

# Overview of occupational and environmental medicine

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# Faculty/Presenter Disclosure

- **Faculty:** Anil Adisesh
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- Potential for conflict(s) of interest:
  - None

# Mitigating Potential Bias

- The information presented in this program is based on recent information that is explicitly “evidence-based”.
- This Program and its material is peer reviewed and all the recommendations involving clinical medicine are based on evidence that is accepted within the profession; and all scientific research referred to, reported, or used in this CME/CPD activity in support or justification of patient care recommendations conforms to the generally accepted standards

# Learning Objectives



Occupational &  
Environmental Medicine

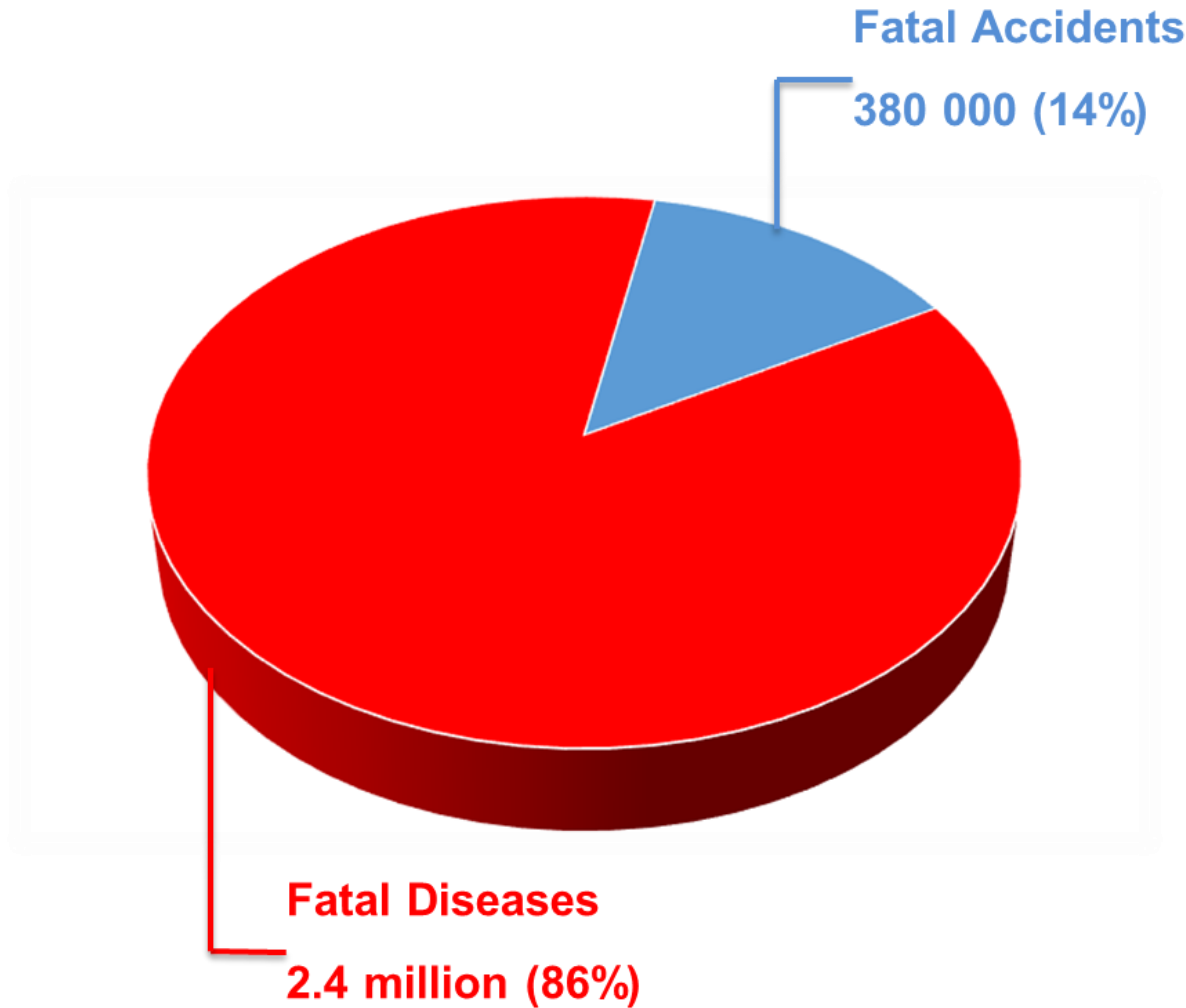
- By the end of this session, participants will be able to:
  - Describe the roles and functions of an occupational health team and those of occupational physicians.
  - Recognize the common categories of occupational medical conditions
  - Explain the relationship between the occupational and environmental aspects of OEM

