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CONNECT

The magazine for the Cardinus customer



Autumn edition

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age has arrived**

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Welcome

Welcome to the latest edition of Connect magazine from Cardinus Risk Management.

I hope you enjoy this, the latest edition of Cardinus Connect, the magazine for risk management professionals brought to you by Cardinus Risk Management.

We have enjoyed filling the pages of our publication with information and advice from some of the most respected health and safety experts. Only Cardinus can bring together this much knowledge and expertise to help you do your jobs better and make your workplaces safer.

This month we look at one of the biggest threats to the health of this generation's workers, the impact of inappropriate technology use on the young people who have been gaming and texting and disappearing into the worlds of their digital devices for years. We think the 'millennials', as they are known, are storing up problems for themselves and us, their employers. We've called the threat the 'ergonomic tsunami' and you can start reading about it over the page.

Paediatric physiotherapist Lorna Taylor continues the theme on page seven as she looks at the impact on children's backs of poorly designed chairs in schools. We all need to make sure we're sitting comfortably at work but not enough is being done for children when their still developing bodies are most vulnerable.

Motoring journalist Martyn Moore shares his thoughts about the UK's Tyre Safety Month and argues that we shouldn't need a dedicated month to remind us what we ought to be doing every day; and there's an excellent feature on page 12 about how wearable technology is helping scientists to understand human movement at work and reduce injuries and musculoskeletal disorders.

On page 16 Keith Osbourne looks at some real-world examples of how health and safety pays back many times over to those organizations smart enough to invest in it. If you're having trouble getting financial support for some of your safety initiatives, this could be a good page to leave open on your finance officer's desk.

We then go from payback to backpacks as Dr Rosina Ghassemi examines the effects of backpacks on school children before Judi Ulrey gives some advice on page 20 about setting up a wellness team in your organization. Jon Paulsen looks at telecommuting and the impact it is having on the modern worker, while Nicole Vasquez this month reports on issues affecting lone workers. Do you have employees who work alone? You need to read Nicole's article on page 24.

Colin Hartley looks at how you can influence driver behavior and presents some compelling evidence from a case study over in the UK. One company's results have been amazing.

Have you heard about mental health first aid? It's like traditional first aid but it's applied to people suffering from stress and psychological problems. Poppy Jaman is a practitioner and advocate and tells us all about it on page 28.

Many of you will be reading this magazine at this year's ErgoExpo conference. We have entered Healthy Working Move, our excellent ergonomics e-learning course and its associated smartphone app into the Attendees' Choice Awards. Drop by the Cardinus stand and check out the course and app. If you're impressed, we'd sure appreciate your vote.

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Jon
Abbott



The future is now

Not to be confused with teleporting, the telecommuting age has arrived. Jon Paulsen looks at the opportunities and challenges of working from home

Telecommuting, once exotic and unusual, looks less like the future of work and more like the modern reality. According to a 2013 article in *Forbes*, one in five of us spent at least one day per week working from home, a number that has only grown in the ensuing two years. As technology improves more quickly than previously imagined, the notion of working from home has turned from far-fetched science-fiction to a fact of daily life for millions of people.

As much as employees enjoy the quality of life improvements that can come with working from home, studies have shown that there are numerous benefits to employers as well, from the money saved on office space to the evidence showing increases in productivity. Telecommuting's rapid spread can be attributed to the fact that it is a win-win for both employers and their workers.

However, as with any major change, there can be unexpected consequences. As more workers see their commutes shrink to a mere stroll from the bedroom to the living room, they may be unknowingly exposing themselves to greater risks to their health and safety.

In any work set-up, employers need to consider the ergonomic risk to their workers. However, a traditional office setting allows the company to plan, set-up, and oversee workstations in a way that encourages health and safety. In contrast, a telecommuter could find herself working at a dining room table, a breakfast counter, or even in bed, all of which are less than ideal locations from a health and safety standpoint.

I have first-hand experience with this. Having worked from home for over a year, I can attest that I was often working in conditions that discouraged activity and increased the risk of repetitive stress injury or long-term strain.

As work continues to move out of the office and into the home, it is more important than ever for employers to be proactive in catching potential health risks and helping employees build safer workspaces. However, this poses its own set of challenges. An employer could provide office furniture to their employees, and ergonomic items from sit-stand desks to split keyboards and vertical mice are more affordable and practical than ever before. However, for many small companies, this sort of overhead expense can offset many of the financial benefits

of encouraging telecommuting in the first place. Fortunately, there are other, more creative ways for employers to encourage safe, healthy spaces for their workers.

Checklists

A checklist is perhaps the most efficient way for an employer to standardize and communicate ergonomic principles and safety guidelines. A standard home office ergonomics checklist, crafted in consultation with an ergonomist, can give each employee a list of steps to complete to ensure they have set-up their workstation in a healthy way.

This is a great option for a company with a large telecommuting population to quickly communicate best practices to a lot of people. You can lay out guidelines on principles like monitor and keyboard placement, posture, chair set-up, and much more in a way that is easy for all your employees to understand and act on.

The wording of these checklist items is the key to making this method work. If they are too vague, the employee might misinterpret them. On the other hand, if they are too specific, they can end up confusing the employee or lead to her ignoring the instruction completely. Additionally, this method provides the least amount of oversight, putting the onus entirely on the employee to set-up their workstation and confirm that it is safe and healthy.

