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Generation pain

Gen Y face up to their looming health issues as they enter the workplace

Joined up thinking
Fleet management and telematics

The ergonomics connection
Employee and organisation wellness

PLUS | DEVELOPING A WELLNESS TEAM ■ MENTAL HEALTH FIRST AID ■ TAKE A BREAK SOFTWARE

Welcome

We're back with another edition of our ever popular magazine for risk management professionals, Cardinus Connect, and boy have we crammed a lot of incredible articles and industry-leading thought into it!

In this issue we look at the significant risk generation Y is imposing upon itself with its dedicated desire to stay connected wherever they are. But not only is it their problem, it's our too problem too. As business leaders, as management, as those people who'll be bringing generation Y into the workforce, we need to know how to cope and how to manage that risk from day one. Their perspective on work and how they work is going to be different to us, whether it's using multiple devices, sit/stand desks or flexible work patterns, and we need to make sure that this 'ergonomic tsunami' is well managed and the risk mitigated as much as possible.

On page 6 we hear about how telematics is being used to revolutionise risk management in fleet. Despite this, there is still some way to go. Although we know more about our drivers and their performance, we still haven't quite grasped how to use these devices properly. Jeremy Guscott tells us that instead of just gathering data, we should be using it to make the drivers under our management drive better. Not only will this save them from potential serious injury, but also save the organisation money.

Experienced ergonomics flag-waver and 2002 Olympic torch carrier (you think you know some people!) Donna Defalco teaches us how to ROAR. Now that's not to howl in excitement, distress or anger, it's to measure a Return On all Allocated Resources , instead of the traditional ROI measurement. This method goes hand-in-hand with high touch engagement and a whole life philosophy to the ergonomic welfare of your staff.

John Davidge tells us about how to cultivate a safety culture within your fleet while linking it to his Dad's ideas about cultivation. Creating a culture is more than just writing policy it's about engaging your workforce and opening up the conversation around safety. The benefits of a safety culture, particularly in fleet are not always well-known or understood. John Davidge not only tells us how to create one, but also what it means to your organisation to have a safety culture in place.

On page 22 Ann Hall, Efficiency Software's Wellness and Ergonomics consultant in the US, looks at different types of fatigue prevention software, as well as discussing why such software is necessary for today's workforce. From my own perspective, I interact with my work in a number of different ways throughout the day, and having something remind me when to take a rest can be hugely beneficial in keeping alert when I need to be.

We hope that you enjoy what we've put together for you and find the information useful and informative, not just for you, but for your friends, family and importantly the people that you work alongside. Only Cardinus bring together such a treasure trove of expertise, so make you sure you stay in touch!

Jon Abbott

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A generation in pain

Millennials are entering the workforce in pain and in need of help, says Bill Pace

Generation Y have been tethered to technology for most of their lives. They rely on technology outside of work to be sociable. We know that they are entering the workforce with pre-existing pain from poor posture and extended daily use of technology; many have pre-existing musculoskeletal disorders.

For the most part, these conditions are left untreated and not diagnosed until they have started their careers. Quite simply, they are experiencing pain, numbness and discomfort in the neck, upper back, shoulders and wrists. They know they are not alone. "My hands turn numb and fall asleep while I work on my laptop and use social media, but I keep going because I know my friends are dealing with this too," says Kim, aged 15, from New York. They demand collaborative work environments and these are created to meet their social and technology needs. But they are far from risk-free and poorly meet their health needs. Providing ergonomic tools and seating is not enough to prevent injury and loss of productivity at work, because the problem is too deeply rooted in their past behaviour.

So, what else can we offer them to reduce their pain and keep them gainfully employed? To answer that question properly, we will need to better understand their connection to technology and poor static postures.

What we know

We have an emerging workforce that is entering the job market with pre-existing medical conditions. Never before has there been a labour group, ready to work, but suffering from MSDs, RSI and other computer-use related ailments. They enter the workforce at high risk of injury and are in need of medical attention to provide relief.

We have interns and new employees, fresh out of college, who come to us in full time employment. These new employees are now requesting their 91st day off of work to meet with a medical professional, perhaps a doctor, physical therapist, chiropractor or medical practitioner, in order to seek relief from pain and possible soft tissue injury developed while in school and at home. They are unaware as to why they developed the pain but they are now seeking relief. They can set an appointment due to the fact that they now, on the 91st day of employment, have health insurance.

"We have hired engineers straight out of college and they are requesting a half-day off on their 91st day to see a doctor for what we see as textbook early neck or other musculoskeletal disorders," claimed an oil and gas industry executive in March 2016.

A vice-president of healthcare and benefits for a large regional brokerage firm says, "The MSD claim is number one in both frequency and cost for our self-insured clients."

New research by social-influence marketing platform Crowdtap indicates that individuals aged between 18 and 36 spend an average of 17.8 hours a day with different types of media. These hours represent a total across multiple media sources, some of which are consumed simultaneously.

For example, a twenty-something may report spending two hours a day on Facebook, an hour a day answering texts and three hours a day watching television, which would count as six hours total. But may only take up three hours of her day if she does some of those things at the same time. What if they are now working eight hours a day on a laptop or desktop? We can accurately report that they would then be spending more than nine hours per day using technology.

"Millennials are always on," says Anna Kassoway, Crowdtap's chief marketing officer. "Some of it is passive consumption. A lot is media hours that are overlapping." Generation Y is not just physically tethered to technology, they are emotionally tethered as well. Taking away their technology abruptly or reducing the hours spent on technology produces stress.

Who was on watch?

Teachers, parents, family members… all of us. What did we fail to do? We failed to protect our youth. Why? We simply did not know.

Their eyes are being negatively impacted too. Carrie Miranda, a doctor of optometry, explains, "The reason eyesight problems are becoming more prevalent for the younger folks is because of the demand for clear near vision. Screen sizes can be between five inches and 32", spread across cell phones, tablets, computers and TVs. It takes a lot

of visual and muscular energy to move between them. Google ciliary body of the eye to see what I mean.

"To help prevent this from happening eye care professionals like to recommend 20/20/20. Every 20 minutes of close work look 20 feet away, or further for 20 seconds. This will be very helpful to reduce eye strain and prevent distance blur at the end of the day."

What can we do about it?

If left alone their problems continue and they eventually become injured. They will choose not to work. We know that their technology use impacts their eyesight and their posture; it creates MSD and affects their overall health. With past employees, we gave them an ergonomic assessment and provided them with recommendations and/ or ergonomic tools.

However, with generation Y traditional furniture is not the norm. Mobile, collaborative, sit-stand and lounge-style seating is more prevalent. They prefer to avoid the systems furniture. Instead of walls they use headphones, peripheral devices and monitors to block out their neighbours, only to remove them for quick and short interactions.

Work hours reflect when work needs to be done and not necessarily during a 9am to 5pm day. How do you keep an eye on those that do not come to work every day and those that may require flex hours and are at work when support is not?

What has been provided in the past is not sufficient. They need immediate education, targeted medical attention and support devices that help reverse the long-term muscle memory. Generation Y and millennials like to research; they respond well to e-learning but not as well to surveys, unless they believe there will receive a benefit or incentive.

Is it just the millennials that we should be concerned for? We know that students are tethered to their electronic devices for 7.5 hours or more every day in extremely awkward postures. The UK's Health and Safety Laboratory has measured that 50 per cent of 11-year-old students are self-reporting back discomfort. The problem continues to the next generation and may be worse if nothing is done to make a change.

Members of generation Z were born after 1995. Gen Zers use five devices: a smartphone, TV, laptop, desktop and iPad-style tablets. Gen Z are adept researchers. They know how to self-educate and find information. Thirty-three per cent watch lessons online, 20 per cent read textbooks on tablets, and 32 per cent work with classmates online.

The average gen Zer has the attention span of about eight seconds. They have grown up at a time when they're being served media and messaging from all angles, and have adapted to quickly sorting through and assessing enormous amounts of information. In fact, recent studies have found that three quarters of young people believe that they cannot live without the internet and nearly half of young people claim that they feel happiest when they are online.

So the problem continues, only the tsunami is growing. According to a white paper published by Cardinus Risk Management in October 2015, seventy-nine percent of generation Z consumers display symptoms of emotional distress when kept away from their personal electronic devices. We need smarter solutions, faster.