# Mad-hatter symptoms confused by diabetes

Mims magazine 1993; 20:30

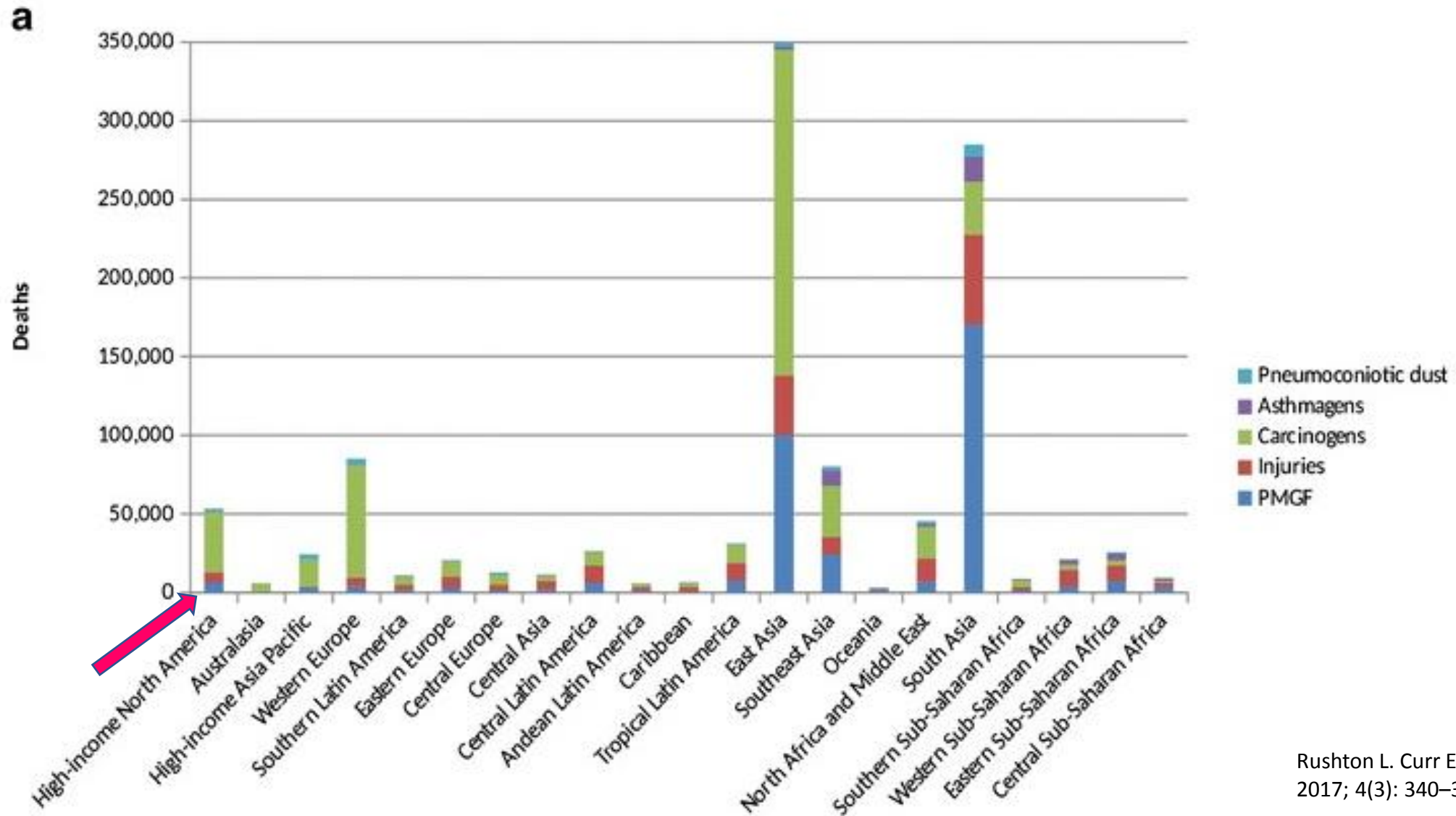


# Global Estimates of Occupational Accidents and