Software

A more technologically advanced version of a checklist, employers can provide telecommuters with an interactive and detailed electronic guide to office ergonomics. This can take the form of tutorial software, a PowerPoint presentation, or a web page, just to name a few examples. No matter what

the medium, this method provides greater specificity and the opportunity to incorporate visual and audio guides to the instructions.

This option even provides the chance for interactivity. You could set up the software to allow a telecommuter to input stats like her height, weight, and age, and then make personalized recommendations.

Of course, no two people have the same needs, so ergonomic software will meet some of the same drawbacks as a checklist. It may be too broad to meet every challenge faced by a remote workforce. Additionally, this method will take a little more time to set-up. However, the extra time investment will pay off in a series of instructions that are clear and easier to follow.

Consultation

The very same technology that makes telecommuting possible can also be put to work in ensuring that telecommuting spaces are healthy and safe for employees. Thanks to email, Skype and phones it is possible to provide ergonomic assessments for employees who are thousands of miles away.

One simple method is to ask a telecommuter to take pictures of her workspace and email them to an ergonomist. The ergonomist can then look at the pictures and call the employee with suggestions on how to improve her office. For higher-tech companies, the same thing can be accomplished through Skype or FaceTime.

Depending on the number of employees on your team, this can end

up being the most time-consuming method. However, the advantage is that each employee will receive personalized instructions on how to reduce risk and improve the health and safety of his or her home office.

Each method comes with its own set of advantages and drawbacks. And, as telecommuting matures from trend to fact-of-life, we will surely develop even more ways of bringing ergonomics into the home.

However, one thing is clear, rather than waiting for problems to present themselves, it is vital for employers to take the initiative and communicate clear ways to reduce risk to telecommuters in advance. By catching and reducing risk early, we can turn ergonomic health and safety into yet another advantage of telecommuting.



Jon Paulsen is a Certified Professional Ergonomist. He is a member of the Institute for Industrial Engineers and the Human Factors and Ergonomics Society. Jon is a lean manufacturing and tooling design expert. He has completed hundreds of ergonomic assessments and implemented corrective actions to reduce risk. He specializes in tooling design for factory, refinery, cleanroom, and assembly line manufacturing operations. He has developed many powered and manual tools that are best known methods in manufacturing, mining, and factory environments.

Lone working – the big questions

Employers with responsibility for lone workers need to ask themselves some important questions. Nicole Vasquez takes us through them

Q: Have you clearly identified all those employees that lone work within your business?

Q: Are you confident that you have assessed all the risks associated with lone working?

Q: Do you have an easily accessible lone worker policy?

Q: Have you implemented effective lone working control measures (and are these being followed)?

Q: Are you happy that your lone workers have had adequate training?

Q: Do you have a system in place to allow lone workers to communicate quickly and easily if in difficulty?

Q: Could you tell me where your mobile lone workers are right now?

If you can confidently answer ‘yes’ to all of the above questions then you can turn the page and carry on reading the rest of the magazine. If on the other hand, you are not completely happy that your answer is yes to all of the above it may be worth spending five minutes reading this article.

Lone working brings many benefits to both organizations and individuals. It allows flexible working, autonomy and greater utilization of resources. However, it can also bring challenges.

Lone workers, by their very nature, are working ‘by themselves without close or direct supervision’. So as employers or managers responsible for lone workers, if we can’t be sure what our lone workers are doing, or where or when they are doing it, how can we ensure that we have fulfilled both our legal and moral responsibility for their safety?

One of the key issues is identifying lone workers in the first place. There are estimated to be 6.8 million lone workers in the UK and yet my experience tells me that they are not always identified or given the attention or support they need. We may traditionally recognize community workers and health visitors, etc. as lone workers. However, lone working can happen in many roles in many sectors. Consider your IT workers, caretakers, salespeople, drivers and engineers, how many of them work alone for all or some of the day?

In practice, there are three key groups of lone workers that we should give attention to.

Firstly, there are those working on site; then there are mobile or remote lone workers and, finally, we must not forget those that work from home.

There is no legislation that specifically prohibits lone working; the general duties under the Health and Safety at Work act apply. It falls to the employer to ensure that they have identified the associated hazards, assessed the level of risk and taken steps to manage the risks by putting in suitable control measures.

There have been incidents where organizations have not fulfilled their legal responsibility and have paid the price in court, after tragic incidents have occurred and some of them make chilling reading. In 2010 the charity Mental Health Matters was fined £50,000 including costs for a breach of section 2(1) of the 1974 Health and Safety at Work etc. Act, for failing to do all that was reasonably practicable to ensure the safety of one of their lone workers Ashley Ewing. Ashley was killed by a service user who had a history of violence and was known to be unwell when (as a lone worker) she visited him at home. The charity had failed to carry out a risk assessment for the visit.

Risk assessments should be carried out for the tasks that people undertake as part of their working role. If lone working is an element and this brings with it specific risks, then these should be identified and assessed along with the other risk factors.

Some of the risks that may be increased (either in likelihood or severity) when lone working are:

- Road traffic incidents when driving long distance/late/early.
- Sudden illness or medical emergency.
- Slips, trips, falls (from height).
- Physical violence and verbal aggression.
- Manual handling injuries.
- Electrocution.