■ **Bill Pace is president of Cardinus LLC. Bill has worked in the US HR software market since 1995 and has specialised in ergonomics solutions for business for the last 12 years. He has worked with several Fortune 500 and 100 companies, including Honeywell, Travelers Insurance and USAA.**

Joined up thinking: fleet management and telematics

Bridging the gap between fleet management and telematics will bring plentiful rewards, says Jeremy Guscott

For businesses running a fleet of vehicles, no matter the size, the need to manage the risks is essential. With the advent of corporate manslaughter legislation and the duty of care regulations confirming that a vehicle is a place of work, it is vital that fleet operators understand the exposures and pragmatically manage the risks. And, it's not just the safety risks that need managing; fuel costs, wear and tear, theft and logistics are all important to the overall efficiency of the fleet.

Telematics has been described by some providers as the "silver bullet" and there is no doubt it is a powerful solution for accessing information that can assist the fleet manager. In the main it has been used to track the vehicle and monitor fuel consumption but as a duty of care solution it can offer so much more. The benefits of this solution can be felt across the company. For large operations a significant saving can be made in fuel consumption, but for many, reducing the cost of excess, premiums and lost work through injury is more than enough to consider telematics as an option.

Of course, installing telematics is only the first step. It only becomes useful if the information is actually monitored and used to understand real-time driver behaviour. To be used effectively this information must then be used to respond to those behaviours and ensure that correct interventions are put in place.

At Cardinus, we have worked with a number of telematics providers to feed driver behaviour data directly into our fleet risk management solution allowing us to automate and manage interventions. Once risks are identified from the data, interventions through e-learning, driver training or other means can be realised. The data also allows for the active recognition and promotion of good driver behaviour.

The commercial insurance market is increasingly starting to look at telematics as a way to differentiate themselves in a competitive market. Some are now providing incentives with up-front discounts and bursaries or even retro-active premium rebates, but they come with a caveat: insurers will want to know that policyholders are actually responding to the

data collected For managers of fleet vehicles telematics represents a significant opportunity to reduce costs, identify and mitigate risks and increase efficiencies. Of course, knowing you have a bad driver and not being able to do anything about it can be worse than not knowing in the first place.

This is where Cardinus can help. With data analysis tools and driver training programmes at our disposal, we monitor your data and provide you with the next steps. We automate this process making it easier for you to show insurers that you're doing everything you need to do to meet their requirements, while at the same time enjoying the benefits of reduced risk, fuel savings and a happier workforce.

An example from the field

As an example, we recently worked with a large van fleet that installed telematics to track vehicles but who didn't have the resources to delve into the data to understand how well their drivers were performing. We agreed to handle the data feed and aggregate the individual scores for idling, speed and braking and produce an overall driver score. From this score, fed to us weekly, we agreed a series of interventions. So, for example, 3 'red' scores within a month automatically invited the driver to our Safe Driving Plus e-learning course, whereas 5 'reds' in a 2 month window led to an in-vehicle training course. The company in question has now imposed a rule within the system that flags any driver with 6 'reds' in a row to be interviewed by the fleet manager with a view to potential dismissal. This has now been written into their driver contracts. While this may seem onerous to employees and organisations, it's actually terrific news

for both as it helps to build up driving ability through intervention, gently nudging employees to evaluate their own driving and improving performance all round. Of course, employees can take this training beyond their work and into a wider context, with the benefits of better driving creeping into society as a whole, which will ultimately save lives.

Over the course of the programme, the company saw a 27% reduction in incidents and resultant insurance claims. This has led to significant premium reductions from the programme, which was actively supported by both the insurer and broker. In addition, they have seen knock-on savings in terms of excesses, lost management time and 12% fuel savings.

Cardinus isn't a telematics provider, although we know most of them, indeed we are agnostic on the solution that you install. What we are adamant about is that you don't ignore the information it provides and the benefits that this technology can deliver in terms of saving you money, ensuring you meet your regulatory compliance and more importantly saving lives.

With our long history of supporting organisations with risk management solutions it comes as no surprise that we whole heartedly approve of this technology. The reasons are clear; bridging the gap between telematics data and proper management of those risks shows significant and plentiful rewards.

Jeremy Guscott is a former rugby union outside centre who played for the British and Irish Lions, England and his home team of Bath throughout his career. He became involved in telematics when he retired from the game. Jeremy is now a well-respected independent consultant on fleet risk and telematics and regularly speaks and writes on the subject.

For managers of fleet vehicles telematics represents a significant opportunity to reduce costs, identify and mitigate risks and increase efficiencies

Healthy Working: introducing a new way to work

Healthy Working is our latest innovation in the fight against poor posture. Jon Abbott gives you the low down on our new e-learning software.

In a unique partnership with the Health and Safety Executive's Health and Safety Laboratory, Cardinus have created a truly ground-breaking e-learning program packed with features to meet the needs of the 21st century worker.

Since the last DSE regulations were updated in 2002 we have seen massive technological and environmental changes within the workplace. This is the backdrop to how Healthy Working came to be. With other DSE solutions no longer covering the actual needs of employees and employers it became apparent that something had to be done about it. Healthy Working was born to bridge this growing gap.

This partnership has allowed Cardinus' in-house experts to work with HSL's Principal Ergonomist and industry-leading thinker Matthew Birtles, whose approach has brought in cutting-edge ideas about the way we sit, stand, move and work at offices, homes and other places of employment. Together we've come up with something that offers real technological inventiveness with the most current thinking on posture and work practices.

Healthy Working offers many innovative features that revolutionise an organisation's DSE provision by setting it firmly in the modern age. These features go beyond other DSE software by introducing many contemporary additions such as mobile and tablet devices, flexible working, maternity and pregnant employees, employee behaviour modelling and much more.

More than just a way to meet regulations

What will impact organisations the most is how Healthy Working allows managers to evidence a very clear return-on-investment by matching potential risks with their associated costs. This allows organisations to see in a transparent way the benefits of going beyond the regulations and to assist their employees in avoiding commonplace injuries and disorders related with the types of work we carry out each day. This can

dramatically cut costs in healthcare provisions, administration and lost time due to absences.

What's more, Healthy Working also aims at boosting productivity by relieving the stresses and strains on the body which can limit people's natural energy levels. It does this through guiding employees through a risk assessment programme so that they can start teaching themselves how to mitigate everyday risks in the workplace.

How it works for your employees

Healthy Working was imagined as a tool that does not just simply go through the motions, ending with the employee gleaning just enough knowledge to adjust their seating position. Healthy Working uses elements of gamification and multi-variant modelling to build a complete picture of an employee's working environment and teach and challenge them on various aspects of ergonomic best practice.

This model not only engages an employee more than the average DSE software – in fact 98% of users found Healthy Working an effective solution – it also helps them retain that knowledge for greater health impact over a longer term.

This step-by-step, variant approach is also really simple to follow too. Users are given appropriate course content to their needs and the intuitive design makes completing it easy. With automated emails nudging employees with emails when they need to complete courses, getting full compliance becomes really easy too.

customers to tweak or change any element of any page of any of the Cardinus courses they use with us. This starts with Healthy Working but as the rest of the e-learning library comes online later this year, those too will be editable from within this easy to use authoring tool. Furthermore customers will also be able to choose to write their own e-learning courses on any subject they want to address with their employees and roll out using PACE.

This powerful software has been released to benefit organisations across the world. We're running free demos for a limited period. To register your interest for a demo contact us at info@cardinus.com or head here: www.cardinus.com/healthy-working-demo/

How it works for those responsible

Behind the Healthy Working course and risk assessment that your employees complete sits a completely rebuilt PACE e-learning and risk management system. More than your everyday Learning Management System, PACE has been developed to manage mass roll outs of courses and report on training completion but more importantly to manage the risk assessment concerns that come back from hundreds or even thousands of DSE risk assessments being completed at the same time.

With 20 years experience developing Workstation Safety Plus, the world's most widely used DSE training and risk assessment software, coupled with the expert advice from Matt Birtles at the Health & Safety Laboratory, every element of the DSE risk management functionality and the MI reporting have been enhanced to make effective risk management and compliance with legislation easier.

Additionally Cardinus has developed an e-learning authoring tool enabling our

■ Jon Abbott is a director at Cardinus Risk Management Limited, with more than 15 years' experience of ergonomics, safety and occupational health. Over that period he has worked with a wide variety of organisations in the private and public sector providing a full range of risk management solutions including software, e-learning and consultancy. Jon feels passionately about the health and well-being of young people and he believes more must be done to protect the workforce of the future. This drove him to set up Healthy Working MOVE in 2013.

Blaze the trail to fire safety

Make sure your fire safety provisions are appropriate and up-to-date with this expert advice from Jamie Truscott

THE number of people dying each year as a result of fires is declining. That's a nice upbeat statistic to start with. It must be assumed that since the introduction of the fire safety order in 2006 that people and organisations that are responsible for the management of fire safety have become used to the idea that the best approach is to be pro-active. But despite all of the statistics it is apparent from our findings on the ground that there is still much that can be done to improve the overall fire safety of properties.

