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# AUSTRALASIAN FACULTY OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE: tests, treatments and procedures clinicians and consumers should question

*The Australasian Faculty of Occupational & Environmental Medicine (AFOEM) is a Faculty of the Royal Australasian College of Physicians (RACP) that connects and represents Occupational & Environmental Medicine Fellows and trainees in Australia and New Zealand.*

## 1. Do not request low back X-rays or other forms of low back imaging as part of a routine preplacement medical examination.

*The purpose of preplacement medical examinations should be to determine an individual's ability to perform the job. However, such examinations are generally not recommended unless there is a reason for using them to assess some specific occupational risks. Even if a routine preplacement medical examination is justified, low back X-rays and other imaging are not useful preplacement tests to undertake because they have not been found to predict future injuries. These tests also result in unnecessary radiation exposure and age-related, asymptomatic, clinically unimportant findings may trigger further imaging evaluation and/or patient anxiety.*

**Supporting Evidence**


- Gibson ES, Martin RH, Terry CW. Incidence of low back pain and pre-placement x-ray screening. J Occup Med 1980; 22(8):515-9.
- Schaafsma FG, Mahmud N, Reneman MF, et al. Pre-employment examinations for preventing injury, disease and sick leave in workers. Cochrane Database Syst Rev 2016; 1: CD008881.


## 2. Do not order X-rays or other imaging for acute non-specific low back pain, unless there are red flags or other clinical reasons to suspect serious spinal pathology.

*As little as two per cent of low back pain cases represent potentially serious conditions requiring surgical or medical intervention. The majority of acute low back pain episodes are benign, self-limiting cases that do not warrant any X-ray or imaging studies. Indeed, unnecessary X-rays and imaging can be harmful due to the potential adverse health effects associated with radiation exposure, incidental findings that trigger more imaging to be performed, and description of asymptomatic, age-related changes in the spine that can result in inappropriate patient anxiety. Moreover, the attribution of symptoms to unrelated incidental findings can then lead to unnecessary surgery.*

*It is therefore recommended that X-rays and other imaging of the lower back should be performed only if there are red flags such as: a history of significant trauma, cauda equina syndrome, symptoms suggestive of a tumour or infection (fever, weight loss, and a history of cancer), and steroid use. Also, plain radiography is insufficiently sensitive and specific pain associated with these risk factors with the exception of suspected 'low energy' fractures e.g. low-height falls in the elderly or osteoporotic. In these cases, plain radiography can be useful to determine whether a fracture is present and inform investigation and treatment of patients at risk of osteoporosis to prevent further fragility fractures.*

**Supporting Evidence**


- Graves JM, Fulton-Kehoe D, Martin DP, et al. Factors associated with early magnetic resonance imaging utilization for acute occupational low back pain: a population-based study from Washington State workers' compensation. Spine 2012; 37(19):1708-18.

- Suri P, Boyko EJ, Goldberg J, et al. Longitudinal associations between incident lumbar spine MRI findings and chronic low back pain or radicular symptoms: retrospective analysis of data from the longitudinal assessment of imaging and disability of the back (LAIDBACK). BMC Musculoskeletal Disorders 2014; 15:152.
- Webster BS, Bauer AZ, Choi Y, et al. Iatrogenic consequences of early magnetic resonance imaging in acute, work-related, disabling low back pain. Spine 2013; 38(22):1939-46.


## 3. Do not prescribe opioids for the treatment of acute or chronic pain without assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and capacity to perform safety-critical activities such as driving a motor vehicle.

*Studies demonstrate that prescribing opioids for workers suffering back injuries is correlated with significantly longer periods of disability and a higher risk of surgery. Some of these relationships may be attributable to the higher likelihood of opiate prescription for people with more serious injuries. However, other studies have documented that long-term opioid use for chronic pain is associated with serious risks such as abuse and dependence, overdose, myocardial infarction, and motor vehicle crashes. These risks may outweigh the benefits given there is also insufficient evidence on whether the pain relief provided by opioids is sustained in the long term.*

*The use of opioids can result in euphoria, drowsiness or inability to concentrate, so using opioids is incompatible with many jobs. Thus, opioid prescription for the treatment of acute or chronic pain should not be initiated without first assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and their capacity to perform safety-critical activities.*

