

# Chemical exposure accidents

Business



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Introduction There are different types of accidents that occur in the world. However, some of them have been categorized as fatal chemical exposure accidents and commonly happen in industries. This is because statistics show clearly that there are many people who have lost life from chemical exposure related accidents. Considering that there are many useful products that are derived from chemicals such as pesticides, fertilizers, paints, fiber glass and plastics, the use of chemicals cannot be banned (Richardson, 37). Medical practitioners have claimed that diagnosis of victims of chemical exposure is usually challenging, considering that some of the chemicals may be inactive in the body until months or years down the line. In addition, there are some injuries, such as memory functions, that may not be restored to their normality.

Causes of Chemical Exposure Accidents There are different causes of chemical exposure accidents in industries and in the community. Most important is to understand that the chemicals are divided into organic and inorganic chemicals. Some of them are very explosive and reactive while others are not. One of the common causes of these kinds of accidents is leaking or spilling of waste materials or chemicals in a populated area. This happens mostly with chemicals that may be mistaken to be human-friendly. Ammonia is one of the chemicals that are mostly leaked in different areas.

Ammonia may react in different ways depending on the risk of exposure, for instance by causing skin, lung, and throat burns or at times even the scenario is fatal lead to death. The leaking also occurs during transportation when they transportation system encounter challenges (National Research

Council, 49). This is usually a threat not only to human beings, but the environment at large. This is because the same exposed chemicals will cause acid rain. When these chemicals are spilled, the outcomes are hazardous as this may claim many lives or make many people live in pathetic conditions.

Unsafe work environments have also shown to be causes of deaths in industries. This is usually a threat to the employees and the managers in that industry. Although this may be mitigated, at times the managers do not recognize, how unsafe the working environment may be (Burke). Research has showed that many people, who suffer from unsafe working environments, may not show immediate side effects as some of them may come months and years down the line. Accidents in industries also result to chemical exposure. This happens in cases where mitigation measures were already in place, but because of some weaknesses in the system, they end up exposing employees and other personnel in the industry to chemicals.

Case Studies and Impacts of Chemical Exposure Accidents There are different cases that have been reported where chemical exposure accidents have resulted to undesirable results. One case happened in Shintech Louisiana LLC, where two workers died in a plant accident. The men were Tommy Rivet, an employee in the plant and Tory Sanchez, performance contractor. The two died after they were overcome by chemical at the plant. This happened when the performance contractor entered a container to retrieve tools and fumes in the container overcame him.

The employee, who had been waiting for the contractor was worried by him not coming back; thus he decided to go and take him from the container.

The employee got into the container where he was also overcome by the fumes. Later they were found there unconscious, where they were given first aid and then taken for more medical assistance (Burke). The two were seen to have fully recovered where they were dispatched. Hours later it was reported that they were dead. The case was taken to court by family member of the victims.

It was no surprise that the chemical exposure injury lawyers claimed that they had handled many cases of the same type in the previous 47 years. This showed clearly that deaths from chemical exposures happened in the past. Therefore, we cannot give a blind eye to this and claim that it happens on rare occasions. The war in Iraq is an historical one because of chemical exposure that affected many people. This is why the war has gained keen interest of many professionals to find long-lasting solutions to such.

Although the victims of the war were exposed to other severe things such as uranium 238, experimental vaccines, biological warfare agents, and diseases and parasites indigenous to the Middle East, chemical exposure was the biggest threat. The chemical exposure left many death and others disabled (National Research Council, 58). The effects of the same are felt up-to-date. Experts and professionals with expertise were also affected by the war, leading to lose of knowledge and information. Applicable Safety Standards Research shows clearly that there are 80, 000 chemicals which are used in the manufacture of products that are consumed by human and industry.

It is also evident that a good number of these chemicals come into the market without testing. There are different regulations and laws that have

been passed in different countries regarding the safety of employees and use of chemicals in industries. COSHH is a body provides clear safety standards to ensure that industries comply with the Control of Substances Hazardous to Health Regulations (Moeller, 37). COSHH has identified eight basic measures that employers and their employees must take. They are aimed at reducing the risk of exposure and enhancing good work practices.

The steps provided by COSHH are discussed below in order: Assess the risks  
Risk assessment has to be a priority in industries whereby the substances used in different workplace activities have to be assessed. The assessment should show the risks that the substances expose to health of people. It is a legal responsibility of the employer to undertake risk assessment. Employees should be made aware of the different risks in the industry and how they have been mitigated (Richardson, 41). This is crucial to enhance healthy practices and control accidents that are done from inadequacy of information. Decide the Precautions that are needed: This involves deciding the actions to be taken after the significant risks have been identified.

The actions should be aimed at removing or reducing the risks to acceptable levels. To identify the necessary precautions, advice from HSE, advisory committees, and trade associations should be considered (Mannan & Lees, 44). The precautions reached at should be recorded and tabled properly. Prevent or adequate Control exposure This involves controlling exposures that have practical control measures. This might also involve changing the activities so that the hazardous substances may not be needed.

It may also mean using the substances in a safer way. There are written sources of information on this that should be included in implementation. Ensure that Control measures are used and maintained COSHH requires employees and employers to make proper use of the control measures and report any defects. This is usually enhanced through employee training, education, and appropriate supervision. The substances have to be checked often to ensure that they are still safe for the people. This is usually done through examinations that will require experts.

Monitor Exposure Under COSHH rules, the concentration of hazardous substances should be measured. This is made to ensure that whatever employees breathe in or touch is safe. This is also made to rectify cases where control measures may not be working properly. There are methods of evaluation that COSHH provides and should be considered (Mannan & Lees, p. 59).

Monitoring results should be well-recorded for future reference and to make the process of evaluation a continuous one. Carry out appropriate Health Surveillance According to COSHH, this should be done where an employee is exposed to one of the substances that are risky. Trained medical practitioners are required in this or in other cases trained supervisors in the industries used to do the surveillance. Prepare plans and clear procedures to deal with emergencies, incidents, and accidents: this is usually done when an activity in the industry results to an accident, incident or emergency. At times this may be planned before it happens (Moeller, 25).

This is best done by setting up warnings and effective communication systems for quick response. Ensure all Employees are informed, trained and properly supervised COSHH requires that employees should have sufficient information on the substances, risk assessment results, precautions, and protective equipments availed to them. Training and employee education should be done occasionally so that they are kept up-to-date with what is happening in the industry. Conclusion In conclusion, chemical exposure accidents may be severe or not depending on the type of chemicals. The workplace has to be safe by meeting the healthy standards written down. It is the duty of employers to ensure that employees are safe.

Considering that many lives have been lost in past because of these types of accidents, it is the high time, that regulatory bodies, such as HSE, should enforce tough rules and inspections in industries to ensure employees are safe. Employees should also take it as their own responsibility to follow rules and read warnings properly before undertaking any activity.