Work-related Illnesses 2017





# Numbers of global occupationally related deaths in 2015 by WHO region and major disease group

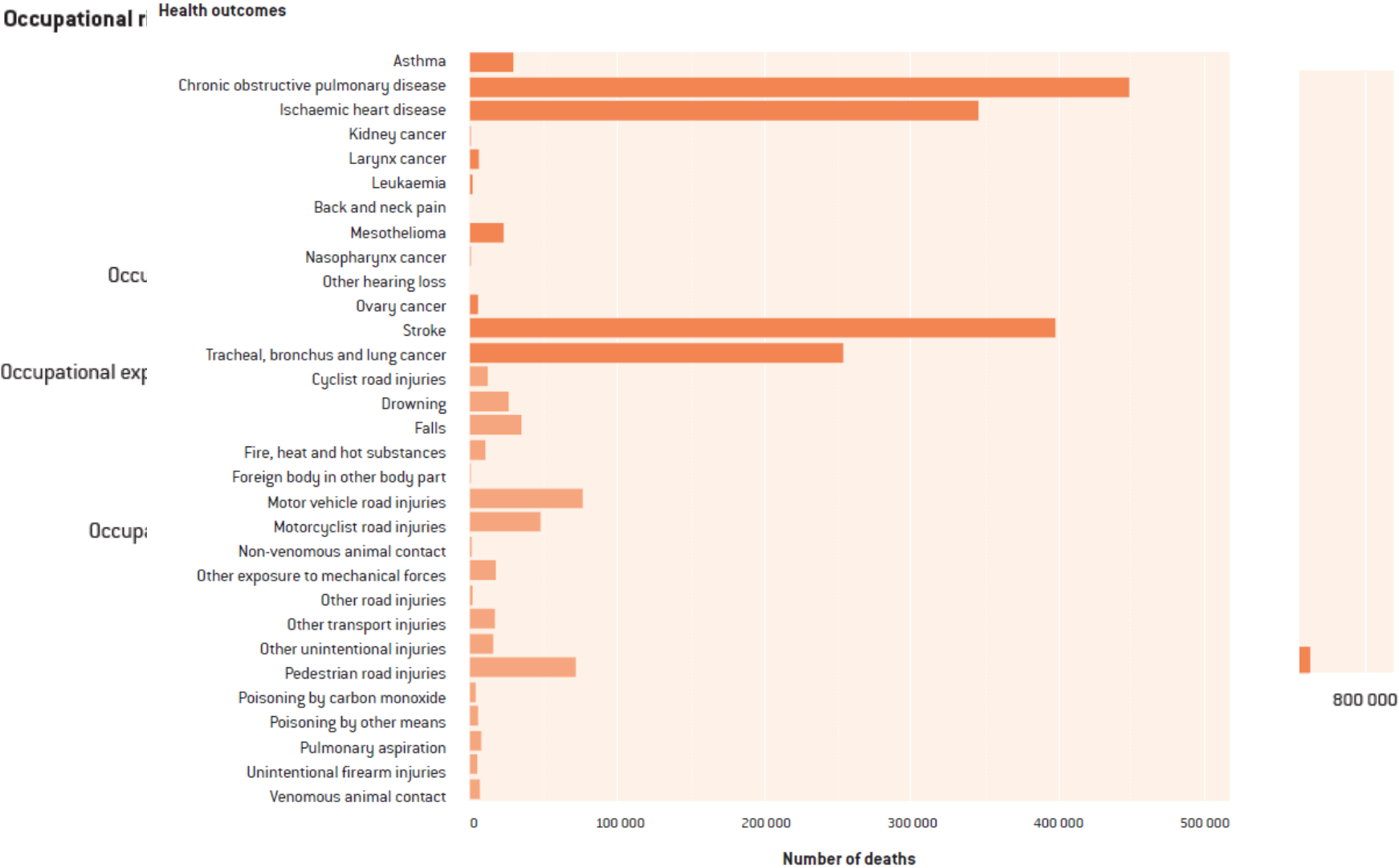




