

Five facts about ... occupational health physiotherapy

APA Occupational Health group chair David Hall and national committee members Martin Van Der Linden, Lucia Tsui and Greg Borman provide five discussion points in the lead up to Occupational Therapy Week, 21–27 October.

1 The sit up straight myth

Many people think that sitting bolt upright at a computer workstation is the ideal position, but that is a myth. If you see any guidelines with this suggested as the 'ideal position', discard them as they are outdated.

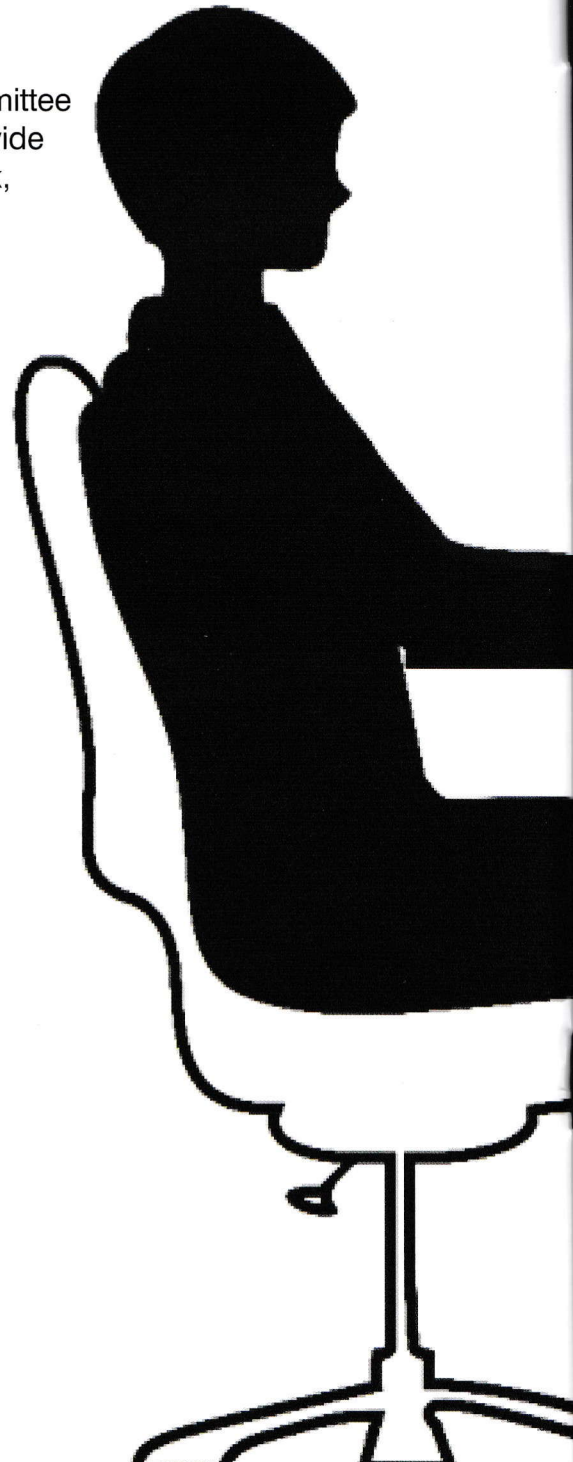
Trying to sit straight puts more pressure on your lower back and also tends to encourage people to slump their head and neck forwards (the dreaded 'turtle neck'). This commonly leads to headaches, neck pain and arm issues.

As shown on the right, computer workers are encouraged to maximise support through their spine by choosing a chair that provides full spinal support, and reclining it to an angle of somewhere between 10 and 20 degrees from vertical.

While on the topic of chairs, the seat pan depth in your chair is very important and often ignored. Shorter people on large seat pans is much too common in office environments. Occupational health physiotherapists are experts in measuring these sorts of dimensions to ensure the workstation is a good fit for the worker.

Reference

Cook C & Burgess-Limerick R (2003), Guidelines for computer workstations, Ergonomics Now.





2 Changing workplace design can help prevent injuries

With training and experience, physiotherapists can utilise their skills to help prevent injuries from occurring. The process for doing this is best guided by two key codes of practice focused on hazardous manual tasks and how to manage work health and safety risks.