After completing risk assessments you may decide that there are certain tasks that you consider to be too dangerous or difficult to be carried out by a single person. For all the other tasks, we need to assure ourselves that our lone workers are at no greater risk than other employees.

Implementing a lone working policy and associated procedures can be a great first step. However, for most the challenge is not getting the words down on the paper, but rather translating what has been written, into actions by lone workers that will have a positive impact on their safety.

Often lone workers already have good practices that they implement unofficially – it would be wise to engage them in the process and create ownership at the beginning of the process. Measures that are owned by lone workers are often more realistic, practical and less likely to be misunderstood or deliberately ignored.

There are many practical changes that can be made in the way that people lone work to reduce the risks to their safety. If you have mobile lone workers, you should ensure that you have a robust communication system that allows the alarm to be raised if they are in difficulty. This should be combined with an effective system that allows you to know the whereabouts of your lone workers at any point during the day.

Effective training for lone workers is vitally important, but the old adage that ‘one size fits all’ could never be further from the truth than when providing lone worker training. When time and financial resources are at such a premium, organizations need to ensure that any training they invest in hits the mark and is capable of achieving the desired outcomes.

It makes sense to explore what specific training your lone workers require, as a ‘sheep dip’ approach is a waste of time, money and resources.

Whatever controls you put in place for your lone workers, you should have a system to monitor their effectiveness. Consider creating safety champions amongst your lone workers, they can help you communicate and promote any changes, help support lone workers and report back on any concerns they may have.

Just remember, to have an impact, your policies and procedures need to be bought into and adopted by your lone workers. It is ultimately the behavior and actions of your lone workers that will keep them safe, not your paperwork.



Nicole Vasquez runs Worthwhile Training and has 20 years’ experience assisting organizations with practical advice to manage the risks associated with employee’s personal safety, security and wellbeing. She has written several training resources and manuals including Managing Personal Safety at Work: a Guide.



Worthwhile Training works with organizations in many sectors to design, implement and embed control measures and effective training solutions to achieve measurable results. You can find out more at worthwhiletraining.co.uk

Ergonomics tsunami

The risk to young people from their inappropriate use of technology is huge, as Nigel Heaton and Guy Osmond explain

We believe society faces an ergonomics challenge that has the potential to overwhelm. It needs to act now to prepare to meet a tidal wave of musculoskeletal issues that threaten to engulf the current and future generations of workers.

The problem is technology and how younger workers today are using it. Everybody is more exposed to technology than ever before and we interact with it in a variety of ways from games consoles to smartphones, via laptops and tablets. The use of smartphones and tablets is widespread and the level of technology interaction both within and outside the workplace is greater than ever before.

We are immersed in our digital experiences on public transport, in our bedrooms, in classrooms and in the evenings while also watching TV. Young people give no thought to the potential impact of such prolonged use of technology nor the situations and postures in which they use it.

Musculoskeletal disorders (MSDs) are caused by a combination of the presence of hazards and exposure to those hazards. For young people this can be a bad combination. They have sub-optimal ways of working, for example, on poor quality chairs, under

unsuitable lighting and without keyboards. Plus they will work for long periods under pressure without breaks. Completing a level in a game, against the clock or opponents, can take many hours during which time resting, stretching, eating and even sleeping will be forgotten.

These activities are starting at a very early age, with primary school children using tablets for study and play. US schools will purchase 3.5 million tablets in 2015, according to industry analysts, and worldwide, K-12 spending on tablets has increased 60 per cent over the last year.

In 2013 Katarzyna Stawarz and Rachel Benedyk from University College London published a study on the use of touch-screen tablets called Bent necks and twisted wrists: exploring the impact of touch-screen tablets on the posture of office workers. Their findings show that the lack of screen adjustability and the virtual keyboard encourage poor posture and tablet use could lead to discomfort in a number of body areas, especially the neck and wrists.

A Swiss study found lower back pain in children as young as six and a study in Finland found that MSD symptoms were common amongst adolescents and this was linked to

computer use or gaming for more than two hours per day.

According to an American study (Manchikanti, 2000) 28 per cent of the industrial population will suffer from lower back pain and eight per cent will be “disabled” in any given year. People with back problems have, on average, more than ten days off work per episode. The average time between episodes is five years. For a 21 year-old retiring at 71 that is 100 days lost.

The desire or, as some see it, the necessity to be constantly connected conflicts with traditional attitudes to changing postures and the desirability of varying activities. Ask a young person to take a break from their desk computer and they will almost certainly switch to Facebook or Instagram on their smartphone.

Young people have a limited understanding of comfort and whether being comfortable is the same as being risk-free. Many have adopted a range of poor postures from a young age and for many years will feel no adverse effects. Despite efforts from ergonomists, medical practitioners, charities, pressure groups and caring parents, poor posture and its long-term effects are not discussed in schools and universities. As a result, the level of knowledge is low to non-existent.

The attitude of many people is that there isn't a problem. Their dining table and chairs feel comfortable enough and they are so engrossed in their activities they won't notice the stiffness and pain until they finally decide to move. The lack of lumbar support from kitchen chairs and stools, armchairs or sofas will not be considered, along with the hunched and rounded position of neck and shoulders. If there is an ache or tingling at the end of a four-hour session it will be dismissed with a shrug.