# Hot off the press!

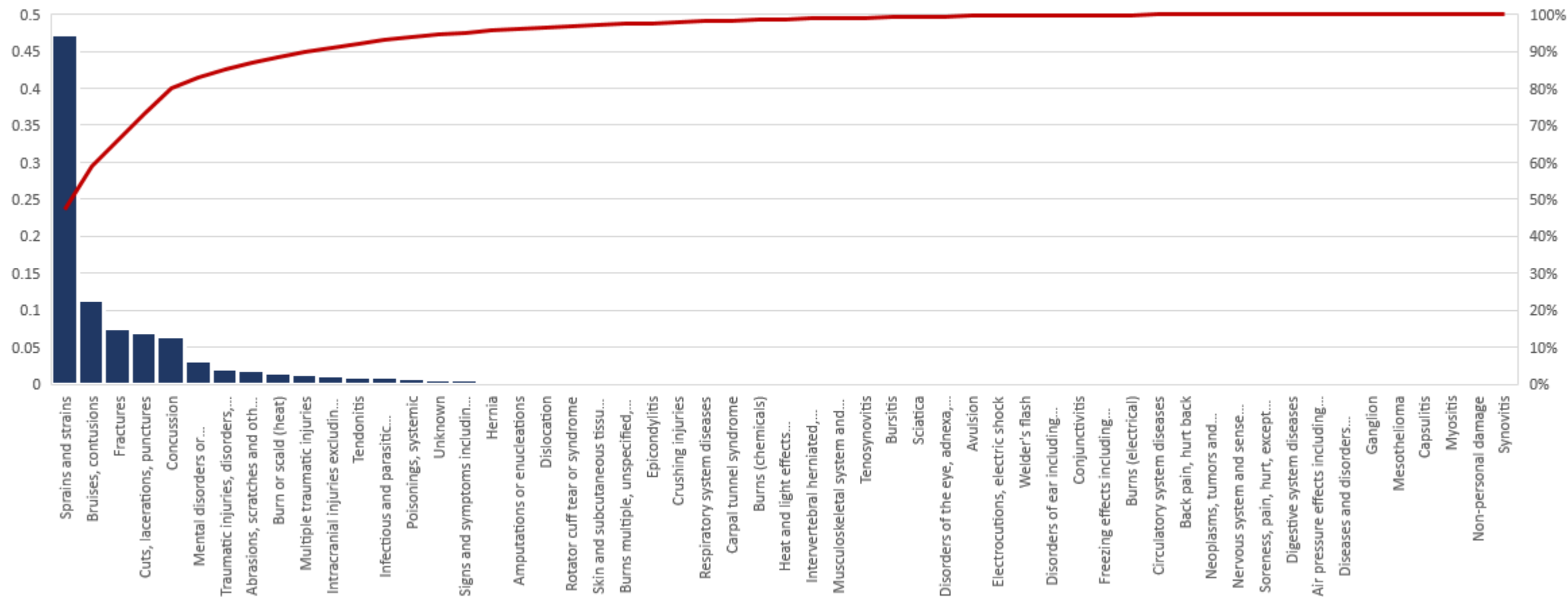
## WHO/ILO Joint estimates of the Work Related Burden of Disease and Injury 2000-2016

