

# Excessive occupational sitting is not a “safe system of work”: time for doctors to get chatting with patients

Employers and doctors need to recognise and respond to the health hazards of too much sedentary time

Being able to work usually has a positive impact on health. However, changes in the physical demands of work and increased use of computers have led to many workers now being employed in sedentary jobs.<sup>1</sup> While these have traditionally been thought of as safe work environments, recent evidence (including meta-analyses<sup>2</sup>) suggests this mode of work — often involving long uninterrupted periods of sitting — may be hazardous, contributing substantially to the growing chronic disease burden associated with obesity, diabetes, cardiovascular disease and cancer.<sup>3,4</sup> Importantly, being sedentary (ie, too much sitting) is not the same as being physically inactive. Insufficient physical activity is defined in the public health context as not meeting the guidelines to accumulate at least 2.5 to 5 hours of moderate-intensity physical activity per week.<sup>5</sup> Both physical inactivity and sedentary time have an impact on health: physical inactivity is estimated to account for 5.5% of all-cause premature mortality, and excessive sitting time, after adjusting for physical activity, accounts for 5.9%.<sup>2</sup> Notably, even if workers meet physical activity guidelines (ie, are physically active), they can still have high exposure to sedentary time.

Work health and safety laws in Australia and other jurisdictions require employers to provide a “safe system of work”. For example, section 19 of the *Work Health and Safety Act 2011* (Cwlth) states that the “primary duty of care” is to “ensure, so far as is reasonably practicable, the health and safety of workers” by, among other things, “provision and maintenance of safe systems of work”. We contend that: a) the systems of work commonly observed in contemporary offices demonstrate a high likelihood of excessive sitting hazard; b) the degree of harm associated with this hazard is likely to be substantial; c) the evidence for this is now widely known; d) there are available ways to minimise the risk; and e) the cost of these strategies is proportionate to the risk.

Exposure to sedentary time can be substantial for office workers. Objective measurement has found that, on average, over 75% of the office workday is spent sitting, with much of this accumulated in unbroken bouts of at least 30 minutes,<sup>3,6,7</sup> demonstrating the hazard is much more common than previously thought.

There is now also evidence that both overall sedentary time and the pattern of sedentary exposure are associated with substantial harm. For example, excessive total sitting time is associated with premature mortality, obesity, cancer (ovarian, endometrial and colon), type 2 diabetes and cardiovascular disease.<sup>2-4</sup> Conversely,

regular interruption of sedentary time is beneficially associated with biomarkers for chronic conditions.<sup>8,9</sup> Occupational exposure can account for around half of total weekly sedentary time,<sup>3,7</sup> and thus fractional risk attribution implies occupational responsibility for around half of the harm.

The evidence for the harm associated with excessive sitting is now being widely promoted. The recently updated Australian Government guidelines recommend minimising the time spent in prolonged sitting.<sup>5</sup> Further, media stories reported in recent years have highlighted the potential dangers of excessive sitting.<sup>10</sup> Advanced organisations are implementing risk control strategies using, for example, a sedentary work practices toolkit.<sup>11</sup>

Changes to work systems can reduce sedentary time. Alterations to the individual physical environment (eg, sit-stand workstations or active workstations)<sup>12,13</sup> and combined approaches (including individual, environmental and organisational changes)<sup>6</sup> have achieved substantial reductions in total occupational sitting time and prolonged unbroken sitting time. The extent to which such changes can minimise chronic disease is now being investigated.

Some risk reduction strategies, such as introducing standing meetings, are costless. While other strategies have a cost, the cost does not seem disproportionate given the potential for significant harm (eg, reduced life expectancy and cardiovascular disease).

On the available evidence, it appears that contemporary offices may be failing to provide a safe system of work. Doctors should be prescribing behaviour to reduce occupational sedentary exposure where this may exacerbate, or be exacerbated by, an existing medical condition. A doctor who is aware that a patient has a prolapsed disc in the spine would require the patient to refrain from lifting heavy objects at work. In the same way, a doctor who is aware that a patient’s cardiovascular condition necessitates remaining active and avoiding excessive sedentary exposure should inform the patient and employer of the need for the patient to regularly move to maintain wellbeing. This could be achieved through the redesign of work tasks to enable postural variability or through regular breaks that involve activity such as walking. In addition to raising this matter in routine patient consultations, doctors could be supporting organisations attempting to provide systems of work in which workers “sit less, move more, and move more often”.<sup>14</sup>

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doi: 10.5694/mja13.00037

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**Competing interests:** No relevant disclosures.

**Provenance:** Not commissioned; externally peer reviewed.

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