There are simple equipment-related solutions that can reduce problems and they deal with the traditional office environment first. The right basic equipment has to be in place before you can hope to start tackling the many variations and diverse habits.

So we should start with correct furniture in the office. Correct desks and chairs must be provided with all the necessary adjustability. If these are being used by a peripatetic workforce they must be adaptable for all the uses to which they will be put.

A fixed desktop computer available for use by different employees on a ‘hot desk’ basis must be adjustable to the needs of all the users. Laptop docking should be provided, where possible. This will be easier if machines are sourced to a common specification. At least the laptop user should have access to separate screen and keyboard. Physical adaptations will have to be instantly usable and ‘look cool’ to gain acceptance. For example, products such as the TabletRiser, UltraStand and Workfit-T are attractive, intuitive and effective.

Your product portfolio should also be reviewed. When was it last purged or added to? Speak to the IT department about current and future deployment plans. If your organization has a ‘bring your own device’ (BYOD) policy, understand that policy and its impact on the use of devices at work.

Employers need to address not just the pre-existing MSDs and health conditions of new, young employees but also their attitudes. A different type of ergonomics education and a different approach to it will be needed to ensure the message gets through. We must integrate behavior-change programmes into their well-being initiatives and, for maximum

impact, ensure they use the latest technologies such as social media to convey their message. Because of the increasingly blurred line between work and personal activities, these issues are very hard to manage. Many employers struggle to understand how far they can go when managing young workers.

How much do you know about what happens to your employees outside of work? You need to know how much exposure to technology and poor posture could be bringing MSD problems into work, especially where work may be blamed for issues that it is not responsible for.

The advice, training and support offered by employers must extend to the extra-curricular activities of staff and needs to be designed to address the ignorance and careless attitudes that prevail among young workers. Educating them on the risks and convincing them of the benefits of good practice is essential.

Take some time to consider the return on investment offered by an effective ergonomics risk management policy. A relatively small outlay now will deliver huge benefits in terms of staff well-being and productivity in the longer-term.

This is a heavily edited extract from the white paper Preparing for the ergonomics tsunami – how to meet the biggest challenge of the millennial workforce. You can obtain a copy of the full report from Cardinus Risk Management.



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■ **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.

Put a wellness team together

One person can champion health and well-being at work but with a wellness team behind them they can make it happen.

Judi Ulrey explains how

Let's start by considering the purpose of a wellness programme. There are plenty of sensible reasons for wanting a fit and healthy workforce and for an employer two of the most compelling are to lower the risk of injuries and to reduce workplace stress. Two of the most common tactics that can be adopted are encouraging employees to be more active and teaching them how to make better food choices.

These are all noble intentions and any success certainly benefits everyone. But what we need to remember is most adults have spent 20-40 years fine tuning their bad habits. And we all love our routines. So is it feasible to suggest that a junior HR person, as part of her job responsibilities, can realistically support hundreds of employees in making challenging changes?

What is needed is a support team – a wellness team – a significant number of employees who are committed to being change agents. They know that if they commit to supporting their colleagues in making more healthy choices, they themselves are more likely to stay on track too. When they're invited to support someone else they will feel empowered and motivated. You're encouraging them by asking them to help another.

So consider this: if you don't have a company wellness committee, you are doing yourself AND your employees a disservice. So how do you recruit these internal change agents?

First, senior management should be invited and do some of the inviting. Those who step up should be assured support, acknowledgement, and time allocated during their working days to wave the fitness flag.

What does a wellness team member look like? They look like everybody else. He's not perfectly fit. She likes chocolate. He has a bit of a belly. She's irregular in her exercise. He drinks beer. She's frustrated with her weight. Do you think you have any employees who fit this profile? Of course you do.

Point being, anyone and everyone should be on your wellness team. If someone isn't in a place to commit to the monthly meetings, maybe he can be responsible for promoting the monthly wellness message at his department meetings every month. Maybe you have a contest crew who rally every time there's an incentive programme, encouraging all to join in. Remember, when you encourage another you encourage yourself. So the more employees who are engaged – some way, somehow –

the more will be making more healthy choices. You want everyone to take part, even on a small scale. This suggests offering multiple levels of engagement. Consider three levels of employee participation:

Vision team

This is your key group of employees who are intently committed to wellness promotion within their department/office. They meet monthly, either live or via teleconference. They understand monthly meeting participation is expected at this level. This group should be well recognized by senior management as critical to culture change and be given regular acknowledgement.

Activities team

These folks spearhead the various activities – lunch and learns, walks, contests, monthly reinforcement activities and quiz. Again, the more the merrier, as two, three, four flag wavers are better than one. If you allow them to volunteer for less than a full year you'll increase participation and enthusiasm. Maybe they commit to six months but stay on thereafter. They report to the wellness team representative at their location.

Support team

Never underestimate the power of the one-time volunteers. These people are on call to help wherever there is a need. One month they may help facilitate the quiz. Another month they're doing lunch room demos. Maybe they simply help their wellness committee representative with admin duties. Gather a list of support volunteers you can call on when you need hands on deck.

So what's a wellness team to do? What exactly does it mean to 'facilitate change'?