The Occupational Health group Level 1 course focuses on these codes. Some key takeaways include:

- make sure you allocate time to get access to the workplace and wear the correct clothing—sometimes there are inductions you have to do and safety clothing you may need to wear
- you will be the expert on what can cause an injury but they are the experts on their job. If you listen well to the workers and ask the right questions they will not only tell you what's hard or hazardous, but how to fix it as well—just like a subjective examination
- we love to think businesses will 'do the right thing' but ultimately it really needs to make a difference to their bottom line, so report on how your suggested changes will give them return on investment
- make sure any new equipment is communicated well with the workforce so they know how and when to use the new equipment safely. Also check you have not introduced any new hazards into the area as a result.

When done well, this sort of injury prevention can be very valuable for workplaces and suitably trained physiotherapists are in a great position to provide this advice.

Guidelines

Hazardous Manual Tasks, Code of Practice Safe Work Australia 2016, visit tinyurl.com/y7tw5r8.

How to manage work health and safety risks, Code of Practice Safe Work Australia 2011, visit tinyurl.com/yasfrlu8.



Photo: © iStockphoto.com/damirucidic

3 The key to well-designed pre-employment assessments

Pre-employment functional capacity evaluations are being used by more employers every year. Many physiotherapists will be asked to be involved in pre-employment assessments (PEA). Be aware that these need to be well-designed and well-matched to the role, or will be ineffective.

Here are some key rules of thumb:

- although standardised, easy-to-administer clinical assessments are attractive to employers, particularly those trying to coordinate assessments across multiple regions or locations, only evaluations that are matched to accurate job demands have demonstrated efficacy
- PEA are designed based on functional capacity evaluations. Ensure this process has been adequately done in close consultation with the relevant people in the workplace, rather than a 'close enough is good enough' cookie cutter approach
- to deliver high-value PEA to employers, a physiotherapist needs to understand work level definitions including physical demand levels and work frequencies, have access to accurate job analysis information (or have the ability to measure job demands directly) and implement testing specific to individual jobs
- it is important that the process is clear and safe for the participant
- given the importance for the participant, clear instructions and well-organised testing procedures are crucial.

When conducted appropriately, pre-employment functional capacity evaluations have been shown to reduce injury rates and reduce the costs of injuries, benefiting both employers and employees.

4 How physios play a role on return-to-work early intervention

Assisting an injured worker back to suitable duties at work is not just the end-result of good management, it is a crucial part of the management. Perhaps the most important part.

Recovery outcomes are not simply defined by the absence of symptoms; they are closely linked to the timeliness and sustainability of returning to meaningful work as soon as possible.

Employers are more committed than ever to investing in effective injury management strategies. At the same time, compensable bodies and schemes are providing increasingly greater incentives to encourage physiotherapists to take on an active role in early intervention.

Early injury management is about 'educating the injured person about their injury, reassuring them about the natural history of the injury, and emphasising the importance of early participation... despite the injury' (Victorian WorkCover Authority 2012).

All physiotherapists contribute to this important function in a number of ways. This starts with providing a prompt evidence-based assessment, diagnosis, treatment and intervention to workers as soon as an injury occurs, either onsite or at a clinic nearby. Many physiotherapists also work in an advisory capacity to educate and inform clients such as employers or compensable bodies on the optimal management and intervention of injuries and illnesses.