If you are the Responsible Person (or Duty Holder in Scotland) you hold the responsibility for your company's fire risk assessment by law. A robust fire risk assessment, along with good fire safety management, will help to prevent fires and when they do occur ensure that everyone can escape safely.

Cardinus Risk Management is one the leading fire safety inspectors in the UK. The company is BAFE SP205 Life Safety Fire Risk Assessment scheme to the NSI Gold standard and has a wealth of experience in fire risk assessment and is pleased to share some of its findings and expertise to help you make sure the property you manage is safer and more compliant. So let's take a quick look at some of the most common problems we encounter and give you some useful advice to help you deal with them.

Test and maintenance of fire safety provisions

52% | **52 per cent of assessments found issues with tests and maintenance at a property.**

All fire safety systems and equipment need to be maintained in effective working order. It is therefore necessary to have in place arrangements for routine inspection, testing, servicing and maintenance.

The inspection and testing of some items can often be carried out by non-specialist contractors, such as cleaners or property managers, provided they are suitably competent. A competent person can be defined as: "Someone with enough training and experience or knowledge and other qualities to be able to implement these measures properly." It is important that there is access to a suitable contractor to follow-up and address deficiencies identified through the testing. In particular it is important to attend a site at short notice to carry out emergency repairs resulting from the tests, for example in the event that a smoke vent will not close or a fire alarm system will not reset.

The most common issues noted with testing and maintenance are:
- Emergency lighting – no monthly test.
- Fire alarms – tested from panel only.
- Smoke ventilation – no monthly test.
- Fire doors not adequately inspected.
- Poor or no record-keeping.

It is imperative that any fire safety equipment is maintained in good working order. This ensures that the equipment does not fail when it is needed most.

Cardinus is often confronted with a lack of proof regarding the test and maintenance of fire safety systems and equipment within a premises. The problems arising from this are twofold; the first being that the company is duty bound to make a significant finding recommendation, which can be time-consuming for the responsible person having to clear the issue once it has been checked. Secondly if, when a case goes to court, there is no recorded proof of a competent test and maintenance regime a judge will consider that it was not done at all.

Fire alarm and detection systems

32% | **32 per cent of all assessments found issues with fire alarm systems at a property.**

A sophisticated fire alarm system or indeed a simple standalone smoke detector is designed with one purpose; to provide early warning of a fire situation to people who may be in

danger. A fire alarm system should not be confused with a fire detection system. The fire alarm system is the one that provides a warning while the fire detection system will not provide an audible warning but will operate other fire protection systems and equipment.

It is always a cause for concern when specified fire alarm systems in residential purpose-built blocks of flats are identified incorrectly. There appears to be, in general, a complete misunderstanding regarding fire alarm types and their appropriate use in certain types of properties.

The most common issues noted with fire alarm systems are:
- Incorrect specification.
- Inappropriate types of detector heads.
- Insufficient test and maintenance.

Fire alarm systems are fundamental in giving an early warning to allow people to escape before a fire becomes fully developed.

During the course of its work, Cardinus often recommends the removal of fire alarm systems from the common parts of residential purpose-built blocks of flats. This can sometimes generate concern from residents and be a costly exercise.

The main issue here is that there has never been a requirement for fire alarm systems in these types of properties and all guidance suggests removal to prevent confusion. Although purpose-built blocks of flats are not normally provided with communal fire alarm systems, there are exceptions. The most common example is a sheltered housing scheme, but this is a special case, and, even then, a 'stay put' policy is normal.

In some blocks there may be fire detection systems installed which will operate smoke ventilation systems, fire door closers and other fire protection equipment. These are not designed to give warning by way of bells and sirens.

Within individual flats, early warning of a fire is an essential component of ensuring that residents can evacuate safely. This is usually achieved by the installation of smoke and heat detectors within the flat.

Fire doors

75% **75 per cent of all assessments found issues with fire doors at a property.**

Fire doors are doors that have been specifically designed and manufactured to prevent the spread of fire for a specified duration of time. They are required in almost every building. Their main purpose is to protect escape routes, such as corridors and staircases, thereby allowing people time to escape safely. In most situations, a 30 minute fire door (FD30S) is acceptable unless a higher fire resistance is required which can be anywhere from one hour to three hours or more.

It is almost unheard of to visit a property and not find some issues around fire doors. Issues can be anywhere from residents replacing existing fire doors on their individual flat entrances to a simple lack of inspection and maintenance regimes.

The most common issues noted with fire doors are:
- Not closing effectively.
- Poorly fitting into frames.
- No intumescent strips or cold smoke seals.
- Plastic letterboxes.
- Cat flaps or ventilation grilles cut into doors.
- Residents replacing doors.
- No periodic inspection.

A fire door is only effective when it forms part of the fire-resisting construction of an existing wall or partition. As soon as the integrity of a fire door is lost it becomes of little or no use as a restriction to the spread of smoke and flame. This will directly affect the safety of people in the building. These problems can usually be simply rectified by a planned protective maintenance programme which identifies and repairs defects.

Other types of fire stopping, Arson, storage and escape route concerns also featured heavily in our data which was taken from a random sample of 100 surveys from the thousands we carried out in 2015. The continual progress being made across the UK in both the residential and commercial sector is both important and welcome. The major issues that have dogged fire safety standards in the past are now under better control. However, for continual improvement we need to make sure we stay diligent in terms of carrying out the appropriate regular safety inspections and look at the information these risk assessments uncover at both a local and national level.

■ Jamie Truscott is the managing director of Cardinus Property and heads up all Cardinus' property and fire risk solutions. Previously, Jamie was the owner of Property Risk Management until its merger with Cardinus. He has over 30 years of experience of London market, property and insurance experience.

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Look beyond the regs

With regulations falling behind the changes in technology and neglecting the needs of children and students, the time has come for industry and education to take the initiative

THE Display Screen Equipment (DSE) regulations lay out a pathway that is designed to minimise health risks associated with using computers. If we follow DSE guidance we should be assured, that our organisations and our people are protected and able to work more healthily and efficiently.

But much of this guidance is no longer relevant for modern workplaces. We know people are working in areas with soft seating, we know technologies do not allow for the stereotypical "safe" ergonomics postures and therefore standard training under the DSE regulations cannot work. It falls to the general Health and Safety at Work act to ensure that the training is suitable to the risk factors that affect that individual.

The Health and Safety (Miscellaneous Amendments) Regulations 2002 addressed early changes in the nature of work as well as recognising the increased capability and reduced dimensions of portable computing. Since 2002, key changes impacting workplace ergonomics and well-being include:

- The growth of open-plan offices and hot desking.
- The move to smart working, including mobile, home and flexible working.
- Invention and market penetration of tablets.
- Continuing evolution of smartphones to provide many tablet or computer functions.
- Widespread availability of 4G and fast wi-fi.
- Bring Your Own Devices (BYOD) policies enabling employees to choose what operating system and appliances they work on.
- Exponential advance of apps handling tasks that were previously only possible on computers.
- A plethora of different work environments for the 4Cs (collaboration, communication, contemplation and concentration), resulting in an even larger variety of working postures.
- Widespread publicity about the potential dangers of prolonged sitting and the resultant growing demand for sit-stand desks.
- Rapid dissemination of ideas and increasing interest in health and well-being as a key consideration in workplace productivity.

In 2012, a third of workers in the USA and Europe spent a significant proportion of their working week both located outside the office and working outside 'normal' working hours. Fifty-eight per cent of UK workers think that the traditional fixed workstation office will have disappeared altogether by 2020.

*"the instant access and ease of use implicit in tablet design make them **tempting tools for many activities**"*

Time to look beyond the regulations

A recent survey of 132 tablet users showed that only 21% were provided with tablets by their company but 82% carry out at least some work-related tablet-based activities. Furthermore, almost a third (31%) had experienced musculoskeletal problems that they attributed to tablet use.

Employees will migrate to the easiest method of achieving a task and the instant access and ease of use implicit in tablet design make them tempting tools for many activities, especially email and scheduling. However, the design of these devices and the ways of interacting with them are not suited to prolonged use. The survey data clearly shows what we already suspected, namely that employers must review their health and safety policies and guidance on the assumption that

Mental and physical
health and well-being are
crucial to employee productivity

handheld devices are being used. They can no longer ignore the use of tablets just because they do not issue them as company property. Many organisations have recognised and embraced this reality by introducing BYOD policies but, in doing so, it is most common to concentrate on the security, software compatibility and data integration issues rather than ergonomics, posture and well-being. We must assume, therefore, that the use of handheld devices is more widespread within business than corporate policies indicate, but how do we manage this situation to optimise employee posture and productivity?

