

Tips for diagnosing occupational illness and ruling out non-occupational causes

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Occupational disease (OD)

Any illness resulting from a variety of biological, chemical, physical, and psychological factors that are present in the work environment can be defined as an occupational disease.

- ▶ ILO has revised the list of ODs in 2010
 - ▶ mental and behavioral disorders have been included for the first time
 - ▶ an open list



Criteria for an OD

- ▶ causal relationship with a specific agent, exposure or work process
- ▶ occur in connection with a specific work environment and/or in specific occupations
- ▶ occur among the groups of workers concerned with a frequency which exceeds the average incidence within the rest of the population
- ▶ scientific evidence of a clearly defined pattern of disease following exposure and plausibility of cause



Challenges in the diagnosis of ODs

- ▶ Exposure
 - ▶ assessment of exposure (hygienic measurements, biomonitoring)
 - ▶ entry routes (inhalation, dermal, oral)
- ▶ Dose-response
 - ▶ consistency of symptoms and reactions with the level and duration of exposure (body functions, biological samples, image technics)
- ▶ Individual susceptibility
 - ▶ atopy, genetic variation
- ▶ Habits
 - ▶ smoking, alcohol consumption and drugs
- ▶ Physiological state
 - ▶ malnutrition, pregnancy



Challenges in the differential diagnosis

- ▶ Chronic solvent encephalopathy
- ▶ Musculo-skeletal strain injuries
 - ▶ extra strain at work
- ▶ Allergic diseases
 - ▶ high level of molds or toxins
 - ▶ irritant or allergic substances
- ▶ Cancers and pneumoconiosis
 - ▶ lag-time
- ▶ Stress disorders
- ▶ Multiple exposure
- ▶ New causes



Tips for OD patient interview

Ask about

- ▶ current work task and exposures
- ▶ previous works and exposures
- ▶ diagnosed diseases, their treatment and current medication
- ▶ onset of symptoms
- ▶ workplace (exposures) association with symptoms
- ▶ first reporting of symptoms to a health professional
- ▶ work capacity and sick leaves
- ▶ socio-economic situation
- ▶ habits



Case 1: Carpal tunnel syndrome

A 42-year-old female worker at an aircraft engine manufacturing company using regularly vibratory hand tools comes to your appointment complaining numbness of fingers at night and weakness of her dominant right hand. She is a regular smoker and her BMI is 30. She is a mother of four children, who likes to do gardening and knitting in her free time.

Is she suffering from an occupational CTS?
How would you proceed?

Ref. Tulder M, Malmivaara A, Koes B. Repetitive strain injury. Lancet 2007; 369: 1815-22. <http://www.sciencedirect.com/science/article/pii/S014067360761204>

Ref. Hagberg M, Morgenstern H, Kelsey M. Impact of occupations and job tasks on the prevalence of carpal tunnel syndrome. Scand J Work Environ Health 1992;18(6):337-345; PubMed: www.ncbi.nlm.nih.gov/pubmed/1485158

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Case 2: Post traumatic stress disorder

A 54-year-old coach driver had killed a young girl when he did not notice her when reversing his coach at the end stop turning point. He developed anxiety and night mares, recuperated partially during a month time and returned to work. He comes to your appointment pale, shaky and distressed saying he had just had a near accident situation and is not able to go back to his duty any more.

Is he suffering from an occupational PTSD?
How would you proceed?

Ref. McFarlane A, Bryant R. Post-traumatic stress disorder in occupational settings: anticipating and managing the risk. Occup Med 2007; 57(6): 404-410; <http://ocmed.oxfordjournals.org/content/57/6/404.full.pdf+html>

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Case 3: Asbestos abatement worker

A 47-year-old male, who had worked in several asbestos abatement firms in the years 1992-2004. He had smoked 30 years 1/2-1 pack per day. He had used both a full and half mask respirator with P3 class filter and a protective overall. He had had for years cough, sputum, and difficulties to breath during the night. He had had a single attack of chest pain in the night. Lately he had developed day-time tiredness and breathlessness even when walking a short distance.

How would you proceed?
Is he suffering from an OD?

Ref: Ylioinas P, Kroppu P, Oksa P. www.laakarilehti.fi > in english

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Remember early risk prevention

- ▶ Diagnosis of OD is not an end of the process, but a start for the primary prevention
 - always inform employer and workers of the OD risks
 - advice on practical changes at work to minimize exposure
- ▶ It is the responsibility of OP to report ODs and clustering of work-related cases

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