There are multiple options for engagement. Activities team members may pick one or more:

Communications

Communication is key, and with today's technology, we're inundated with messages. It's all too easy to press the delete key. The more the personal the message, the more likely people are to read it. We pick up when we see a friend's number on our phone. We don't when it's withheld. The same is true of your wellness communications. People are much more likely to read if their department wellness team member had mentioned it than if it's simply more stuff from corporate. Many companies choose one person to be in charge of communications. But what if she's on vacation? Or simply gets too busy? Who's her back-up? You don't want momentum to lag just because someone's sunning on the beach.

Show time

Keeping practical wellness messages consistently in the forefront is critical foundation building. Many work groups have

regular monthly meetings. Add some variety and take five minutes to discuss a new topic each month. A person from each of these departments/shifts who facilitates this discussion each month adds great value to your wellness team.

Monthly activities

If you present a new fitness focus each month, what if you invited a few employees to coordinate a demo or activity to reinforce the message? Maybe you get a new team of folks every few months to encourage new ideas, more involvement and avoid burn-out.

Monthly quiz

To encourage all to engage in your monthly wellness topic, offer incentives for completing a short quiz. Designate a quiz team or two.

Small groups

The best teachers of your employees are your employees. Whether it is sharing healthy recipes, tips

for fitting exercise into a busy day, or simply accountability, small groups offer personal support. All you need is a facilitator who's a good question-asker. Find folks from each of your departments who would be willing to facilitate a small group gathering. Remember, helping another will help them too.

Finally, let's look at lauding and applauding your wellness team. Multiple studies have been done on employee satisfaction. What do we want from our job and our supervisors? Results confirm that acknowledgement by the boss goes a LONG way.

People like to help. People like supporting others. People like making a difference. But they like it a whole lot more after their boss says, "Thank you so much for all your help on the wellness team. I appreciate your efforts!" So Mr Big Boss, consider sending personal, hand-written notes, Starbucks cards, a few pats on the back. Your accolades make a difference. As you create your campaign strategy, recruit and empower your team. Your success is dependent on them.



Judi Ulrey is president of Fitness Consulting, Inc. and she has been promoting employee wellness since 1985. Her programmes are web-based so companies can regularly present a unique wellness message via video, audio, text, discussion boards and more. View samples at FitnessConsulting.com, or email her at Judi@FitnessConsulting.com.



When it comes to getting staff to sit or stand...

it's easier to train a dog!

Ann Hall describes the frustration of training employees to use sit/stand desks

Behavior change is difficult. We all know what we would like to do, but remembering and following through can often be a challenge. It's especially difficult when you have to change the behaviour of employees and sometimes it feels easier to train a family pet.

I rolled out a walking program where one of the hardest obstacles was getting people to remember to use their wearable fitness tracking devices. Every week I heard the drama of people forgetting, washing and losing their device as well as excuses as to why exercise was impossible.

The employees who set morning reminders to use the devices and pre-scheduled their walking times were the most successful. I don't necessarily

think they wanted it more, I think the way they realistically integrated it into their schedule was just more effective for them. It essentially became part of their daily routine.

Changing a working position from sit to stand or sit/stand is a change from how many of us have worked our entire lives. The concept is simple, but getting employees to buy-in on this notion and use the desk in the best possible way can be a challenge. Based on 16 years working with sit/stand desks there is one thing I am sure of – you cannot just give a person a new desk, walk away and expect them to use it the way you intended. The question is how do we get the majority of employees motivated to use the desks properly and help us to achieve compliance?

I recommend a focus on these three things to improve your compliance rates:

Training

Employees need to be intrinsically motivated to stand and sit. Sounds easy, but why people would want to use a sit/stand desk is very diverse. I use a worksheet to help users define their own motivation and goals after we identify all the benefits that they could realize. Having more energy and more comfort through reduced muscle fatigue can usually be felt right away so this is to be emphasized. It is also good to highlight better circulation and improved metabolism, and that it is easier to manage anxiety and stress.

Unfortunately, there are a lot of employees who mention calorie burn and are highly motivated by it. The last thing any corporate wellness professional wants is an employee eating more high fat, high sugar junk food, thinking they have burned off enough calories standing. If calorie burn is what motivates them so be it, but please help them be realistic about their expectations.

Training on static postures and the key benefits of alternating your position throughout the day is really important so they know how to properly use their desk. If you swap all day sitting for all day standing you probably won't have more energy or comfort.

Other benefits of using a sit/stand desk, such as being able to adjust the desk to better achieve a neutral posture, are good to cover. This includes defining what this means for users in both the sitting and standing positions. Be prepared to cover the use of keyboard trays and monitor arms as well if they are used at your facilities.

Coaching

Getting people to advance to the point where they are standing anywhere from eight to 24 times a day is something that needs to be worked up to for the majority of people. Users need to start and advance at their own pace. Some may not have the leg muscle strength to support their body weight standing in a static position for very long. Others may need to be coached to take sitting breaks.

Research has shown that for behavior change to be the most effective and sustainable it should contain these components: specific, measurable, achievable, relevant, and time-based. Yes, like objectives, they should be SMART.

I would also say that the person having some control over their goals and plan is key. You can guide them, but there seems to be more commitment when the pace and goals come from them. I came to terms with the fact that some people may stand twice a day for no more than ten minutes, not counting bathroom breaks. The more people feel the results, then the more apt they are to increase their goals.

