

Eliminating/Reducing Exposures and Protective measures

Maija Eglite, professor, Dr.
habil.med.





Darba un vides
veselības institūts

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**





HSE @H_S_E · 5h

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](#)



24



8



Darba un vides
veselības institūts

Synergistic effects

- There are **synergistic effects** between some occupational carcinogens and **lifestyle** factors and other cancer **risk factors** (tobacco 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 particular 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 immediatly; 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 tobacco free**;
- ❑ **Take control of Your health**

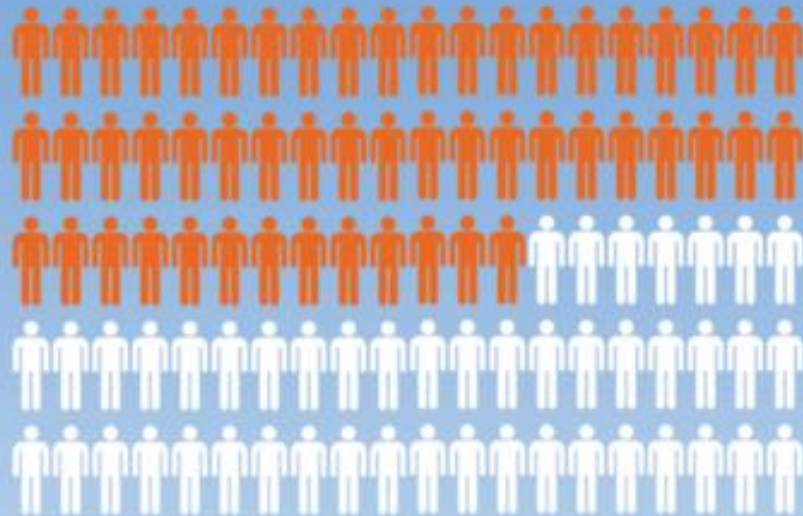


Thank
you for
your
attention

▪

Stop cancer at work

53% of all work-related deaths
are caused by occupational cancer.



THESE DEATHS ARE PREVENTABLE



Darba un vides
veselības institūts