDING

If a major blood vessel is cut, a person can bleed to death in minutes. **Bleeding must be stopped as quickly as possible.**

TREATMENT

- * Apply direct pressure to the wound.
- * Use a clean cloth or dressing if available.
- * Have person sit or lie down if possible.
- * If cloth becomes blood-soaked, apply a new cloth on top without removing the first dressing.
- * If wound is large and gaping, press sides of wound together and hold as you apply pressure to stop bleeding.
- * If flesh is torn or wound very large, plug up the wound with a clean dressing.
- * Remove sharp objects lying loosely in a wound as they may increase bleeding when pressure is applied.
- * Removing objects which are impaled in a wound may increase the bleeding.
- * Elevate legs and arms to stop flow of blood.
- * Allow puncture wounds to bleed a little as this will flush out foreign material.
- * Send for help.

NOSE BLEEDS

If bleeding results from a severe blow to the head - DO NOT TRY TO STOP BLEEDING but get medical help immediately.

TREATMENT

- * Sit with head leaning forward.
- * Pinch nostrils to apply pressure.
- * Breathe from mouth.
- * Loosen clothing at neck.
- * Do not blow nose.
- * Apply cold cloth to nose.
- * Contact doctor if bleeding cannot be stopped.

BURNS AND SCALDS

TYPES

FIRST DEGREE BURNS redden the surface of the skin.

SECOND DEGREE BURNS cause blisters.

THIRD DEGREE BURNS destroy the underlying growth cells.

A **scald** caused by steam from water or other liquid is usually a surface burn. It will be serious if a large part of the body has been scalded.

Chemical burns are caused by strong acids or other corrosives coming into contact with the skin. Unless the chemical is removed or neutralized, burning will continue. If any corrosive material is spilled on the skin, brush off as much as you can before flushing the burn with water. Some dry products increase corrosive activity when wet, so dry removal is an essential first step.

The **depth** and **size** of the **burned area** are both important **indicators** of the **seriousness** of the **burn**.

TREATMENT

- * Cool burn by immersing burned area into cold water or gently applying cold packs.
- * Cover with a sterile dressing.
- * Treat for shock.
- * Flush chemical burns with large amounts of cold water and continue flushing until help arrives.

EPILEPTIC SEIZURES

TYPES:

MINOR CASES:

- * person is pale
- * eyes fixed or staring
- * unconsciousness may be very short
- * recovery is immediate

MAJOR CASES:

- * loss of consciousness
- * body rigid
- * face and neck flushed
- * may be convulsions
- * breathing noisy

TREATMENT

- * remove any objects on which a person may injure himself
- * convulsive movements may have to be guided to avoid damage to the unconscious person
- * keep airways open
- * watch carefully until consciousness returns

FAINTING

This is caused by a reaction of the nervous system which reduces blood supply to the brain for a short time.

Caused by illness, injury, being tired or hungry, or from a lack of fresh air.

SIGNS

- * feeling unsteady
- * paleness
- * beginning to perspire

TREATMENT

- * loosen clothing at neck and chest
- * lie down with head low OR
- * sit down leaning forward with head at the knee

SHOCK

Shock is caused by failure of the circulatory system and occurs after emotional shock, stress or loss of blood.

SYMPTOMS

The victim may:

- * become pale
- * sweat, even if the skin feels cold
- * vomit
- * have a rapid and weakening pulse
- * lose consciousness

Pain, cold, and anxiety can aggravate the effects of shock.

TREATMENT

- * Have injured person lie down with head lower than feet to maintain blood supply to the brain.
- * Cover the victim to preserve body heat.
- * Talk to the victim and give reassurance that help is coming.

POISONING

POISONS enter the body by:

- * **INHALATION** - gases or fumes.
- * **INJECTION** - needles or punctures.
- * **INGESTION** - swallowing, mouth contact.
- * **SKIN CONTACT** - absorbed through pores of skin.

TREATMENT

Each poison has its own particular effect and treatment but the prime concern is to begin treating the victim immediately. Proceed with caution and get medical assistance as quickly as possible. Contact the Poison Centre at each occurrence.