Here is a short list to build upon when coaching people to adopt a sit/stand lifestyle:

Specific, measurable goals

- How long can you commit to standing* each work day?
- How many different times are you willing to stand*?
- Why do you want to do this? What do you think you will gain?

*For some this may be sit.

Reviewing goals to make sure they are achievable and time-based

- Are these goals realistic to how you work?

- Ultimately, what would you like to work up to?
- Can you commit to following this plan for four weeks?
- Are you willing to review your progress in four weeks?

Tools

Employees with the best of intentions can still forget to use their desks when they get caught up in what they are doing. The goal is to make sitting and standing throughout the day part of their daily routine.

For the last four years I have worked with a couple of companies on tools that help remind users to change positions. I highly recommend some intervention to help remind people about their commitment. SitStandCOACH software allows users can set reminders and track their progress. Even if they just use a basic alarm setting it will help to have the awareness there during the day.

The best mix of sitting and standing is one that is realistic for the user to follow and maintain, based on their schedule, job, body condition and willingness to participate in a lifestyle with more movement. Based on a review of studies, Dr Alan Hedge of Cornell University recommends that in every 30 minutes working in an office, people should sit for 20 minutes, stand for eight minutes and then move around and stretch for two minutes. He does not recommend standing for more than 10 minutes at a time.

Former director of NASA's life sciences division, Joan Vernikos, recommends a natural lifestyle of constant, natural movement that resists the force of gravity. Her emphasis is not on the duration of the standing times, but rather the number of sit

to stand adjustments. "Standing up often is what matters, not how long you remain standing," she says. Specifically, she recommends the act of going from sitting to standing and back again between 30-35 times a day. For a typical workday that would be about 16 times or twice an hour.

Dr James Levine of the Mayo Clinic says, "Do not sit longer than 60 minutes at a time. Try and get up every hour and move around (walk) for ten minutes." And in a study of Australian office workers, Taleb A Alkhajah and colleagues showed that users prefer 15 minutes of sitting alternated with five minutes of standing. It must be borne in mind that these participants were public health researchers and they might have been motivated to use these tables more frequently than average office workers.

You might not get the enthusiastic response of public health researchers and you can't expect the blind obedience of a well-trained Labrador retriever, but by combining education, training and tools you can expect successful results from a well-run sit/stand program.



■ 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.



Payback time

You can predict how soon a good ergonomics programme will pay for itself. As Keith Osborne explains, after that it's all profit

You know that the impact ergonomics has on production, quality and human performance can be a competitive advantage for your business not only in productivity increases but retaining the talent to take your organization to the next level.

You know ergonomics can help your people work safer and be more productive. You have attended workshops and conferences where presenters have all shown you what can be done with a good programme. Now you need to be able to prove this to your organization and get them into a proactive mode instead of chasing trends.

The neat thing is a really good ergonomics process doesn't have to be as complicated as launching a probe to Pluto, but getting it going and sustaining it can be a little dicey if all the pieces don't fit together. For your ergonomics process to achieve sustainable results it should be efficient, streamlined and once established, proactive to impact design and function while mitigating injury potential before either become negatives to the organization.

An effective ergonomics process requires multiple levels of efficiencies to be effective. It requires an approach combining the efforts from various departments within the organization, not just the efforts of the ergonomist. Management, engineers, employees, and others all have a stake in building a process that is both effective and

proactive in its approach to not only driving down injuries but driving up productivity and efficiencies throughout the company. Identifying the stakeholder is crucial but also identifying the tools needed to develop and run the process too.

For an ergonomics process to be successful, the company's management must be fully committed to integrating ergonomics into the workings of the organization. Management must also understand that ergonomics in itself is a process just like safety, maintenance, and production and must be afforded the same attention and overseeing.

Employees must see this as a means to improve their work processes and a way to enhance their abilities to work smarter not harder. It is a means to have a voice in the other processes mentioned by continually improving their work through self-assessment and collaborative corrective actions that benefit not only the organization but also the individual employee. Tools used to allow employees to self-assess must be easy to use, understandable to all, and not be a burden because they take a long time to complete.

Along with effective tools there should be integrated training as well as training that all supervisors and managers can employ to improve the organization's knowledge base. This knowledge will become the cornerstone for organizational improvements which will not only impact productivity, but also help drive

down high risk numbers, injury rates and workers' compensation costs.

Effective online assessment tools are a valuable process multiplier for any ergonomics initiative, whether you are building an industrial, office, or combined one. The best ones have built-in metrics to allow for instant feedback on how the process is progressing. They identify and categorize employees into low, medium, and high risk allowing the ergonomist to be more proactive in their approach so they can begin to mitigate the risks for these employees before they become a lost time injury.

They also have integrated tips and training to give employees instant feedback so the self-correction process can begin. This is vital to assisting the ergonomist in being able to work with those who are of the highest risk or those who simply cannot correct some of the issues shown in the assessment.

Human resources, facilities, safety, and engineering departments all have a stake as well. HR can use the process to help with return to work and alternative work arrangements by engaging the ergonomist.

A great process is also a fantastic selling tool for talent managers within HR to tout what the company can do for the individual employee once they come on board.