When the original DSE Regulations appeared in 1992, it was possible to gain a good insight into a user's posture without them even being present. The screen height and chair set-up or the relative positions of the monitor and telephone provided a setting and context

for the user's work environment even when nobody was at the desk. It was almost possible to complete a workstation assessment without the user even being there, as long as you knew their height, a little about what they did and whether they were left- or right-handed.

With the widespread introduction of laptops, this was no longer the case but docking stations, separate mice and other items left on the desk provide tell-tale indications of the overall setup. These clues vanish with smartphones and tablets. Apart from the ubiquitous charger cable, there is no workplace indication of how a device is used – or even which device is being used. Early posture guides dating from the late-1990s covered all the key indicators of good and bad posture when using a desktop or laptop computer. Over the years, we have replaced CRT monitors with flat screens, extended the laptop guidance, introduced mini keyboards

(with standard key spacing but without the numeric keypad) and, most recently, introduced information for sit-stand desk use. In all that time, the guiding principles are unchanged and the content has simply evolved rather than undergoing any dramatic change.

Tablets and smartphones present very different challenges for user guidance and training. There is no obvious starting point since you cannot presume the existence of a desk or an office chair. More than that, the user may not even be stationary, adding a very different safety issue. More recent guides address the physical demands of different postures and activities. Rather than creating a traditional 'start at the top and read down' document like the guidance for laptop and desktop computer users, it is more appropriate to provide tips and suggestions relating to different parts of the body. The reader

identifies which parts of the advice pertain directly to his/her own experience.

Since tablets and smartphones are self-contained entities, the 'desk, chair and immediate work environment' for an individual may change several times each day. If employers are to 'perform a suitable and sufficient analysis of those workstations' (Regulation 2), should they consider the kitchen, train, coffee shop, reception, hot-desk, meeting room, breakout area, canteen, touchdown zone, bus shelter, client office, tube, restaurant, bar, lounge and bedroom that so many of us use in our daily lives? Of course, these are not all used every day and many of these locations will involve only a couple of minutes of texting or email but these periods are cumulative and many of the postures will be poor.

It is clearly not possible to apply the old risk assessment procedures to every situation but the reality is that handheld technology is being used regularly and frequently in many of these environments. Office design guidelines need to be re-invigorated with threads of well-being to ensure not just higher retention and productivity, but high levels of wellness whatever the workplace setting. A number of influencing factors need to be taken into account for both employee and employer alongside the DSE regulations to achieve more effective smartworking spaces for the technology-equipped nomadic worker.

Our studies expose the need for further research into both the long-term physical and psychological effects of mobile technology, changing work practices and the need for innovative ways of affecting change for both individuals and companies interested in improving health and productivity at work.

The DSE regulations are presenting a message that is outdated and no longer reflective of the workplace. In the absence of anything else they still have a place, but we need to be creative and remember the spirit of the regulations: to prevent injury. If we can subscribe to this message and deliver a safety programme designed for young people using social media and other mechanisms we may have a chance. We need to embrace awkward postures and give people an informed choice. Telling people how to sit is different to explaining the impact on the body if they choose different postures. We have all heard the mantra "the next posture is the best posture" but does our training reflect this or does it follow the DSE regulations?

Take a walk around any workplace and see how people really sit and observe how often they change posture. Unconsciously, they will fidget when their bodies tell them enough-is-enough. DSE training might have been completed but are the moral and financial arguments lost if employees are not comfortable? Productivity increases of up to 17 per cent can be achieved by helping people to be comfortable. Mental and physical health and well-being are crucial to employee productivity and it is logical that a positive and dynamic approach to creating an empowered, engaged and healthy workforce will be more effective than the rather more negative approach of risk assessment and management. Whilst risks must be identified and eliminated or mitigated, the more holistic process is to ensure that individuals understand them, understand how to manage them and, more importantly, understand how to manage themselves.

Without doubt the world of work is changing. Our employees are changing too. Now is the time to consider the workplace modifications that are needed to support a generation of young people who will be joining you with injuries and behaviours that have developed through their school years. This is a big problem, it will be costly to GB PLC and there is little foresight to address it.

Jim Taylour trained as a furniture designer and ergonomist and has worked in the office furniture industry for 30 years, both in a specialised occupational health capacity and in mainstream workplace design and research. He has published a number of papers on the relationship between physical and psychological workplace wellbeing and appropriately deployed workspaces and technology. Jim also chairs the Institute of Ergonomics and Human Factors special interest group on children's ergonomics and helps to represent the industry in harmonisation of furniture standards across Europe through the British Standards Institute.

Guy Osmond has been working in workplace ergonomics for more than 20 years. His specialities include ergonomics, reducing workplace absenteeism and presenteeism, improving productivity, addressing musculoskeletal problems and disabilities in the workplace. He blogs and speaks regularly on topics including flexible working and the changing office environment.

Driving your culture

Cultivating an environment of safety is more than setting it out in a policy, it's about being part of the conversation of the workplace, says John Davidge

HAD I talked to my father years ago about 'culture', as a keen grower of tomatoes he would have automatically assumed that I was at last starting to develop an interest in his hobby that was so dear to him. 'Culture' would have stimulated thoughts about how he focused so closely on creating the perfect environment for growing the best plants and the best yield of tomatoes from his greenhouse. He tried to control as far as possible all the necessary aspects for optimum results – good soil, further enhanced by the addition of quality nutrients, a careful understanding of the bugs and diseases that could affect tomato crops so that he could prevent or minimise those negative effects and optimise humidity and watering at the right time. My interest was limited to enjoying the results of his enthusiasm – and not surprisingly what we now buy at the supermarket bears very little resemblance taste-wise, to his output. It certainly underlines the old adage that 'all that glitters is not gold'.

There's a much wider meaning to 'culture' though, which often varies according to the subject area in consideration. For some, it describes an interest in music and the arts, or the degree of nightlife or facilities available in

*"every step forward is one more step that **minimises the risks of incidents and prosecutions."***

a certain area. Equally scientists or biologists might see this as a description of what they might grow in a petri dish. One dictionary definition of 'culture' is "a way of life of a group of people - the behaviours, beliefs, values, and symbols that they accept, generally without thinking about them, and that are passed along by communication and imitation from one generation to the next".

In the field of safety, 'culture' is a term that is often not appreciated or understood by too many people and by some companies, but that latter definition is very appropriate. Far-sighted organisations have wisely invested the time to develop that 'way of life' whereby safety is considered by all staff as an important and inbred standard; clearly they have recognised that while that 'way of life' takes time, money and effort to develop, in the longer term it pays off. It typically involves careful examination (and re-examination – like the greenhouse) of the 'status quo' at both a macro and a micro level to identify 'good' and 'not-so-good'. Regrettably some of the most ardent converts to this culture are those who have experienced a catastrophe and are keen not to repeat those experiences. Much of the safety standards we see in the oil and petrochemical industries originated that way.

Around 150 people annually die in UK workplaces, and this figure has fallen dramatically over the past 40 or so years as the Health & Safety at Work Act has changed the 'culture' of many of our workplaces. It is not that long ago that hard hats and high-conspicuity clothing were unknown; these days they are the norm in most places (though there are still some sectors of industry and some levels of the workforce where it remains 'work-in-progress').

Currently four times as many deaths (around 600 annually) occur on UK roads where somebody involved was driving on business

at the time. Here too the culture is changing – but lagging behind in too many organisations, or has some way to go to reach the 'optimum results'. A senior management team may have set out to develop a sound safety culture where every aspect of driving risk is carefully considered and controlled to achieve the 'optimum'. However at lower levels in the organisation, some drivers, supervisors and low to middle level managers produce a virus-like effect with attitudes like "don't worry about that, just get the damned parcels delivered" or " just get the pipe in the ground", because the safety focus is tarnished by performance targets that deal only with the in-bound financial results.

Just like the greenhouse, in such situations the negative effects of that virus are not seen until it has decimated the tomato crop or wiped out all of the good financial achievements with a high collision frequency, hidden costs and repair costs that keep mounting until the fateful day when insurers decline to renew insurance, or a major collision results in huge costs and unquantifiable but disastrous negative publicity after a Crown Court case has been reported in the papers, impacting adversely on future tenders for some time. My father clearly understood the implications of 'prevention rather than cure' and careful control of the 'culture' within his greenhouse to achieve the optimum climate, giving optimum results.

