



Occupational &
Environmental Medicine

Diagnosis and Management of Work-Related Injuries and Illnesses

Anil Adishes,
Specialist Physician, Occupational Medicine
Dalhousie University
September 29, 2023

Faculty/Presenter Disclosure

- **Faculty:** Anil Adishes, MB ChB, MSc, MD, FRCP, FFOM, FFCI, FRCPC, Hon. FFOM, (Ireland), CIME
- **Relationships with financial sponsors:**
 - **Grants/Research Support:** WSIB Ontario, Canadian Cancer Society, Canadian Immunology Task Force / CIHR, WCBs New Brunswick, Nova Scotia, CanPATH, New Brunswick Innovation Foundation
 - **Speakers Bureau/Honoraria:** N/A
 - **Consulting Fees:** N/A
 - **Patents:** N/A
 - **Other:** Director - OccupAI Inc. start-up in occupational health informatics, Chief Medical Officer at Canadian Health Solutions Inc.

Disclosure of Financial Support

- This program has received financial support from the Workplace Safety and Insurance Board (WSIB) in the form of an educational grant.
- This program has received in-kind support from – N/A
- 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:

1. Define occupational illness and occupational injury
2. Evaluate a patient for a suspected occupational or environmental illness/injury
3. Outline a return-to-work plan

Definitions

- “**occupational illness**” means a condition that results from exposure in a workplace to a physical, chemical or biological agent to the extent that the normal physiological mechanisms are affected and the health of the worker is impaired thereby and includes an occupational disease for which a worker is entitled to benefits under the Workplace Safety and Insurance Act, 1997; (“maladie professionnelle”)
[Occupational Health and Safety Act, R.S.O. 1990, c. O.1 Accessed: 2023-09-05]

Definitions

An **occupational disease** is a health problem caused by exposure to a workplace health hazard. Your workplace should be healthy for your body and mind. You can help keep yourself and your workplace healthy by being aware of health hazards in your environment.

These workplace health hazards can cause an occupational disease:

- dust, gases, or fumes
- noise
- toxic substances (poisons)
- vibration
- radiation
- infectious germs or viruses
- extreme hot or cold temperatures
- extremely high or low air pressure

(See <https://www.wsib.ca/en/businesses/claims/occupational-disease-and-workplace-health-hazards>)

- **“occupational disease”** includes,
 - (a) a disease resulting from exposure to a substance relating to a particular process, trade or occupation in an industry,
 - (b) a disease peculiar to or characteristic of a particular industrial process, trade or occupation,
 - (c) a medical condition that in the opinion of the Board requires a worker to be removed either temporarily or permanently from exposure to a substance because the condition may be a precursor to an occupational disease,
 - (d) a disease mentioned in Schedule 3 or 4, or
 - (e) a disease prescribed under clause 15.1 (8) (d); (“maladie professionnelle”)

Personal Injury by Accident

- “accident” includes,
 - (a) a wilful and intentional act, not being the act of the worker,
 - (b) a chance event occasioned by a physical or natural cause, and
 - (c) disablement arising out of and in the course of employment; (“accident”)

[Workplace Safety and Insurance Act, 1997, S.O. 1997, c. 16, Sched. A]

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 (Safety Data Sheet, 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?