INHALATION

- * Move victim immediately to a fresh air source.
- * Some gases will give a feeling of light-headedness, e.g., freon from fridge.
- * Some gases are extremely poisonous and require the rescuer to wear a self-contained breathing apparatus, e.g. chlorine gas.
- * Call the Poison Centre since some gases affect the body even though the victim has been removed from the contaminated work site.
- * Call the Poison Centre with specific details of the inhalant in order to obtain specific treatment procedures.
- * Keep airway clear. If breathing has stopped, begin artificial respiration.
- * **DO NOT INDUCE VOMITING** if poisoning is from kerosene or other petroleum products or from caustics such as acids.

INJECTION

- * Get medical assistance as to appropriate procedures to neutralize or minimize effect of chemical to the body.
- * Inquire about need for a tetanus shot.

INGESTION

- * The decision to induce vomiting depends upon the type and amount of material ingested.
- * Contact Poison Centre for proper treatment procedures.

- * If material is **corrosive**, e.g., bleach, petroleum product, e.g., kerosene, or an **acid**, **DO NOT INDUCE VOMITING** as it re-damages tissues in its exiting.
- * Occurs any time the mouth is touched by hands or tools carrying the contaminant.
- * The effects of many substances are cumulative.
- * Avoid eating or drinking in the studio.
- * Practice good hygiene practices such as washing hands or not biting fingernails.

SKIN CONTACT

- * Brush any **corrosive dry material** off the skin before rinsing as its **corrosive activity** increases when wet.
- * Rinse affected area
 - (1) with cool, running water for 10 minutes by the clock OR
 - (2) in basin of cool water for 10 minutes by the clock.

Change the water at least once.
- * Begin rinsing immediately:
 - after rinsing 5 minutes - 65% of poison is removed
 - after rinsing 10 minutes - 94% of poison is removed
- * Certain materials break down the skin's natural protective barriers and allow toxins to penetrate more easily.
- * Wear gloves or barrier creams when possible. Always use the appropriate gloves **and** creams for the particular material being handled.
- * Cover open cuts and abrasions.
- * Materials such as Crazy Glue are dangerous since it takes a long period of time to **separate** the skin tissues once glued together.

EYE CONTACT

- * Begin treatment immediately unless it is a **corrosive** or **glass**. In this case cover **with a loose bandage** and get medical attention immediately.
- * Irrigate the eye for 15 minutes by the clock.
- * Contact the Poison Centre giving name of poison or corrosive. The Centre will specify the length of rinse time. Some products require as much as 30 minutes.

Rinsing Methods:**(1) Shower:**

- * Stand with back to the water spray.
- * Lean backward and have water trickle over the face.
- * Keep eyes open and blink during the rinsing process.

(2) At Sink:

- * Sit with back to the sink.
- * Lean back with head over the sink.
- * Using a cup or water pitcher, pour water just above the bridge of the nose allowing it to trickle into the eyes.
- * Keep eyes open and blink during the rinsing process.
- * Take care not to wash chemicals into the uninjured eye.

MEDICAL TERMS

ALLERGENIC - a substance that induces allergy.

ALLERGY - an exaggerated or pathological reaction to foods, germs, dust, chemicals, emotional excitement and physical states such as coldness.

ANEMIA - an abnormally low concentration of red blood cells. Causes range from loss of blood to destruction of red blood cells, to destruction of bone marrow, needed in the production of red blood cells.

ANTIMONY POISONING - causes colic, vomiting, diarrhea, severe irritation of the mouth and nose, shallow breathing and pulmonary congestion.

APLASTIC ANEMIA - a lack of red blood cells caused by the destruction of bone marrow which is needed in the production of red blood cells.

ARGYRIA - is caused by poisoning the body with silver or silver salts. Chronic argyria is marked by a permanent ashen-gray discoloration of the skin and the internal organs.

ARRHYTHMIA - a condition signaled by changes in heart rhythm caused by the formation of carbon monoxide in the body.

ASBESTOSIS - a condition caused by the inhalation of asbestos dust. It produces fibrous changes in the lungs which is an attempt of the tissue of the lungs to wall off the foreign substance. Asbestos contains 41% silica and 2-1/2% iron oxide. The lungs react particularly to the silica, producing a condition called silicosis.

ASTHMA - a respiratory disease caused by hypersensitivity to various substances. It results in various degrees of difficulty of breathing due to mucous plugs that obstruct the bronchial tubes.

BENZENE POISONING - this injures the blood-forming organs like bone marrow. In severe cases recovery is difficult.