In this respect, 'culture' could be described as 'the sum of all the conversations that occur within your organisation'. Discussions around the boardroom table may all be positive and well targeted – but to what degree are they matched by the downward conversations to lower grades? Is the message diluted or distorted as in the old 'chinese whispers' party game? What are the discussions on the same subjects in the drivers' canteen, or at quarterly sales meetings (in some cases,

do those subjects even get mentioned in the first place?). A sound and carefully considered health a safety policy is a starting point to define clear expectations for all staff to follow, but won't work effectively unless fully understood and implemented by all.

What is the safety climate within your organisation? Do you know what the internal 'conversations' are? Is everybody speaking equivocally - with 'one voice'?

Measuring your safety climate is one way in which you can start identifying and assessing the conversations in the workplace and there are many brilliant tools out there for companies to use. These tools aim at encouraging staff at all levels of the organisation to be involved and contribute, feeding back information in such a way that there is a clear output about your 'safety climate'. As with other areas of business, if you don't know where you stand, how will you know which direction to take in the future?

And as with all safety related matters, every step forward is one more step that minimises the risks of incidents and prosecutions.

■ **John Davidge is Head of Fleet Technical at Cardinus Risk Management.**
John served for 15 years policing the roads as an officer, where he saw the results of driving errors first-hand. He holds the National General Certificate from the National Examining Board in Occupational Safety and Health.

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What about health?

With huge leaps in the reduction of accidents at work due to safety regulations, Mark Preston asks the question, what about health?

It still surprises me that health and safety within the UK continues in some quarters to be seen as 'over the top' and safety officers as interfering 'busy- bodies'. Recently my daughter told me that she had been talking about me at school and when I asked her about it, she told me that her teacher had said what a boring job a safety inspector must be!

It is strange that while our safety and that of our children and loved ones must be paramount to all of us, the role of health and safety in the workplace can sometimes be seen as a boring inconvenience. How many of us would be happy allowing our children or partners to work in an unsafe building or somewhere that does not take

fire prevention seriously? In the past month we have again seen the impact that the Hillsborough disaster has had on those affected and indeed the country as a whole. Safety is a serious business and we can be rightly proud of how we in this country have addressed workplace safety issues over the past decade or so.

Great leaps in accident reduction

Health & Safety Executive (HSE) accident statistics over the past few years have not only indicated that the number of accidents in the UK continues in the main to fall, but that according to Eurostat (the statistical office of the European Union), UK safety performance is favourable compared to other EU countries. Standardised incidence rates of fatal injuries at work (excluding road traffic accidents and accidents on board transport in the course of work) showed the UK having the lowest incident rate of 29 European

countries. The fatality rate has fallen by 86% since 1974 when the Health and Safety at Work Act was introduced.

With regard to employer reported non-fatal injuries, the rate per 100,000 employees has fallen by some 37% between 2010/11 and 2014/15. So while there is still room for improvement the UK accident trend is moving in the right direction and we can be rightly proud of our safety record.

The London Olympic park was built without a single death - the first to do so. This is something that has been further put into perspective when looking at the building of other major sporting stadiums around the globe. Even with this improving record the authorities continue to look at ways of improving safety in the workplace. Recently we have seen the introduction of a number of pieces of legislation including the Corporate Manslaughter and Homicide Act and the amended Construction (Design and Management) Regulations 2015 looking to improve safety and deal with those individuals and organisations who continue to flout standards.

In addition, the introduction of the sentencing guidelines for health and safety offences, corporate manslaughter and food safety offences introduced in November last year are now in force and apply to any case sentenced in courts in England and Wales. These have been described as the most dramatic change to health and safety legislation since the introduction of the Health and Safety at Work Act in 1974 and will result in substantially higher penalties for both organizations and individuals following successful prosecution under health and safety law, plus more custodial sentences (we have indeed

witnessed the two prison sentences being served over the past month on individuals, including a 6 year sentence on one particular Director following the death of a man on a construction site and fines in the millions of pounds). So when it comes to safety, whilst we still need to improve the UK is doing fairly well. What about that section of the subject that until recent times appears to have been ignored – health?

What about health?

While the number of workers killed in accidents in 2014/15 was reported as 142 (still far too many) it is estimated by the HSE that around 13,000 deaths each year occur from work-related lung disease and cancer thought to be attributed to past exposure, primarily to chemicals and dust at work. Of the estimated 27.3 million days lost due to work-related ill health or injury, 23.3 million were lost due to ill health with 4.1 million due to workplace injury.

In 2014/15 an estimated 2 million people were suffering from an illness (long standing as well as new cases) they believed were caused or made worse by their current or past work. Around 80% of new work-related conditions were either musculoskeletal disorders or stress, depression or anxiety, with musculoskeletal being the most common.
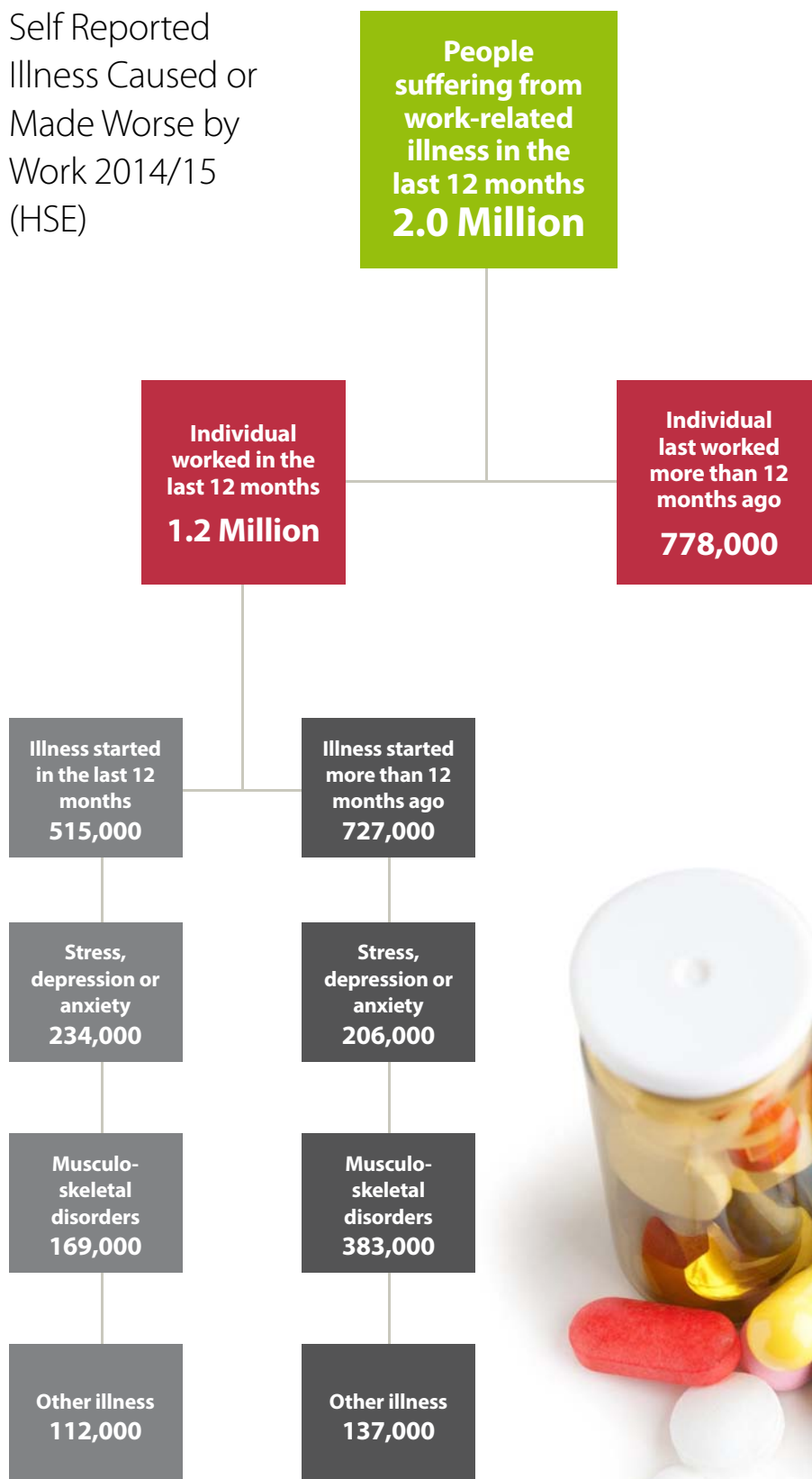
Musculoskeletal disorders (MSDs) are the focus of considerable research in occupational safety and health, being the most common cause of severe long-term pain and physical disability, affecting hundreds of millions of people around the world. A number of epidemiological studies have been conducted in different sectors (from office to manual work), repeatedly showing links between work-related psychosocial factors and MSDs. This is an area that we will see increasing focus on.