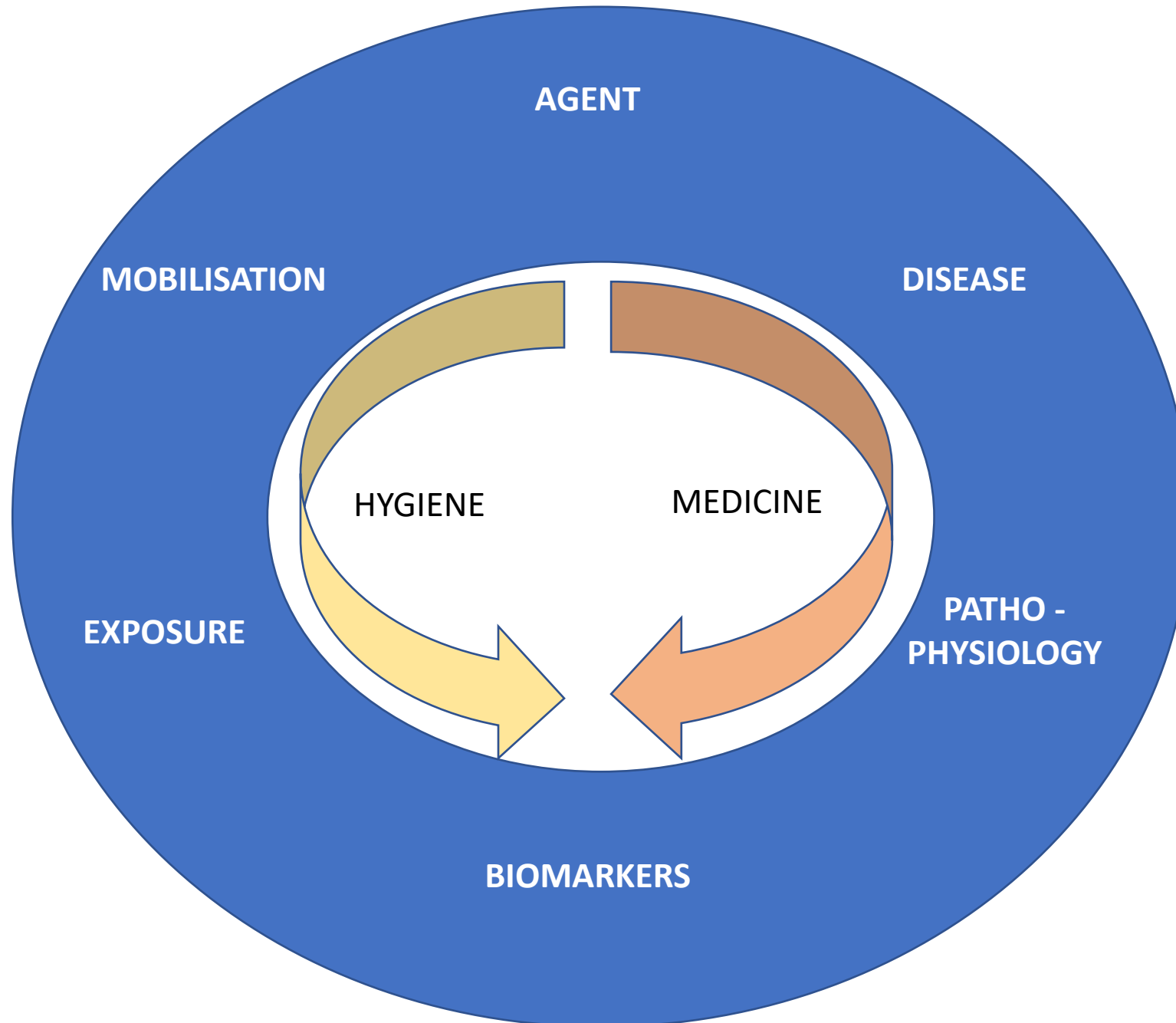
Do you know of anyone else in your workplace with similar problems?

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

Making the Link between Work and Illness



Occupational &
Environmental Medicine



Causation

Occupational Causation

Workplace
Exposure



Symptoms



Diagnosis

Occupational Exacerbation / Aggravation

Diagnosis



Workplace
Exposure



↑ Symptoms

For WSIB Ontario

Aggravation: is the temporary effect that a minor work-related injury/disease has on a pre-accident impairment requiring health care and/or leading to a loss of earnings.

