Eliminating/Reducing Exposures and Protective measures

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Definition

• Occupational cancer is cancer caused by occupational hazards: occupational agents, factors and conditions.
Occupational cancer (OC)

- Occupational cancer accounts for about **4 to 20 %** of the cancer cases in developed countries (WHO)
- More than **200 000 people** die each year from occupational cancer
- Occupational exposure to chemicals, dusts, radiation, and certain industrial processes have been tied to occupational cancer
Occupational cancer (OC)

- Asbestos, second hand smoke, and benzene are the carcinogens that people are most commonly exposed to work.
- Lung cancer, mesothelioma, bladder cancer, and leukaemia are the most common occupational cancers.
- WHO considers that prevention of exposure to carcinogens in the workplace may be the most efficient way to prevent cancer.
Past exposure to deadly dusts is costing workers' their health and lives today, we need to act now for our future health #HelpGBWorkWell

2515
Mesothelioma deaths in 2014, with a similar number of lung cancer deaths linked to past exposures to asbestos
Source: Death certificates

What are you doing to #HelpGBWorkWell
There are synergistic effects between some occupational carcinogens and lifestyle factors and other cancer risk factors (tabacco use, alcohol, a diet low in vegetables and fruits, inactive lifestyle, a high body mass index, overexposure to UV radiation, personal characteristics such as age, gender, and race, a family history of cancer etc.)
Synergistic effects

- For example, occupational exposure to asbestos increases dramatically the likelihood of tobacco smokers to develop lung cancer.
- The presence of certain medical conditions, such as chronic infection with Hepatitis B or Hepatitis C.
- Most cancers cannot be attributed to a single risk factor or cause.
Preventive measures of OC

- Occupational cancer (OC) is entirely preventable and interventions at the workplace can save millions of lives every year (IARC).

- The prevention of OC is specific because it relies heavily on legislation, since the population at risk can be relatively easily identified.

- Preventive measures for occupational cancer have an established hierarchy.
Legislation

1) Prohibiting the manufacture of chemicals and other agents known to be carcinogenic in humans (in a limited number of countries)

2) Legislation concerning monetary compensation in the case of occupational cancer
Prevention of occupational cancer

- **Primary prevention** – the reduction or elimination of exposure to established risk factors to prevent the occurrence of occupational cancer

- **Secondary prevention** – early detection of occupational cancer
Preventive measures of OC

- The most effective strategy for control of OC is removing or reducing the use of carcinogenic substances and processes at the workplace, in particularly by replacing them in so far as is technically possible with less dangerous ones.
Preventive measures of OC

- Develop regulatory and enforcement control of carcinogens
- Next steps – monitor and reduce occupational exposures to carcinogens
- Organize health surveillance of exposed workers
Preventive measures of OC

- Develop comprehensive workers health programmes based on primary prevention to improve working and living conditions

- **Methods of controlling** Worker exposure to chemicals include: **engineering controls** (isolation, enclosure, local exhaust ventilation, process or equipment modification etc.)
Methods of controlling exposure

**administrative controls**: (good work and hygienic practices, personal protective equipment)

All these methods reduce or eliminate the risk of harm by interrupting the exposure between the hazardous materials and the worker.

Important – a *workplace exposure assessment* – the measurement of hazards in the workplace.
Safety messages for protection of OC (IARC)

- Messages for employers and employees
- **Main ways for employers** – how to protect workers:
  - **Education** – educate workers about the hazards associated with cancers
  - **Hygiene** – provide good personal hygiene opportunities
  - **Protection** – ensure appropriate personal protective equipment and clothing are used; keep exposure records
Safety messages for protection of OC (continue)

- **Storage** – ensure harmful substances are properly stored and product containers are kept tightly sealed when not in use
- **Sun safety** – develop a sun protection policy for Your workers
- **Tabacco** – ban smoking at the workplace; support smoke free workplaces
Safety messages for protection of OC (continue)

- **Material Safety Data Sheets (MSDS)** – must be prepared. If the products are carcinogenic, this information must be in the Toxicity section of MSDS

- **Worker education and training** helps workers understand the risks associated with carcinogenic materials and procedures
Safety messages for protection of OC (continue)

☐ **Main ways for employees** – how to protect themselves:

☐ **Be vigilant at the workplace** – get a copy of the MSDS; know the information and health effects of all substances You work with; minimize exposure at the workplace; wear personal protective equipment; report any spill and accident immediately; insist that Your work environment be designed to prevent exposure to toxic substances
Safety messages for protection of OC (continue)

□ Develop safe personal habits at work – keep hands away from Your lips and mouth; do not eat or drink in the workplace; wash Your hands and face with soap and water before eating; rinse Your mouth before eating or drinking; avoid breathing and skin contact with chemicals

□ Do not bring hazards home – wash as soon as possible after finishing work;
Safety messages for protection of OC (continue)

- **Immediately change clothes** soiled with chemicals; remove work clothes before eating and before leaving work; keep work clothes away from other laundry and wash them separately;
- **Do not take tools**, scap, chemicals and similar items **home**;
- **Go tabacco free**;
- **Take control of Your health**
Thank you for your attention.