

## ***OCCUPATIONAL HEALTH & SAFETY ISSUES***

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### **CANCER AND THE WORKER**

#### **What is Cancer**

Cancer is a disease that involves uncontrolled cell growth. Under normal circumstances the cells in the body grow and multiply at a given rate. The rate at which they grow generally matches the rate at which they die. Cancer is a condition in which a group of cells begin to grow and divide continuously, resulting in a tumour. The tumour then invades and destroys neighbouring tissues. Some of these cells may even travel to other parts of the body, a process referred to as metastasis, causing more tissue damage. When major organs are involved, such as the lungs or liver, the tissue destruction and loss of organ function eventually causes death.

#### **How Does Cancer Develop?**

Every cell in the body contains a set of instructions called deoxyribonucleic acid (DNA). These instructions are similar to a computer program telling the cell what to do and when to do it. If there is a mistake in the instructions (referred to as a mutation), the cell may not perform properly. Cancer occurs when the cell does not divide properly. Mistakes (mutations) can happen in two ways. First, a person can inherit “bad instructions” from their parents. In this inherited cancer however accounts for a small fraction of total cancers.

The second and more common way a mistake can happen is when a person is exposed to chemicals that interfere with the cell’s DNA. Exposure to the damaging chemicals can occur as a result of lifestyle for example, alcohol and smoking or result from workplace exposure.

It is important to realize that nothing can be done regarding genetically inherited cancer. On the other hand, cancer as a result of chemical exposure is entirely preventable provided exposure to carcinogenic substances can be eliminated.

#### **Workplace Exposures**

The most effective way to fight cancer is to prevent it. While some cancers may result from several factors combined (genetics, diet, environment, workplace) reduction of workplace exposures is the most important factor to change. The best way to prevent the disease is to eliminate exposures is the most important factor to change. The best way to prevent the

disease is to eliminate exposure to the substances that cause it. For example, one of the best ways to prevent lung cancer is not to smoke, Since most occupations involve exposures to various chemicals and mixtures, the same concept can be applied to the workplace.

If carcinogenic substances are identified, then workers and management can and must play a crucial role in preventing occupational cancer. By identifying those substances in the workplace, they can be eliminated and substituted with less harmful substances and processes. In some situations, the use of a specific substance is necessary to meet product specifications but in most cases, with more investigation, there are other solutions to producing the same results. In the event that neither elimination nor substitution is possible using current technologies. Plans for eliminating carcinogens over time must be developed.

In the meantime, exposures to carcinogens in the workplace must be reduced to an absolute minimum by completely enclosing processes and using strict engineering controls such as local exhaust ventilation. Personal protective equipment should only be used as a last resort. A safe practice is to subscribe to the ALARA principle, which states that exposures should be kept As Low As Reasonably Achievable. For known human carcinogens this means eliminating, to the fullest extent possible, all exposures to the carcinogen and for suspected carcinogens, controlling exposures to levels as low as possible.

## **Preventing Exposure to Cancer Causing Chemicals**

Make sure your MSDS (Material Safety Data Sheets) for the chemicals in your workplace are up to date (WHMIS, Workplace Hazardous Materials Information System, regulations require them to be updated every three years.) This is your employer's responsibility. Read your MSDS thoroughly to see if they contain any carcinogens.

Propose that the employer eliminate the carcinogen by substituting the carcinogen with a less hazardous substance. Raise it with the Joint Workplace Health and Safety Committee. Raise it at the bargaining table by negotiating the elimination of carcinogens. Raise it with government inspectors to insist they write orders for elimination of carcinogens. Refuse to work with carcinogens. If you work in Ontario, monitor your Workplace Toxics Use Reduction Plan. If you work in another province than Ontario, lobby your provincial government to enact Toxics Use Reduction legislation.

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