Consequence

- “permanent impairment” means impairment that continues to exist after the worker reaches **maximum medical recovery**; (“déficience permanente”)

Clinical Evidence

- A clear exposure that preceded the illness/injury
- A plausible temporal relationship between exposure and outcome
- The exposure is known to cause the outcome in question
- Other causes have been ruled out or deemed less likely

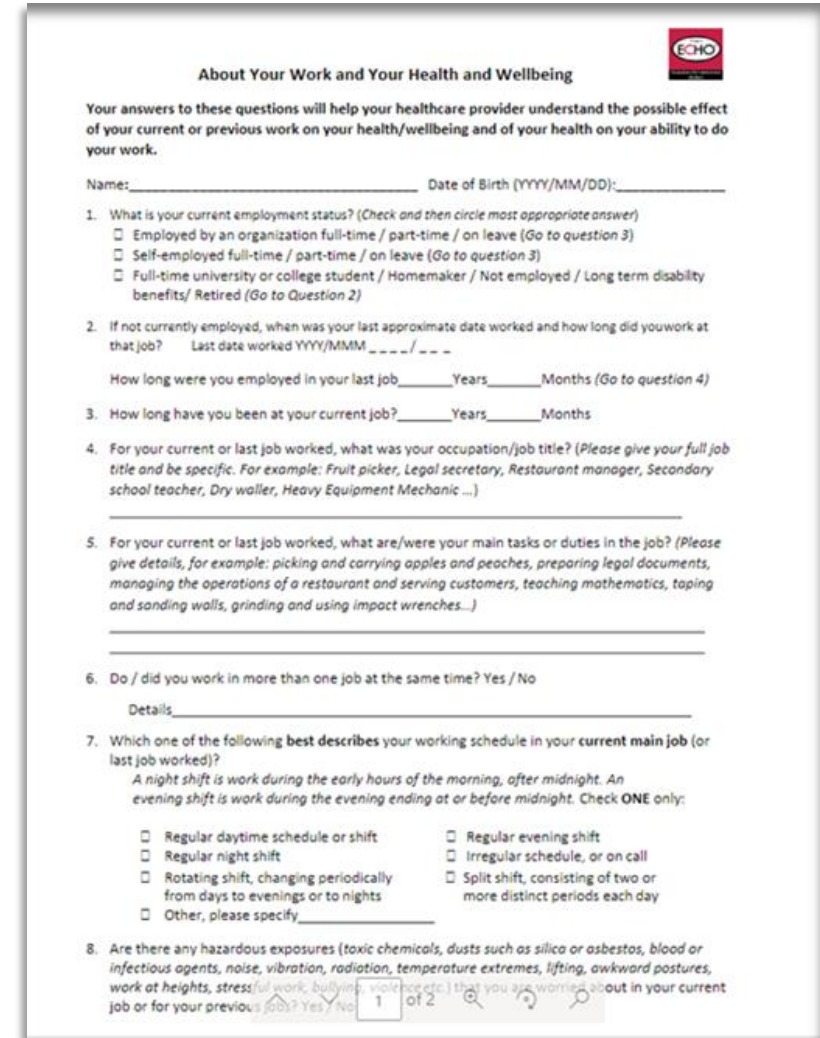
Supportive features:

- Co-workers with similar outcome
- Improvement with cessation of exposure
- Prior symptoms with similar exposures
- No other apparent cause

Occupational History Recording Tool

Why use it?

- Time management
- Record keeping
- Communication
- Collaboration
- Assessment
- Environmental exposures
- Disclosure of information
- Prognosis
- Special populations (adolescents, pregnant workers)



About Your Work and Your Health and Wellbeing

Your answers to these questions will help your healthcare provider understand the possible effect of your current or previous work on your health/wellbeing and of your health on your ability to do your work.