BERYLLIOSIS - results from the inhalation of the highly toxic metal fumes of beryllium. Acute berylliosis may result from a single strong exposure or from repeated mild exposure. It is a severe pneumonia-like disease which is frequently fatal or gives permanent lung damage. Chronic berylliosis affects lungs, liver, heart, kidneys and may cause bronchogenic cancer. It can cause weakness, shortness of breath, cough, nervousness and loss of weight.

BRONCHIAL ASTHMA - a condition in which the bronchial tubes are narrowed by spasm of the muscles and by excess secretion of the mucous glands. It makes it difficult to exhale and with air exchange hindered, oxygenation is reduced which makes patients look blue.

BRONCHITIS - is an infection or inflammation of the bronchial tubes. Usually the windpipe, voice box and larynx are involved. Its chief danger is the possibility of pneumonia. Bronchitis may be caused by the inhalation of toxic fumes such as phosgene.

BYSSINOSIS - is caused by the inhalation of cotton, flax and hemp dusts. In its mild form, it gives shortness of breath, chest tightness and increased sputum flow and is reversible. In advanced cases, it resembles chronic bronchitis and emphysema and is irreversible.

CADMIUM POISONING - causes kidney damage, loss of smell, gastrointestinal problems, bone, tooth and liver damage as well as prostate and lung cancer.

CARBON-MONOXIDE POISONING - can cause brain damage because of a lack of oxygen supply, and heart arrhythmias which are irregular heart beats.

CARCINOGEN - a cancer-causing agent.

CATARACT - is a clouding of the lens of the human eye. It prevents seeing images clearly. In severe cases, a cataract causes blindness. Cataracts may be removed surgically.

CHEMICAL PNEUMONIA - is an acute lung condition resulting from overexposure to cadmium fumes, manganese dust and other toxic chemicals.

CHROMIUM POISONING - is caused by the inhalation of chromium particles or the ingestion of chromium dust. It causes kidney damage, muscle cramps, vertigo and gastroenteritis.

COLIC - acute spasmodic pain in the bowels and abdomen. It can have various causes such as gas and air in the bowels, a passing kidney stone and functional, environmental and nervous conditions.

COMA - a state of slow, heavy breathing and complete loss of consciousness from which the patient cannot be aroused, not even by the most powerful stimulation. It can occur from poisoning by alcohol and other toxic substances.

CONVULSION - a violent and abnormal contraction of the body.

CYANOSIS - is signaled by blueness of the skin due to inadequate supplies of oxygen in the blood. The causes vary greatly. The heart may be too weak to pump the blood through the lungs, or carbon monoxide may combine with the hemoglobin in the blood to cause suffocation.

DELIRIUM - a sporadic or temporary mental disturbance associated with fever, intoxication, shock or injury and marked by restlessness, excitement, hallucinations and general incoherence.

DERMATITIS - a skin condition caused by defatting agents such as bleaches, acids, resin solvents, benzene and other chemicals which dissolve the fatty layer of the skin and make it more vulnerable to invasion by other substances.

EMACIATION - a state of severe weight loss.

EMPHYSEMA OF THE LUNGS - a condition in which the lung walls and other parts of the lungs are overdistended because of a pathological accumulation of air in this organ. Symptoms include breathlessness, cough, and chronic inflammation of the bronchial tubes. The stretching tends to destroy the elasticity of the lungs, so vital for proper breathing.

FIBROSIS - inflammation of the fibrous tissue anywhere in the body.

GANGRENE - is the death of tissue, usually in considerable mass, generally with the loss of nutritive supply and followed by bacterial invasion and decomposition.

GASTRITIS - an inflammation of the stomach which, if severe, may cause hemorrhaging. It may be caused by irritating substances or poisons which have a caustic action on the stomach lining.

GASTROENTERITIS - is an inflammation of the stomach and the intestine. It may be caused by silver nitrate used for hypotests in the photography laboratory.

HEART ARRHYTHMIA - a condition signaled by changes in heart rhythms, caused by the formation of carbon monoxide in the blood. This reduces the oxygen supply to the body and affects the heart beat.

LEAD POISONING - occurs through the inhalation or ingestion of lead dust. Even minute traces are harmful since there is a cumulative effect. It affects the neuromuscular system, the circulatory system, the gastrointestinal tract, and the brain. It affects the gastrointestinal system (lead colic), red blood cells (anemia) and the neuro-muscular system, especially the wrists, fingers, ankles and toes.

