An Overview Of Chemical Injury

To remove confusion, we need to clarify that there are two different categories of Chemical Injury.

1. The first category is your typical accident that occurs when there is something like a chemical spill or toxic chemicals getting splashed on a person's skin. It can happen in the community or in the work place and is a common occupational hazard. The Hazmat Team or the first responders will immediately evacuate everyone out of the toxic zone where the accident happened and relocate them to an area of good air quality. That is broadly accepted as the first emergency measure step that must be taken before administering other medical aid. Sometimes with appropriate medical aid, the people recover completely from the exposure; and other times, individuals may have long-lasting negative health effects from the exposure. This type of Chemical Injury is familiar to almost everyone.

2. The second category occurs very gradually from birth on up, as people are daily exposed to thousands of toxic chemicals. Toxic chemicals are poisons, and the daily, constant exposure to these poisons result in the body very gradually becoming poisoned with a poison mixture. This poison mixture will eventually make the person sick. It can cause a variety of diseases; it can disable; and it can kill. This second type of chemical injury can be referred to as gradual onset chemical injury caused by regular exposures to poison mixtures.

This gradual type of Chemical Injury is better known by its key symptom of Chemical Sensitivity, which simply means that the person has toxic reactions at very low levels of exposures to toxic chemicals. These reactions are not allergy reactions; they are toxic reactions. The toxic reactions are informing the person that chemical injury is occurring and there is a need to leave the toxic environment before greater injury occurs. The severity of the toxic reactions depend on how poisoned the person’s body is at the time of exposure.

In simplified terms, the Chemically Injured are not always able to produce sufficient glutathione to metabolize and eliminate toxic chemicals. This dilemma can be compared to a diabetic person who lacks sufficient insulin to metabolize sugar. Sugar is a safe product, but it is not safe for a diabetic person who lacks sufficient insulin. The chemically injured person lacks (or has lacked) sufficient glutathione, making it difficult and at times impossible to metabolize and eliminate toxic chemicals. Therefore products such as pesticides are not eliminated from the person’s body, and instead, become stored in the tissues and organs of the person’s body, causing the body to become very gradually poisoned.

Chemical Injury is an umbrella term, which includes such ailments as Chronic Fatigue Syndrome, Fibromyalgia, Chemical Sensitivity, Sick Building Syndrome, Gulf War Syndrome, etc. The common thread in Chemical Injury health conditions is the body’s inability to deal with the daily bombardment of toxic chemicals. The body becomes overloaded and enters a poisoned condition. In some cases, this poisoned condition is the primary cause of ill health; and in other cases, it is the secondary cause. Also, there is a lot of overlap among this group of health conditions, for example, patients with Chronic Fatigue Syndrome might also develop Fibromyalgia.

Very rarely are there two patients alike. There is a wide variety in the symptoms and the manifestations of gradual-onset Chemical Injury. The reason is very simple. Each person is a unique individual, with his/her own life experiences. The variety of toxic chemicals daily encountered will probably be very different with each person, resulting in a wide variety of poison mixture exposures. Different chemicals have different characteristics when they enter the human body. They also have different target organs. For example, some bond rapidly with fat tissue, some with bone tissue, some with muscle and organ tissue, etc.

Toxic Chemicals can be classified as:

Carcinogens (Causes cancer)	Musculoskeletal Toxicants
Cardiovascular or Blood Toxicants	Mutagenic (Causes genetic damage)
Developmental Toxicants	Neurotoxicants
Endocrine Toxicants	Reproductive Toxicants
Fetotoxicants (Causes death of the unborn baby)	Respiratory Toxicants
Gastrointestinal or Liver Toxicants	Skin or Sense Organ Toxicants
Immunotoxicants	Teratogenic (Causes birth defects)
Kidney Toxicants	

Consequently, various combinations of organ systems may be affected. This accounts for the wide variety of symptoms and manifestations of these health conditions. Chemical Injury can vary widely in the degree of severity, similar to physical injury. Physical Injury can vary from a small cut, to fractured bones, to multi-system trauma, and everything in-between. Likewise, Chemical Injury can vary from a headache, to painful muscles and joints, to multi-system trauma, to everything in-between.

However, the first medical step with each situation of chemical injury is always avoidance. The person must be removed from the toxic environment and relocated to an area of good air quality. This step is crucial in order for the medical treatments to be effective. If this step cannot be achieved, the medical treatments will either not be effective at all or will be greatly reduced in its degree of effectiveness.

The two greatest medical needs of a chemically injured person are:

1. A safe place to call home – a place to recover health, and to live, work, socialize and thrive without fear of toxic chemical exposures.
2. Access to quality health care – access to clinical toxicologists trained in diagnosing and treating gradual onset chemical injury, and access to hospitals that don't expose the patients to scent, toxic chemical cleansers, disinfectants, and so on.

If these medical needs can be met, the chemically injured individual would have the opportunity for some degree of recovery from their injury (maybe even full recovery), and the opportunity to go from surviving to thriving.