Facilities, in working with the recommendations of the ergonomist, can help design and reconfigure workspaces to better accommodate the needs of the employees they support. They can install equipment that is not only functional and efficient but adjustable to accommodate several different body postures and a range of body types which promotes better postures and lower discomfort levels.

Safety and engineering have a stake to ensure that ergonomics is addressed early in a design process. This means making sure the recommendations are both safe but value added to the entire project. Ergonomics is about process improvement throughout the organization and should enhance, never sacrifice either of these two disciplines.

An effective process also develops and maintains metrics. This data is the cornerstone of the process because it is what will drive continuous improvement, future funding, and expansion to all areas of the company as management see how ergonomics can positively impact performance and morale.

Much of this data will come from recognized leading and lagging indicators. What is a lagging indicator you ask? It is basically historical data where you will find injury trends, compensation costs, sick days and productivity trends to see where the organization has been. This is valuable data to begin seeing where some of the initial efforts will need to be focused to make the biggest impacts. Below are some of those indicators:

- OSHA recordable injuries.
- Workers compensation costs.
- Incidence rates.
- Productivity performance trends.
- Cycle time inefficiencies.

Leading indicators are those that, when properly tracked and developed, can put your programme on a path to effective proactivity and best practice continuous improvement. One where you are ahead of the trends and able to correct before issues become something tracked in a lagging indicator.

Leading indicators are ones that can be used in case studies to show the effectiveness of an ergonomic process where none existed previously. They can be the springboard needed to show stakeholders the effectiveness of a supported ergonomic process and how it can positively impact the entire organization. Some examples of leading indicators are:

- Reduction of ergonomic risk factors.
- Training sessions completed.
- Audits completed.
- Proactive compensation savings.
- Reduced cycle times.
- Return on investment (ROI).
- High-risk employee reductions.

The last two can have a big impact on those who hold the financial sway at your organization. Can you show that your process effectively mitigated risk to the degree that if it had gone unchecked, there was a potential for lost time, recordable injuries, and workers' compensation claims impacting the organization? Some may say you can't really track that, but I think you can. By using an effective online tool in conjunction with an effective one-on-one assessment protocol, you can mitigate that potential from your highest risk employees.

By mitigating the reported risk through the elimination of awkward postures, enhanced training, and ergonomic engineering control implementation before it crosses the lost time reportable threshold, it becomes a leading

indicator. You have effectively lessened discomfort and corrected poor postural risk without loss of time to the organization. Additionally, the employee becomes more effective because that discomfort is lessened and they are able to function at a higher level because of the proactive actions taken. Simply put, the return on investment could be as follows: direct cost + indirect cost - corrective action cost (to include labor) = money saved.

This could then be translated into a timeline ROI where you could show your organization roughly how soon they will recoup their investment through the productivity increase from a healthier employee. Depending on your online assessment tool, that productivity cost may be already tracked.



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Wear it well

Sensors worn on the body are helping to prevent injuries and absenteeism by providing ground-breaking manual handling data

Eight stories high, surrounded by scaffolding and steel, a father and son team of bricklayers are building the framework of what will soon be an academic tower along the sandy coast of southwest Wales – home of the Science and Innovation campus of Swansea University.

It's a fitting locale for a lesson in enterprise innovation where hard labor meets high tech. Between the two of them, Steve and Christian Gwyn are wearing 16 tiny wireless movement sensors from an Australian-based company called dorsaVi. Throughout the Smiths' shift, dorsaVi's ViSafe sensors will track every bend, twist, and twinge of their back and shoulder muscles as they lay brick after brick after brick. Global construction giant Vinci Construction will use the objective, precision data to better understand how to improve worker safety, reduce risk and potentially lower the cost of worker injury claims. They're using the new sensors to test whether a new adjustable mortar board that rents for about a £1 (US\$1.56) per day might save them money, and the workers' backs.

"I've been laying bricks for more than 20 years and I feel it every day in my back. My son is just getting started and I don't want him to have to go through this," said 54 year old Steve.

Wearable sensor technology has exploded in the consumer market where aspirational fitness enthusiasts have demonstrated an insatiable appetite for diagnostics about their daily lives. Sensors are being built into rings, watches, glasses, contact lenses and more.

First generation devices are able to track patients' heart rates, activity levels, sleep patterns, and calories burned. New sensors are being built into textiles like socks, shirts and shoes. Investors have taken notice. A recent IPO from the wearable sensor technology Fitbit valued the company at more than US\$4 billion. One recent report from IDTechEX estimates that there will be three billion wearable sensors by 2025 with more than 30 per cent of them being new sensors that are just beginning to emerge.

Industry has long had an interest in sensor technology, but up until very recently the focus has been on the Internet of Things, where a network of physical objects are embedded with software, sensors and connectivity to exchange data and be monitored remotely. But with workplace injuries eating into profits and productivity globally, more and more companies are discovering that their most valuable assets – their employees – also have critical data to share.

And sometimes the best way to acquire that data is to utilize wearable sensor technology.

"To lose a person to a musculoskeletal injury caused by lifting equipment improperly or from a process that was poorly designed has a major impact on our business," said Sean Watters, Emergency Response Unit Manager for London Underground. "We have four teams around London waiting to respond at any time and we can't afford to have these people lose work days to injuries."