**Supporting Evidence**


- Dowell D, Haegerich TM, Chou R. CDC guideline for prescribing opioids for chronic pain – United States. Recommendations and Reports 2016; 65(1):1–49.
- Franklin GM, Stover BD, Turner JA, et al. Early opioid prescription and subsequent disability among workers with back injuries: the Disability Risk Identification Study Cohort. Spine 2008; 33(2):199–204.
- National Opioid Use Guideline Group (NOUGG). Canadian guideline for safe and effective use of opioids for chronic non-cancer pain. 2010.
- Webster BS, Verma SK, Gatchel RJ. Relationship between early opioid prescribing for acute occupational low back pain and disability duration, medical costs, subsequent surgery and late opioid use. Spine 2007; 32(19):2127-32.


## 4. Do not certify a patient as totally unfit for work unless the work absence is clinically necessary, and the patient is unfit for suitable alternative or restricted duties.

*While some medical conditions necessitate time off work, for example, a person recovering from surgery or experiencing debilitating pain, with many medical conditions there is a substantial discretionary element to work absence. So some patients may be able to participate in work if employers make appropriate accommodations.*

*There is substantial evidence to support a positive link between work and (physical, mental and social) health, as well as evidence that absence from work contributes to declining health, slower recovery times, and longer duration of disability. The certification of work absences due to medically discretionary injuries and illnesses should therefore be discouraged. When asked to provide an opinion on functional abilities to employers or insurers, medical practitioners' focus should be on abilities; restrictions should be objective, specific, and listed only when medically indicated.*

**Supporting Evidence**


- Australasian Faculty of Occupational & Environmental Medicine / Royal Australasian College of Physicians. Australian and New Zealand Consensus Statement on the Health Benefits of Work 2011.
- van der Noordt M, IJzelenberg H, Droomers M, Proper IK. Health effects of employment: a systematic review of prospective studies. Occupational and Environmental Medicine 2014; 17:730-36.
- Waddell G, Burton A. Is work good for your health and well-being? The Stationery Office (UK) 2004.

## 5. Do not repeat chest X-rays when screening asbestos-exposed workers unless clinically indicated.

*Asbestosis usually takes years to decades to develop after the initial exposure and chest X-rays cannot immediately indicate whether or not asbestos fibres have been inhaled. Given the long latency period, screening and early detection of asbestosis by chest X-ray is unlikely to confer any health advantage or psychological benefit on asbestos-exposed individuals. Moreover, there is now evidence that low-dose multi-detector CT (MDCT) rather than chest X-ray is justified for initial examination because it is more sensitive.*

*Therefore, while it may be appropriate to obtain a baseline chest X-ray at the time of first assessment, for screening purposes the radiation risk outweighs the benefit of frequent chest X-rays.*

*Radiation exposure is also a concern for repeated CT scans. Further screening may be justified only if exposure to asbestos has continued and, in this case, the frequency and extent of exposure should determine the requirement for repeat screening. In addition, low-dose CT may be appropriate in individual cases, if there is considered to be an increased risk of lung cancer.*

### Supporting Evidence


- Eisenhawer C, Felten MK, Tamm M, et al. Radiological surveillance of formerly asbestos-exposed power industry workers: rates and risk factors of benign changes on chest X-ray and MDCT. Journal of Occupational Medicine and Toxicology 2014; 9:18.
- Safe Work Australia Asbestos Guidelines
- Vierikko T, Kivistö S, Järvenpää R, et al. Psychological impact of computed tomography screening for lung cancer and occupational pulmonary disease among asbestos-exposed workers. Eur J Cancer Prev 2009; 18(3):203-6.
- Weissman DN. Role of chest computed tomography in prevention of occupational respiratory disease: review of recent literature. Semin Respir Crit Care Med 2015; 36(3):433-48.


**How was this list created?**

**The College worked with the President and EVOLVE Lead Fellow of AFOEM to compile and refine a list of nine recommendations regarding low-value clinical practices in occupational and environmental medicine. This initial list served as the basis for an online survey. Based on survey responses, each of the nine recommendations was assigned a score and ranked accordingly. Based on the ranking of the initial nine, and the review of newly suggested items, these five low-value practices and interventions were chosen.**

**Last reviewed: August 2017**