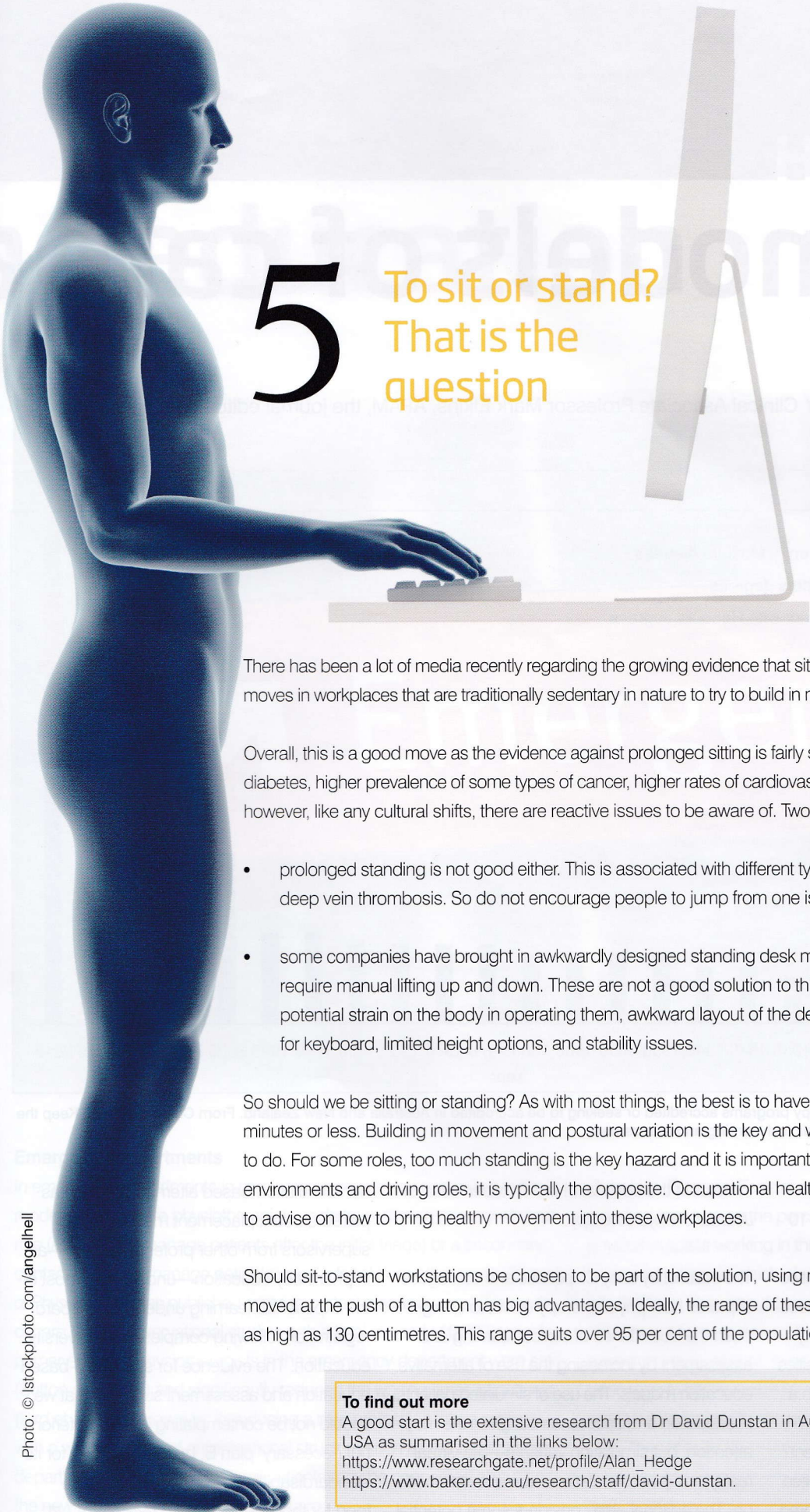
By targeting injuries during the early stages of their development, workers are afforded the opportunity to resume work and activities of daily living earlier in a safe and controlled manner. This is beneficial in minimising unnecessary productivity loss and the likelihood of long-term activity limitations, restrictions and persistent pain.

Reference

Harbin G et al (2005), Post-Offer, Pre-Placement Testing in Industry, *American Journal of Industrial Medicine*. 47:296-307

Guidelines

Clinical Framework for the Delivery of Health Services, Victorian Workcover Authority 2012. Visit tinyurl.com/ycvu6tm9.



5 To sit or stand? That is the question

There has been a lot of media recently regarding the growing evidence that sitting is killing us. As a result, there have been moves in workplaces that are traditionally sedentary in nature to try to build in more standing opportunities.

Overall, this is a good move as the evidence against prolonged sitting is fairly significant, including higher rates of type 2 diabetes, higher prevalence of some types of cancer, higher rates of cardiovascular disease and lower life expectancy; however, like any cultural shifts, there are reactive issues to be aware of. Two in particular are:

- prolonged standing is not good either. This is associated with different types of issues, such as low back pain and deep vein thrombosis. So do not encourage people to jump from one issue to another
- some companies have brought in awkwardly designed standing desk models that sit on the existing desk and require manual lifting up and down. These are not a good solution to this issue. Potential problems include the potential strain on the body in operating them, awkward layout of the desk when they are in place, reduced room for keyboard, limited height options, and stability issues.