We are certainly improving on safety, however we need to work harder at health risks particularly, as according to HSE figures, the number of new cases of stress, depression and anxiety has remained broadly flat for a decade and the number of new cases of musculoskeletal disorders has remained similar since 2011/12.

While a number of studies in recent years have indicated that it makes economic sense for organisations to tackle employee health issues there is a growing pressure on authorities to take action on organisations who fail to address health issues. Every organisation should be including health issues in their risk management processes, something we at Cardinus are greatly involved in. Not only is it a legal necessity but it makes good business sense.

Self Reported Illness Caused or Made Worse by Work 2014/15 (HSE)

People suffering from work-related illness in the last 12 months
2.0 Million

Individual worked in the last 12 months
1.2 Million

Individual last worked more than 12 months ago
778,000

Illness started in the last 12 months
515,000

Illness started more than 12 months ago
727,000

Stress, depression or anxiety
234,000

Stress, depression or anxiety
206,000

Musculo-skeletal disorders
169,000

Musculo-skeletal disorders
383,000

Other illness
112,000

Other illness
137,000

■ *Mark Preston BA, CMIOSH, MAPS is a registered safety practitioner with more than 20 years' experience in health, safety and environment management. His consultancy work has included the development of systems, auditing, training and strategic advice to senior management in organisations including: BMW, AB World Foods, Eversheds, Microsoft, Air Canada, Thames Water, EA Sports and the New York Stock Exchange.*

Mark is a member of the Institute of Occupational Safety and Health, the International Institute of Risk and Safety Management, the Association for Project Safety and the American Society of Safety Engineers. He has qualifications across the entire range of health, safety and environmental disciplines.

Preventing fatigue at work

Create a healthier and more productive workforce by preventing fatigue at work, says Ann Hall

Fatigue might not seem like a big deal but it decreases our ability to respond to situations and zaps our energy. It is a risk factor for injury.

We have all had those days where we are working intensely at our computers not taking breaks and under a great deal of stress. At the end of that day we are exhausted. We didn't do heavy physical activity, rather we worked too hard, for too long. For many of us this means that when we get home we crash. If this happens every once in a while that is one thing, but many people repeat this pattern every work day. Can you imagine the stress that places on their health? How it effects their quality of life?

To prevent this ongoing cycle, one must learn to manage fatigue by balancing and pacing themselves throughout the day. The skill of pace is not one that comes easy for many. You have to remind yourself to slow down and

The effects of fatigue on your body can manifest in the form of **tiredness, headaches, body aches, and even irritability.**

take small breaks along the way to achieve overall endurance. Ask a runner how they pace themselves for a race. The answer will vary depending on the distance, difficulty of the course, environmental factors and their personal health condition. There are many things to consider in order to know how to pace yourself in order to have a good, safe, comfortable run, rather than a run where you are puking a mile from the finish line.

One study analysed elite performers spanning from musicians to athletes to chess players. The study concluded that more rest can maximise achievement. This goes against what many of us practice. We arrive to work, focus on the task at hand and go as hard as we can without a break until we get really fatigued. Sadly, some estimates show as many as two-thirds of office workers eat lunch at their desk. Employers tend to see these people as the hardest workers, but what they are doing has been shown to be counterproductive. Going without breaks exhausts us and the result can be lack of focus and reduced quality of work.

Top performers, by contrast, tend to practice in focused sessions lasting no more than 90 minutes. They work in bursts taking frequent breaks to ensure recovery and avoid exhaustion. This supports studies that conclude that performance deteriorates in

continuous work, but can be reversed by taking rest breaks. Breaks from sustained activity as short as one minute have been shown effective in restoring performance while at the computer. These should be a combination of both physical and mental breaks (depending on personal need) so employees can learn to master their pace.

Fatigue

There are many types of fatigue in the office – mental, eye, static muscle and muscle over-use. The effects of fatigue on your body can manifest in the form of tiredness, headaches, body aches, and even irritability.

All of the fatigue types combined together can be quite the monster. When I talk about fatigue I always think about a long car trip. Imagine yourself driving for 9 hours. A trip like this is always exhausting. You have static muscle fatigue from holding the same sitting posture for so long. You have mental fatigue from the monotony of the drive and extended focus. If you are in heavy traffic or have crying children – that will increase the mental load. Your arms and hands are likely tired from gripping and holding onto the steering wheel. There is no tremendous physical activity involved, but the majority of people will be extremely tired by the onset of fatigue during the drive.

Some people's work environments closely resemble a long road trip. Sitting for hours without movement in a closed space, intense focus and repetitive arm work. Replace the traffic and crying kids with work stress, deadlines, customers and co-workers. It is often the combination of multiple types of fatigue that can lead to complete exhaustion. It is up to each of us to do what we can to manage our fatigue. Awareness is key and taking the time to rest is necessary to optimise our work performance over the long-term.

Managing fatigue at work by software intervention

Studies have shown that scheduled breaks were generally more effective than leaving workers to take breaks at their own discretion. Rest break software has been created to coach and encourage workers to take the breaks they need to avoid fatigue.

This type of software targets different types of fatigue, but gives users the ability to customise their own plan. The user chooses a setting that best represents their needs and then they have the ability to enhance this with custom reminders and content. Breaks range from stretch breaks, to short-cut key tips, to world news. The software measures the time and intensity to which employees engage with their computer. If the computer user works for too long without taking a natural break, the software will advise that they need to take a micro-break. The goal of the software is to raise consciousness in a natural, non-forced way that a small break is needed. Computer users get feedback on their computer usage and intensity and the software lets them know what they are doing well and what they could improve on to have more comfort and energy. Admins can view statistics to see how employees are doing and better target which departments could use more coaching and support.

The proactive feedback closes the loop for an organisation between providing a tool to take breaks, to providing feedback on the actual usage of the tool, to responsibility of taking breaks on part of the individual employee.

■ *Ann Hall has degrees in marketing and management, holds a certification in ergonomics management and is a certified corporate wellness specialist. She has joined Efficiency Software in the testing and promotion of software solutions that target increased wellness and productivity at work.*

Post-employment screening for MSDs

Lee Huber tells us why screening for MSDs can help organisations benefit in the long term

Musculoskeletal disorders (MSDs)—such as carpal tunnel syndrome, hand tendonitis and shoulder inflammation—cost the U.S. economy between $13 and $15 billion annually. As a result, many executives who promote MSD prevention need to look carefully at better testing for predicting who is at risk during hiring and before putting people in new jobs. Such screening should be carried out after an applicant is given a conditional job offer, in accordance with the Americans with Disabilities Act (ADA). In theory, screening employees minimizes hand disorders in jobs having upper extremity MSD risks. Screening is also thought to benefit employees by achieving proper diagnoses and foregoing unnecessary surgery.

In comparison, federal and state OSHA regulators expect inherently hazardous jobs to be evaluated, and the risks designed out of them, to the extent possible. Companies having taken initial risk reduction steps and refinements are most likely to benefit in the long term. On the other hand, regulatory compliance officers put little stock in what they consider to be administrative efforts, such as employee screening to control potential

In theory, screening employees minimizes hand disorders in jobs having upper extremity MSD risks.

injuries. Therefore, the use of post-offer screening is not likely to ward off potential OSHA enforcement concerns.

Other governmental agencies mandate close adherence to their regulations, like the Equal Employment Opportunity Commission (EEOC) and the ADA. In accord with ADA requirements particularly, job-related screening is a significant issue, particularly for identifying problems with workers' upper extremities. Whether by choice or by mandate, employers would be well-advised to establish some kind of post-employment screening process to determine employees' susceptibility to MSDs as a matter of prevention. Testing may include fitness-for-duty, electronic screening, written exams, non-work-related physicals, strength capability, clinical exams (e.g., Tinel's sign or Phalen's manoeuvre) and others.

The NCV test has its faults

The current "gold standard" for MSD diagnosis is the NCV test, which measures the speed of impulses through a nerve, using an electrical stimulus to the nerve. NCV testing costs around $550 per limb, however, not counting attending physician evaluation charges. It also regularly produces false negatives for symptomatic people and false positives for asymptomatic people.

Given NCV's shortcomings, effective post-offer screening needs to consider a discussion of best practices in the screening industry, regulatory practices and the effectiveness of screening itself. The National Institute of Occupational Safety and Health recommends that if screening is incorporated into company protocol, five factors should be considered to determine if test procedures are valid: they must be safe to administer, reliable in their data, job-related, practical and predictive of risk. These criteria tend to exclude most screening methods.