Name: _____ Date of Birth (YYYY/MM/DD): _____

- What is your current employment status? (Check and then circle most appropriate answer)
 - Employed by an organization full-time / part-time / on leave (Go to question 3)
 - Self-employed full-time / part-time / on leave (Go to question 3)
 - Full-time university or college student / Homemaker / Not employed / Long term disability benefits/ Retired (Go to Question 2)
- If not currently employed, when was your last approximate date worked and how long did you work at that job? Last date worked YYYY/MMM_ ___/ ___ - ___

How long were you employed in your last job _____ Years _____ Months (Go to question 4)
- How long have you been at your current job? _____ Years _____ Months
- For your current or last job worked, what was your occupation/job title? (Please give your full job title and be specific. For example: Fruit picker, Legal secretary, Restaurant manager, Secondary school teacher, Dry waller, Heavy Equipment Mechanic ...)
- For your current or last job worked, what are/were your main tasks or duties in the job? (Please give details, for example: picking and carrying apples and peaches, preparing legal documents, managing the operations of a restaurant and serving customers, teaching mathematics, taping and sanding walls, grinding and using impact wrenches...)
- Do / did you work in more than one job at the same time? Yes / No

Details _____
- Which one of the following **best** describes your working schedule in your **current main job** (or last job worked)?

A night shift is work during the early hours of the morning, after midnight. An evening shift is work during the evening ending at or before midnight. Check **ONE** only:

<input type="checkbox"/> Regular daytime schedule or shift	<input type="checkbox"/> Regular evening shift
<input type="checkbox"/> Regular night shift	<input type="checkbox"/> Irregular schedule, or on call
<input type="checkbox"/> Rotating shift, changing periodically from days to evenings or to nights	<input type="checkbox"/> Split shift, consisting of two or more distinct periods each day
<input type="checkbox"/> Other, please specify _____	
- Are there any hazardous exposures (toxic chemicals, dusts such as silica or asbestos, blood or infectious agents, noise, vibration, radiation, temperature extremes, lifting, awkward postures, work at heights, stressful work, bullying, violence etc.) that you are worried about in your current job or for your previous jobs? Yes / No

1 of 2

Applying a Prevention Model to Management

- Tertiary prevention:
 - Treatment/management of the illness/injury.
 - Assess if there is a risk for ongoing or re-exposure, and if so, define limitations and/or restrictions –could also consider specialist (occupational medicine) referral.
 - St Michael's Hospital Occupational Medicine Clinic.
 - WSIB claim
- Secondary prevention:
 - Ongoing monitoring/follow up after return to work to ensure no further exacerbation.
- Primary prevention:
 - Reduce or eliminate the hazard.

Return to Work (RTW)

- As soon as medically possible
 - 100% recovery is NOT necessary and waiting may risk longer absence with health consequences
- Advise on Limitations of condition
(What they cannot do even if they wanted to)
- Advise on Medical Restrictions
(What they should not do in your opinion)
- Consider timing
 - Graduated return
 - Shift work
 - Nature of work

Questions to Consider

Question 1: Could the disease/illness, injury or treatment affect ability to work?

- Be mindful of “Safety Sensitive Work” (SSW); work where any brief incapacitation, impairment of cognition etc. could result in loss of life or damage, e.g. commercial driving, pilots, law enforcement, health care, etc.)
- May be legal obligations on you e.g. to report pilots to Regional Canadian Aviation Medical Officer
- The Canadian Medical Association Driver’s Guide can be helpful!
- Canadian Medical Protection Association

Question 2: Could work worsen/exacerbate the disease/illness or injury?