LIVER DAMAGE - is caused by various toxic substances inhaled or ingested. Since the liver is the key detoxifying organ in the body, damage to it has serious consequences. Particularly harmful are: arsenic, phosphorus, chloroform and carbon tetrachloride.

LUNG SCARRING - caused by injury to the lung tissue. It reduces elasticity and thus makes breathing more difficult.

MANGANESE POISONING - manganese occurs in pigments and in metals. It enters the body primarily as dust. It causes deterioration of the central nervous system and can lead to permanent paralysis. Patients develop mask-like faces, become clumsy and unable to stop in motion. It is a serious nervous system disorder, very similar to Parkinson's disease. Early symptoms include: loss of appetite, apathy, spasms, headaches and irritability.

MERCURY POISONING - acute poisoning through ingestion of mercury is marked by severe abdominal pain, vomiting, bloody diarrhea with watery stools, and corrosion and ulceration of the digestive tract. In chronic form, due to absorption through skin or mucous membranes, as well as inhalation or ingestion, there is stomatitis, sore bleeding gums, loosening of teeth, and severe damage to the nervous system and the kidneys.

MESOTHELIOMA - a tumor arising from mesothelial tissue which covers the surface of all serous membranes (peritoneum, pericardium, pleura). The peritonium is the membrane lining the walls of the abdominal and pelvic cavity. The pericardium is the sac enclosing the heart. The pleura refers to the serous membrane around the lungs and the lining of the thoracic cavity.

METAL FUME FEVER - acute inhalation of many metal fumes may cause metal fume fever. Symptoms include: headaches, fever, dizziness, nausea, pains which may last up to 36 hours. Chronic inhalation may cause serious illnesses, such as a fatal pneumonia-like disease, and damage to lungs, liver, heart and kidneys.

MUTAGEN - agent capable of causing cells to mutate, resulting in genetic changes, birth defects. Extremely hazardous to the fetus.

MUTANT - an organism which has undergone genetic mutation which is a permanent, transmissible change in the genetic material.

NARCOSIS - is a depression of the central nervous system, induced by chemicals of various kinds. Basal narcosis results in complete unconsciousness amnesia and analgesia and death. Lighter cases experience dizziness, headaches, loss of coordination, mental confusion.

NARCOTIC - any substance that produces narcosis.

OSTEOFLUOROSIS - a condition caused by the ingestion of excessive amounts of fluoride.

PARKINSON'S LIKE DISEASE - chronic inhalation of manganese fumes and various other toxic chemicals may cause a nervous system disease resembling Parkinson's disease. Early symptoms include apathy, loss of appetite, weakness, spasms, headaches and irritability.

PERIPHERAL NEUROPATHY - any disease or condition associated with the peripheral nervous system.

POTTER'S ROT - see Silicosis - caused by the inhalation of dust from clays, stone, sand, or flint containing silica. This brings about nodular fibrotic changes in the lungs.

PSYCHOSIS - any major mental disorder of organic or emotional origin marked by derangement of personality and loss of contact with reality, often with delusions, hallucinations or illusions.

PULMONARY EDEMA - extravascular accumulation of fluid in the pulmonary tissues and air spaces.

SENSITIZER - a chemical which provokes allergy in people. Children are affected by many chemicals more readily than adults. Extreme care must be taken not to expose them to toxic materials and fumes.

SEPTUM - a septum is a dividing wall or partition in the body. It consists of bony tissue or a thin fibrous membrane. An example would be the dividing wall inside the nose. Inhaling acid fumes and other irritants may cause perforation of this septum.

SILICOSIS - is a serious lung disease caused by the inhalation of dust from clays, stone, sand, or flint containing silica. This causes nodular fibrotic changes in the lungs.

SOMNOLENCE - is sleepiness or unnatural drowsiness. It may be caused by exposure to toxic chemicals such as ammonium bromide.

SYSTEMIC EFFECTS - pertaining to or affecting the body as a whole. Symptoms may vary greatly and include loss of appetite, headaches, nausea, weakness and dizziness.

TERATOGENS - are agents or influences that cause physical defects in the developing embryo.

TINNITUS - a noise in the ears, which may at times be heard by people other than the patient.

ULCERATION - the formation or development of cuts or openings in organ tissue caused by toxic substances and resulting, at times, in fatal bleeding.

VERTIGO - a sensation of movement and disturbance of the sense of balance due to chemical poisoning which affects the nervous system and the brain.