Senior management demands for fiscal responsibility require a close look at methods purported to reduce injury through predictive analysis. The consensus among professionals who make injury reduction and prevention their livelihood is that the highest cost benefits are derived from investing in job and design modification. As a result, the ergonomic risks that cause upper extremity MSDs in the first place are reduced.

Adequate risk reducation

The methods for achieving optimal results through ergonomic initiatives lead researchers to basic conclusions for reducing risk in the vast work universe. Risk reduction still comes down to the proper tools to perform the job, appropriate materials, adequate workstation designs and sound risk management. When these elements are properly evaluated, chosen and utilised, the worker has a chance to excel without injury and the employer has the opportunity to reap the benefits of injury-free workers with optimal productivity.

It is suggested that progressive companies are better served by continuing to invest in proven prevention methods such as job modifications, redesigning equipment and/or improving job methods to reduce ergonomic risks in higher hazard operations. This is because there are as yet no consistently reliable, cost-effective, scientifically validated criteria for screening employees to prevent upper extremity MSDs. Until there are, these measures will have to suffice.

■ *Lee Huber is a Senior Ergonomist for ESIS Health, Safety and Environmental. In this role, Lee provides professional ergonomic services for manufacturing, distribution, retail and office environments.*

Lee has a Bachelor of Science in Industrial Education. He has multiple designations including Certified Professional Ergonomist (CPE), Certified Industrial Ergonomist (CIE) and Certified Safety Professional (CSP).

Lee also actively participates in a number of professional/society board memberships including the Human Factors and Ergonomics Society; Law Enforcement Alliance of America; Board of Certification in Professional Ergonomics; Board of Certified Safety Professionals; and the Oxford Research Institute.

Obligations when it comes to managing contractors

Mark Preston discusses the health and safety liabilities associated with managing contractors

Liabilities associated with managing contractors, and the duty of care owed to them, is often misunderstood or even ignored, despite increasing evidence of the liabilities for failing to appoint and manage such contractors.

The term contractor applies to anyone you get in to work for you who is not an employee and will include individuals as well as organisations. The basic test of whether a person is an independent contractor is one of control over the undertaking of the work specified. For clarity, contractor personnel who are merely visiting your premises for meetings are deemed to be visitors, not contractors. Organisations also need to be aware of and understand the differences between 'labour only' and 'bona fide' sub-contractors.

Labour only sub-contractors work under the employer's direction and control, so for insurance purposes are deemed to be 'employees'. These will include temporary workers, agency workers and hired-in labour. Bona fide sub-contractors work under their own company's direction and supervision or in association with a principal contractor, and should have their own Employers and Public Liability insurance arrangements. The

term 'contractor' is not restricted to building contractors. In its wider sense it includes any individual or company who enters premises to fulfill a contractual obligation agreed with the business occupying the premises, the property owner or their managing agent.

A lack of suitable control of contractors can and does lead to accidents not only to contractor's employees but also to one's own employees, tenants, residents and visitors. There are numerous examples where accidents have resulted in both prosecutions and civil claims against the employing client business in addition to the contractor

Case law

The principle that organisations (employers) retain responsibility for the safety of contractors working on their premises was established in the case of R v Associated Octel Co. Ltd (1996), heard in the House of Lords. Associated Octel was prosecuted under section 3 of the Health and Safety at Work etc Act 1974 (HSWA) for failing to ensure the safety of persons not in their employ. Their defence was that the bona fide sub contractor dictated how the task was undertaken and that Associated Octel had no duty under section 3

of the HSWA and accordingly had no right to control or stipulate how the work was done.

Associated Octel appealed earlier judgments to the House of Lords who upheld the lower courts' decisions. Whether a work activity is part of the conduct of an employer's undertaking is a question of fact. It does not depend on whether the employer engages employees or independent contractors to carry out that work or whether control is exercised over the activity. If the work itself is part of the undertaking, meaning 'enterprise' or 'business' in this case, a duty is owed under HSWA s.3 (1) to ensure that it is done without risk, subject to reasonable practicability.

Employers cannot defend themselves by relying on contractors to manage their operations in isolation. The Court of Appeal reaffirmed in Lynch v CEVA Logistics and Lynch Electrical Contractors (Court of Appeal 2011), that a workplace owner or occupier owes visiting Contractors and their employees a duty of care where it is able and competent to give them instructions, and must be alert to any unsafe practices of sub-contractors.

Legislation

A number of pieces of legislation require employers to have duties when employing contractors including the Health and Safety at Work etc Act 1974, the Occupiers' Liability Acts 1957 (common law duties to visitors) and 1984 (duties to trespassers), The Management of Health and Safety at Work Regulations and the updated Construction (Design and Management) Regulations 2015 (CDM).

The CDM Regulations place specific duties on clients who appoint anyone to undertake a construction project. It should be remembered that 'construction' under the regulations has a very wide meaning and includes, among other things, construction, alteration, conversion, fitting out, commissioning, renovation, repair,

upkeep, redecoration or other maintenance, de-commissioning, demolition or dismantling of a structure. Under the regulations a client must make suitable arrangements for managing a project and ensuring that the work can be carried out, so far as is reasonably practicable, without risks to health and safety of anyone.

Safety Management

It is essential that every organisation that appoints contractors have a robust procedure in place for appointing and managing 'competent' contractors. Following any incident it may be necessary for the client to evidence the steps they took to identify and appoint 'competent' contractors and the processes they had in place to continue to manage those contractors effectively.

Sometimes you may have more than one contractor on site. You need to think about how their work may affect each other and how they interact with your activities. Clearly, in these circumstances there is more chance of something being overlooked.

Some of the key elements of contractor management will include the following:

Assess the experience and competence before appointment

It is wise to have a process in place whereby before appointing any contractor you assess the evidence of their competency. This can be done through establishing their experience, the training of their staff and whether they have a safety management system, including relevant risk assessment processes in place.

Communicate with contractors

■ Accidents happen more easily when the contractor's job is excluded from your usual methods of safe working if:
■ The hazards of their job haven't been identified and steps have not been taken to minimise risks

■ No one is around to make sure the contractor follows health and safety rules on site
■ Accidents with contractors can be caused by poor communication – when staff don't know there is a contractor working nearby and when contractors don't know the dangers on site.

Include contractors

Bring contractors into your health and safety procedures. They may be strangers to your site and won't know:
■ About the hazards on your site
■ Your site rules and safety procedures
■ What to wear
■ About special equipment they need to use
■ What to do in an emergency;
■ The sound of the alarm, and how and when to raise it

You may take good practice for granted in-house, but don't assume the same applies to contractors. Even regular contractors may need reminding. Now is the time to ask yourself, do you need to improve your procedures for work with contractors? Are you sure they cover all contractors, every time? Maybe you've never had an accident involving a contractor, despite this, it is not necessarily a good reason to think that your procedures are adequate. In our experience employing contractors can be one of the biggest health and safety risks for any organisation so make sure you have a robust contractor appointment and management system in place with plenty of evidence to protect yourself.

■ *Mark Preston BA, CMIOSH, MAPS is a registered safety practitioner with more than 20 years' experience in health, safety and environment management. His consultancy work has included the development of systems, auditing, training and strategic advice to senior management in organisations including: BMW, AB World Foods, Eversheds, Microsoft, Air Canada, Thames Water, EA Sports and the New York Stock Exchange.*

Mark is a member of the Institute of Occupational Safety and Health, the International Institute of Risk and Safety Management, the Association for Project Safety and the American Society of Safety Engineers. He has qualifications across the entire range of health, safety and environmental disciplines.

The ergonomics connection

As Wayne Maynard reports, whether you're aiming for employee wellness or organisational wellness, the link with ergonomics is irrefutable

Lack of sleep has been associated with traffic crashes and work-related injuries.

There is no universally accepted definition of wellness. But for me, wellness is about the person and decisions they make about their health, safety and well-being both on and off the job.

Ergonomics is about designing the job to fit the capabilities and limitations of the worker. Primary factors influencing job demands to worker capacity include characteristics of materials, organisations, tasks and environment and characteristics of the worker including, psychological, physiological (fitness), and biomechanical capability (strength). The International Ergonomics Association (IEA) describes three domains of ergonomics:

1. **Physical:** Concerned with human anatomical, anthropometric, physiological and biomechanical characteristics as they relate to physical activity.

2. **Cognitive:** Concerned with mental processes, such as perception, memory, reasoning and motor response.

3. **Organisational:** Concerned with the optimisation of sociotechnical systems, including organisational structures, policies and processes.