So should we be sitting or standing? As with most things, the best is to have a mix of the two, ideally, moving every 30 minutes or less. Building in movement and postural variation is the key and well-designed workplaces make this easy to do. For some roles, too much standing is the key hazard and it is important to allow sitting at times. For office environments and driving roles, it is typically the opposite. Occupational health physiotherapists are well placed to advise on how to bring healthy movement into these workplaces.


Should sit-to-stand workstations be chosen to be part of the solution, using models where the whole desk is safely moved at the push of a button has big advantages. Ideally, the range of these is from as low as 60 centimetres and as high as 130 centimetres. This range suits over 95 per cent of the population.

To find out more

A good start is the extensive research from Dr David Dunstan in Australia, and Professor Alan Hedge in the USA as summarised in the links below:

https://www.researchgate.net/profile/Alan_Hedge

<https://www.baker.edu.au/research/staff/david-dunstan>.



Life as a physio onsite in heavy industry

Aerial shot of QAL, one of the largest alumina refineries in Australia.

As a physiotherapist, going to work each day in an alumina refinery is somewhat different to working in a hospital or clinical practice. I start work before 6.30 am, and wear high-visibility clothing with steel-capped boots. When I'm out onsite, it is mandatory to be fully kitted up in additional personal protective equipment, such as monogoggles, hard hat, gloves and hearing protection. And I love it!

The type of work I'm involved with is somewhat different too. I am employed by Queensland Alumina Limited (QAL) in Gladstone, Central Queensland, and work in the onsite occupational health centre in a multidisciplinary team that includes an occupational physician and two occupational health nurses.

I am occupied with some hands-on injury management, but mostly I'm involved with injury prevention, return-to-work programs, health surveillance, functional capacity evaluations and ergonomic reviews. I liaise daily with other service teams onsite, including occupational hygiene, safety and human resources, as well as having continual contact with team members and leaders from all over the site. I use a participatory approach in ergonomic reviews, and any recommended changes require consultation with all key stakeholders.

To give you an idea of the size of the place, QAL is one of the largest alumina refineries in Australia, employing some 860 people, as well

as having up to 300 contractors onsite. The bulk of the employees are shift-workers. We produce approximately 3.8 million tonnes per year of high-quality smelter-grade alumina (four tonnes of bauxite makes two tonnes of alumina, which makes one tonne of aluminium).

The plant site is 80 hectares, and there are multiple levels/stories to access across site (eg, platforms, ship unloaders, conveyors and the top of tanks). Located on the Gladstone Harbour, we have our own wharf, bulk handling and storage facilities. Ships of bauxite travel from Weipa or Gove, and the bauxite is processed into alumina in a four-step process called the Bayer process. This involves grinding and dissolving the small red pebbles of bauxite, before a series of steps, including mixing with caustic soda and applying heat and steam, turns it into alumina, a fine, white powder. Movement of the product (millions of litres) through the plant from tank to tank is via pipework—a lot of pipework. And all these pipes have valves, flanges, nuts and bolts that need to be moved or changed on a regular basis. Operational and maintenance teams work around the clock on a rotating roster; there is a lot of manual handling involved, as well as many other health considerations.

The finished product (alumina) is then either moved to an adjacent aluminium smelter at Boyne Island via conveyor, or shipped to other customers in Australia and around the world.



Ready to go: Di Staats.

Safety is a value held by all our workers and our aim is to be an injury-free workplace every day. To achieve this, we follow the Rio Tinto Health and Safety Standards, given we are 80 per cent owned by Rio Tinto (and 20% by Rusal, a Russian company). We measure, monitor and understand our health and safety exposures in the workplace and are continually working towards improving work practices, tools, systems and processes to eliminate or minimise any hazards. We encourage early reporting of concerns or injuries, and run annual health reviews of employees to detect any anomalies, as prevention is better than cure. The other area that is very different for me as a physiotherapist is in the 'number of hats' I wear. As a company employee, I am an advocate for the business; as a health professional, I am an advocate for my patients. So I can influence and guide both the work tasks and the individuals. Finding the balance with these advocacies comes with experience in industry, and is very rewarding.

Di Staats, APAM

Physiotherapist and Ergonomics Advisor, QAL

LET'S CELEBRATE 2018



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Time: 6.00 pm - 10.00 pm

Venue: Eat Street Northshore, Hamilton

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