TOTAL NUMBER OF ATTRIBUTABLE DEATHS, BY HEALTH OUTCOME, 183 COUNTRIES, FOR THE YEAR 2016

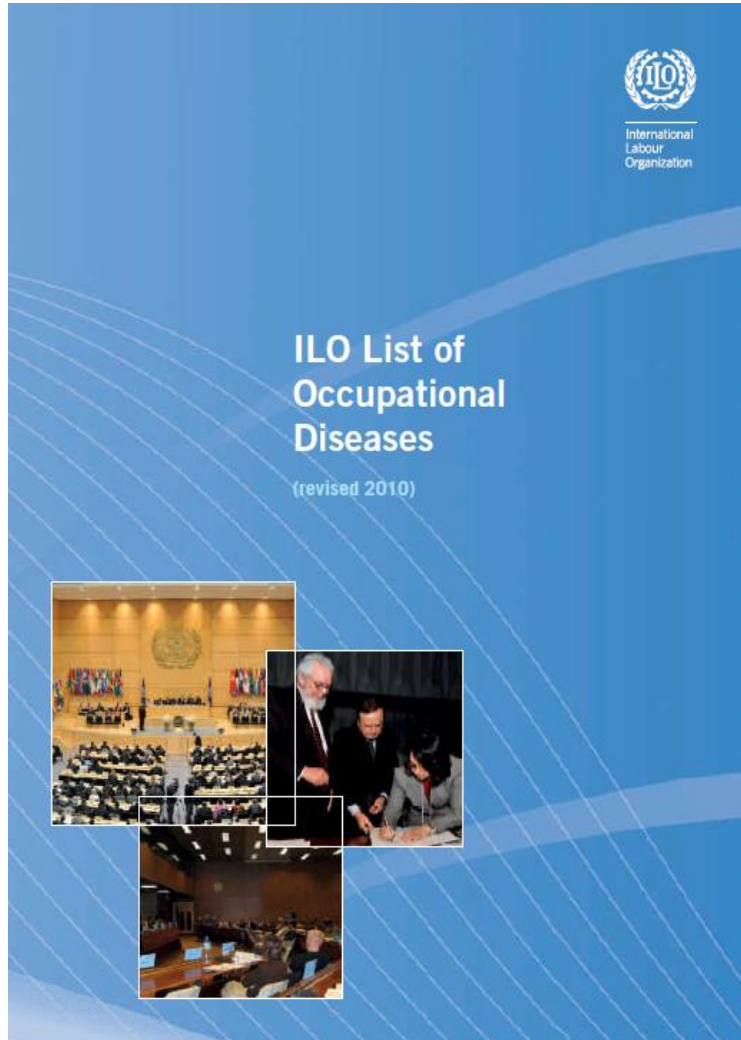


# What is seen in Ontario?

## WSIB 2018 Lost time claims by Nature of injury (%)



# ILO List of Occupational Diseases



97 listed diseases with 9 open items

4 categories:

**Category 1** Occupational diseases caused by exposure to agents arising from work activities, divided into a section for diseases caused by chemical agents, diseases caused by physical agents, biological agents and infectious or parasitic diseases.

**Category 2** Occupational diseases by target organ systems; 4 sections; Respiratory, Skin diseases, Musculoskeletal disorders and Mental and Behavioural disorders.

**Category 3** Occupational cancer listed by specified agents.

**Category 4** other diseases.

# What does an Oiler do for a living?

## Job Description: Marine Oiler

- 1) Oils and greases moving parts, such as gears, shafts, and bearings, of engines and auxiliary equipment used to propel maritime vessels: Examines machinery for specified pressure and flow of lubricants.
- 2) Fills oilcups on machinery with grease and lubricating oil, according to machinery lubrication instructions.
- 3) Reads pressure and temperature gauges and records data in engineering log.
- 4) Assists Engineer in overhauling and adjusting machinery.
- 5) May lubricate deck machinery when vessel is unloading cargo

# Think Work!

- What is the patient's job?
- Could the disease be due to an work exposure?
- What has the patient been exposed to at work?
- Is the exposure enough (dose) to cause the disease?
- Did the exposure start long enough ago (duration) to cause the disease?