Job stress is the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker. Job stress can lead to poor health and even

injury. Fatigue is closely related to job stress. People experience abnormal stress when either deprived or over stimulated; minimal stress occurs when stimulation is moderate. Long work hours, demanding work schedules and sleep/wake durations are associated with adverse outcomes on worker safety, health and wellbeing. Shorter sleep durations are associated with cardiovascular disease, hypertension, diabetes, depression and obesity. Lack of sleep has been associated with traffic crashes and work-related injuries. Based upon available research, consider the following ergonomic guidelines when designing a shift system for safety and health:

- Day (morning) shifts are to be preferred over afternoon or night shifts.
- Limit work to five or six consecutive shifts in a row.
- Provide for frequent rest breaks. Hourly breaks are appropriate for many kinds of work, but for highly repetitive or strenuous work, breaks more frequently than once each hour are necessary.

As for night work, keep consecutive night shifts to a minimum. Only two to four nights in a row should be worked before a couple of days off. This stops circadian rhythms being disturbed and limits sleep loss. The European Commission's Working Time Directive recommends keeping night work at an average of 48 hours per week, allowing up to six eight-hour night shifts or four 12-hour night shifts per week.

Lack of physical activity is one of the leading causes of preventable death worldwide. Prolonged sitting time, independent of physical activity, has emerged as a risk factor for various negative health outcomes. Studies have demonstrated associations of prolonged sitting time with premature mortality, chronic diseases such as cardiovascular disease, diabetes, cancer and obesity. Sit-stand workstations allow the user to adjust the height of the work surface from a seated height to a standing height. The benefit is workers will be able to reduce sedentary time while at work by changing from sitting to standing thereby improving health outcomes, and possibly improving work productivity. Sit-stand workstation users, who received comprehensive training (1.5 hours) varied their postures at work, exhibited increased productivity at work, compared to those who were not trained.

Return to work (RTW) programmes can have a positive impact on overall health and wellness. The longer a person is away from work, the less likely it is that he or she will ever return. Supervisors trained to respond to work injuries in a positive way, including communication and problem-solving with employees on return to work accommodations, significantly reduced the number and cost of disabling WC claims. RTW programmes and integrated disability management strategies complement strategic health and wellness initiatives by shifting attention to employee health as an investment. Obesity is one of the major health problems with over two-thirds

of adults being overweight or obese. In America employers bear a large share of healthcare costs and it is estimated that in 2010 direct healthcare costs attributable to being overweight or obese exceeded $100 billion. Research has shown a clear relationship between body mass index (BMI) and cost of WC claims. Insurance industry research has shown there are systematic differences in the outcomes for obese and non-obese WC claimants with comparable demographic characteristics, and a greater risk that injuries will create permanent disabilities if the injured worker is obese. In studies, 81 per cent of lost time claims with a comorbidity diagnosis, such as diabetes, chronic pulmonary disease, drug abuse and hypertension, were attributed to obesity. Obesity also plays a role as a contributor to injury risk with obese workers 29 per cent more likely to sustain workplace injuries than those of normal weight. Figures like this make the strongest case for engaging employees in health promotion programmes targeting obesity and healthy behaviours. These programmes can now be viewed as having a potentially protective benefit in terms of workplace safety and disability prevention.

Health promotion is the non-occupational side of wellness – traditional wellness programme interventions that focus on healthy lifestyles and healthy behaviours. A 2008 survey of large manufacturing employers reported that 77 per cent offered some kind of formal health and wellness programme. The survey reported benefits of a healthy workforce including reduced healthcare costs, reduced workers compensation costs and reduced costs associated with absenteeism (off the job) and presenteeism (on the job but not functioning at full capacity).

A number of studies over the years have shown positive return on investment (ROI)

for worksite wellness initiatives. Workplace health programmes generated a positive return on investment in all instances except randomised control trials.

In one US report (36 studies, many industries, and larger companies with more than 1000 workers) concluded on average that medical costs fell by about $3.27 for every dollar spent on wellness programs and absenteeism costs fell by about $2.73 for every dollar spent). Analysis criteria for this study included 1) must have had a well-defined intervention; 2) must have had a treatment and comparison group, and 3) must be a distinct new intervention. Average intervention size was >3,000 employees and comparison group 4,500 employees.

The physical domain is often recognised as 'micro' side of ergonomics and solutions mitigate physical risk factors associated with high repetition, long duration, high force, awkward postures and others. The organisational domain is the 'macro' side or simply macroergonomics. This domain addresses psychosocial risk factors or the organisational and work context issues described above. According to the late Dr Hal Hendrick, "If you take a microergonomic approach and look at the research results over the years, successful programmes tend to get a 10-25 per cent improvement, whether it is in productivity or accident reduction. But when you get the macroergonomic level in there and it is a true macroergonomic intervention, we normally see 50-90 per cent improvement. Associated benefits include better productivity and quality, and improved job satisfaction and employee commitment."

Macroergonomics utilises extensive employee participation in identifying work system deficiencies and designing solutions. Macroergonomic approaches include:

- Recognition of employees for good work.
- Opportunities for career development.
- Organisational culture that values the individual worker.
- Demands (both physical and mental) commensurate with capabilities and resources of individuals.
- Jobs designed to provide opportunities to use skills.
- Employees have input on decisions or actions that affect their jobs and the performance of their tasks.

There are many definitions of wellness but it is important for all stakeholders to understand how a well organisation and a well employee work together to form a win/win for both. Management commitment and employee involvement; especially a positive safety climate are critical variables to successful outcomes. The contribution of ergonomics to wellness at both micro and macro levels cannot be overstated and the evidence base is solid. Remember, ergonomics is about healthy jobs, healthy workers and healthy organisations.

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High touch engagement & ergonomics

Increasing employee engagement means moving beyond the desk and embracing a more holistic approach, says Donna Defalco

Does your current ergonomics programme ROAR? Or is it just a means to quantify ROI on a stat sheet? Move on. Now's the time for High Touch Engagement and it promises to give you a Return On all Allocated Resources… it's the ROAR Factor!!

What's the difference between ROI and ROAR?

- Measure all the allocated resources, not just out-of pocket costs
- Measure all the returns, not just reductions in medical cost or similar objective outcomes
- Focus on programmes that make people feel great, and what makes them want to roar!
- Measure how well you are doing in helping people feel great

Why we should look to further engage employees

According to Gallup, only 13 percent of employees are highly engaged, with the remaining 87 percent either not engaged, indifferent, or actively disengaged. We all know that employee engagement is critical to success, but only 25 percent of all corporate programmes have a strategy to address this human capital issue.

Gallup also estimates that employee disengagement costs organizations an estimated $450 to $550 billion a year. Meanwhile, their survey of 1.4 million employees found that teams scoring in the top 25 percent of respondents for engagement experience several benefits:

- Lower turnover: 65 percent
- Fewer safety incidents: 48 percent
- Lower absenteeism: 37 percent
- Higher productivity: 21 percent
- Higher customer metrics: 10 percent

How can you reach the other 87%?

Extending your current ergonomic programme to engage the other 87% will offer solutions that touch your employees beyond the desk and embrace total worker health. This "whole" approach addresses the risks associated with individual musculoskeletal disorders (MSDs), the cost associated with MSDs and at the same time making employees feel great , maximising their work and life performance.

A highly engaged workforce positions the organisation for success. External factors have less impact on organisations with an engaged workforce. Engagement enables growth and profit in either a positive or negative business climate. Engagement makes your employee's feel like roaring!!

So is high touch ergonomic engagement worth the investment?

Employee's notice when a company is putting forward their best efforts to ensure their health and safety. If an employee does not experience fatigue and discomfort during their workday, it can reduce turnover, decrease absenteeism, improve morale and increase employee involvement. By offering solutions that go beyond the desk to engage employees in high touch activities at work and play, you educate them and strengthen their musculoskeletal system. When implementing a Knowledge2Action® program you do more then just get an employee to look and listen, this type of programming touches them in a way to makes long lasting changes at work and at play that enhance a culture of trust. Just imagine if you only engaged 10% of the 87% of unengaged employees, the ROI would be $55 Billion!

- *Donna Defalco is a consultant and wellness program developer with over 30 years of experience in musculoskeletal health and stress related disease. President of The Health Enhancement Company she overseas on-site wellness and development around ergonomics issues to national and international Fortune 500 companies.*

* O'Donnell MP. What is the ROAR Factor for your health promotion program? (Hint: we used to call it ROI.) Am J Health Promotion. 2015;30:v–vii. Available at: http://ajhpcontents.org/doi/10.4278/ ajhp.30.01.v. Accessed September 26, 2015.