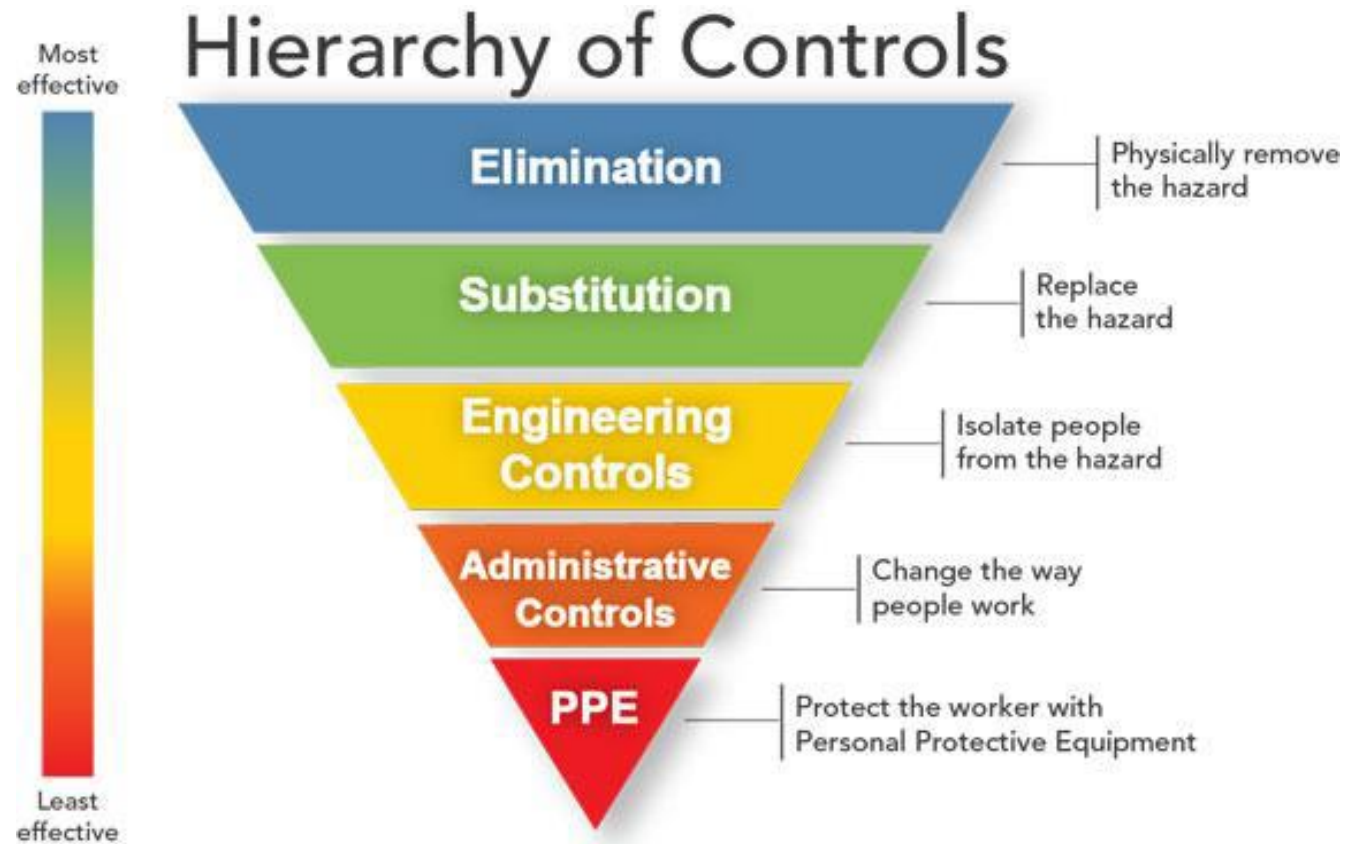
- Role of medical restrictions
- Human rights / disability accommodation

Question 3: When can they RTW?

- As soon as medically reasonable, with modified duties and/or hours as needed to support recovery (use evidence-based guidelines)

Question 4: Are there compensation issues?

Primary Prevention



Take Home Messages

- Ask about patient's work and what they do
- Consider the effect of their work on their health and of their health on their work
- Remember good work is good for people



Occupational &
Environmental Medicine

Questions/Discussion

Thank you!

anil.adishesh@dal.ca