**Dose X Duration = Effect**

# Taking an Occupational History

What job do you do now (job title)?

What do you do at work (activities)?

Chronologically list all jobs from leaving school  
(with dates, if possible)

Do you know of any Hazards or Risks in your work?

Are there any vapours, gases, dusts or fumes?

- List all materials used by the worker (SDS)
- Estimate duration and intensity of exposure to substance

Do you have to wear any protective equipment at work e.g.  
masks / gloves

# Taking a History for Occupational Disease

Is there any special ventilation of the workplace?  
(general, local, enclosed process)

Are your symptoms the same, better or worse on rest days? *Followed by* .... Are your symptoms the same, better or worse on holidays?

**If better to either question = Work-effect**

Have you had to take time off work because of this condition?

Do you know of anyone else in your workplace with similar problems?

Had anything changed in your work or workplace before the onset of your symptoms?



# Occupational health

Occupational health is an area of work in public health to promote and maintain highest degree of physical, mental and social well-being of workers in all occupations.

Its objectives are:

- 1.the maintenance and promotion of workers' health and working capacity;
- 2.the improvement of working conditions and the working environment to become conducive to safety and health;
- 3.the development of work organization and working cultures that should reflect essential value systems adopted by the undertaking concerned, and include effective managerial systems, personnel policy, principles for participation, and voluntary quality-related management practices to improve occupational safety and health.

# Occupational health teams

- Certified occupational nurses – occupational health nurses
- Nurses working in occupational health – non-certified in OH
- Administrative assistant
- Physician
  - Specialty trained in Occupational Medicine
  - Canadian Board of Occupational Medicine
  - Other qualifications / experience
- Occupational hygienist
- Safety Professional

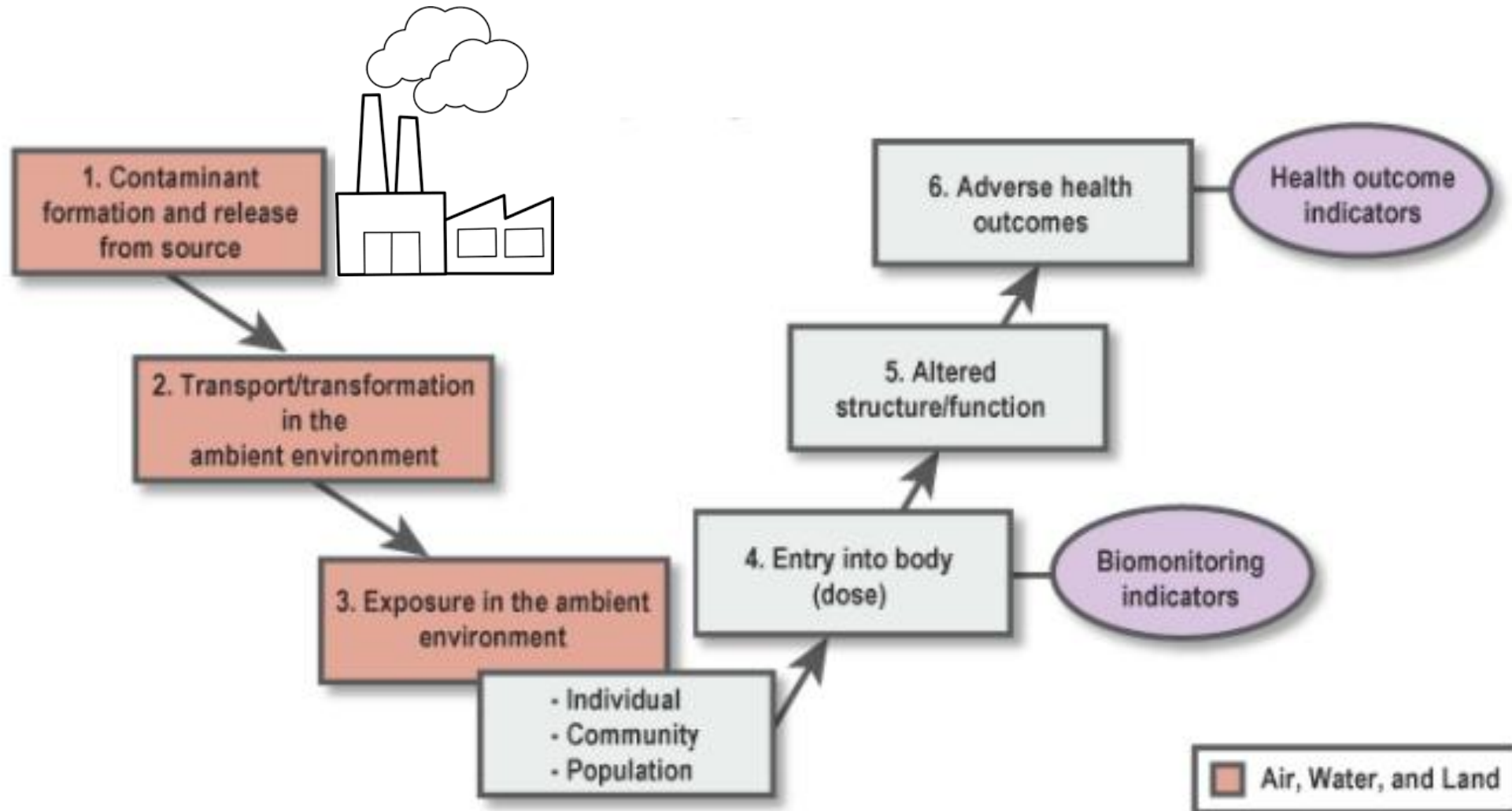
# Occupational health teams

- In House provision
- Group provision
- Contracted services
- Social provision



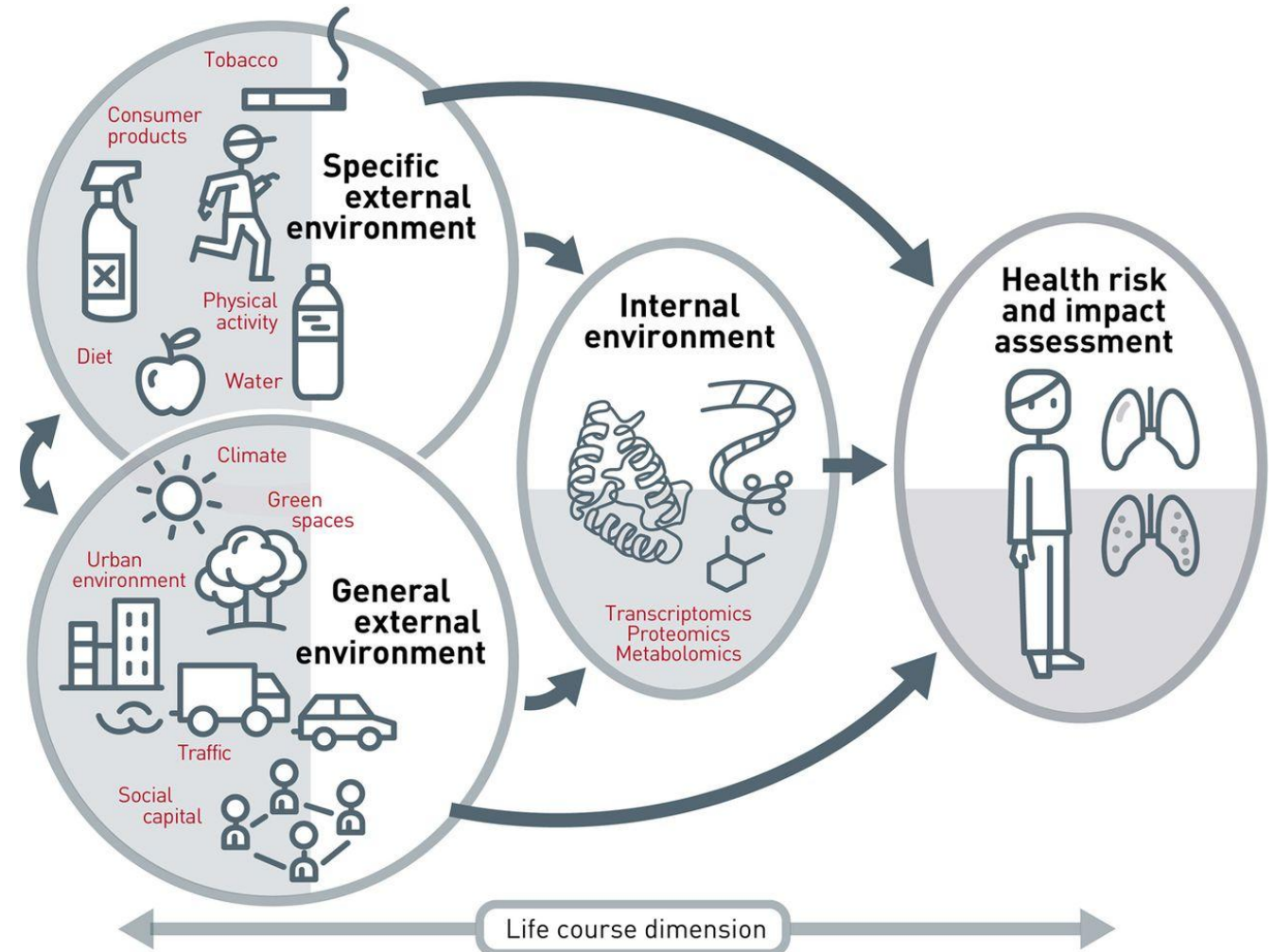
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# Environmental exposure and health

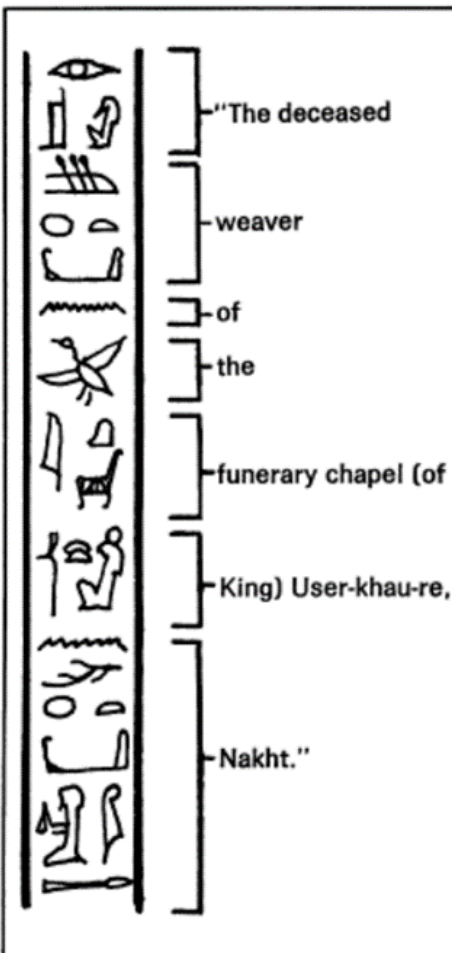


# What is the exposome?

## The Exposome: Exposure to Disease







Thank you,

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## Coffin for the Mummy of Nakht

Western Thebes, Egypt, about 1190 BC

Nakht was a young weaver from a small temple on the west bank of the Nile. His mummy was autopsied in Toronto in 1974. When Nakht died about three thousand years ago, someone in his family loved him enough to ensure that he was buried in a good quality coffin, where his name and occupation were recorded for all eternity.

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