When it comes to 'old school' industry, it doesn't get much older than Transport for London, the enterprise that runs the 152-year old Tube.

The London Underground hired dorsaVi to help them assess their existing safety processes and help them prioritize safety features for a fleet of new emergency response vehicles. TFL is trying to reduce or eliminate manual

handling risk for its employees. The dorsaVi sensors are informing their buying decision before they commit to a significant capital purchase.

"For us, ViSafe is the next step forward in reducing the risk of harm to our employees and others within London Underground," said Watters. ViSafe is a wireless sensor technology that tracks and measures how people move in real-time work situations, so companies can assess risky movements with hard data, not hunches, and then design fact-based solutions to create a safer work environment. The ViSafe system consists of wearable motion sensors, software, and sophisticated algorithms that provide an objective, quantitative overview of workplace physical activity. The ViSafe team analyses the data and video footage to pinpoint risky areas of repetitive or sustained movements that can lead to injuries.

Workplace injuries are an expensive global problem. In the US, companies will spend \$80 billion on workers compensation claims this year. In the UK, 8.3 million work days are lost due to musculoskeletal disorders (MSD), which make up 42 per cent of all work-related illnesses. MSD can become a chronic condition affecting an individual's long-term health and quality of life, yet other programs to prevent workplace injury are, on the whole, doing little to curb the growing burden of workplace injury and recovery. As a result, employers and insurers are actively looking for more effective, objective solutions based on fact, not guesswork.

Wearable technology now offers employers the opportunity to take risk assessment to the next level – providing an in-depth understanding of the demands that a given task or job is putting on the human body. Being able to gain, for example, a combination of accurate movement data and muscle activity information from real situations

on-site, whether in a warehouse, in an office or a hospital, is unique. Giving employers insight into where injury risks might occur – such as when a worker is lifting heavy objects or if they twist or turn in a way that places strains on the body – helps them champion initiatives to address the risk and to prevent injuries from occurring and provide a safer workplace.

Wearable tech is quickly becoming a critical new tool to significantly advance the work that ergonomists and OHS professionals do every day in reducing workplace risk. It can add objective data about movement that the human eye simply cannot see; complex movement patterns, muscle activity and the effect of fatigue over longer periods of time. Wearable sensors enable monitoring over time, over a whole shift perhaps, which adds a new depth to the data OHS professionals have to hand. This all allows companies to make important investment decisions to ensure they are creating and maintaining safest work environments possible.

Getting employees back to work and keeping them healthy is another huge issue for employers. According to the Workers Compensation Research Institute in the US, the average employee injury keeps them away from work for seven working days. For more serious injuries, it's much longer.

That's lost productivity for companies and an economic burden on the employee's family. In the UK if someone is off for four weeks, their probability of a prolonged period of time off work increases significantly, yet in many workplaces return to work OHS activities only begin at this four-week point.

Using wearable technology to establish the functional requirements of a job is the next step in improving return to work programs. Understanding the physical demands of a job accurately and objectively means that return to

work can be better managed with risk controlled, and better outcomes for the individual and the company.

Back in Wales where the Gwyn family wound down their shift, the sensors provided some interesting insights for Vinci. By using the new and adjustable mortar board (developed by one of their own entrepreneurial employees, by the way), the sensors documented an **84 per cent reduction in low back muscle activity, and up to 70 per cent reduction of high risk movements**. Plus, an important insight was the **confirmation of a 17 per cent increase in productivity** (bricks laid per minute) when using the new adjustable mortar board versus the old way of doing things.

Wearable technology is a valuable tool in the life cycle of workplace health and safety and therefore should be a critical part of the occupational health and safety plans of a business. By providing an objective and accurate source of data on worker movement, potential injury and by acting as an aid to rehabilitation, this technology takes the guesswork and high costs out of current workplace health and safety practices.



dorsaVi is an Australian company with operations in the UK and United States. dorsaVi is currently working with companies in Australia, the United States and United Kingdom including Caterpillar, Sodexo, Vinci, Transport for London (London Underground), Skanska, Allianz, Crown Resorts and Orora. For further information www.dorsavi.com



Give me back my cube!

Lessons learned and best practices for creating the workplace of the future. By Rick Spencer, MS – Head of Prevention and Optimization at Briotix

You have lost your cube or office. If you haven't, you will be very soon. Why? Because open workplaces are the future. They encourage collaboration and transparency, and, well... they are the best. Not convinced? Will the idea of a private workspace soon become extinct, with cubicles becoming merely an exhibit in museums highlighting a lost work practice? Or is there a need to strike a balance between the open workplace and the need of employees to perform focused work in a cognitively demanding world? Let's take a look at what you need to know to be a player in this initiative at your organization.

Based on research from IFMA (International Facilities Management Association) over 70% of employees work in an open environment, and the dedicated space for employees is on a rapid decline (from 225 sq. ft. in 2010 to 190 sq. ft. in 2013). While many proponents of open work environments tout the benefits of learning and culture, many organizations are designing their workplaces with the goals of reducing costs (real estate, energy, furniture). How did we get here? Time to look to the past to understand “work”.

The beginnings of most modern economies started with home based craftsman occupations. Think of a butcher, a baker and a

blacksmith (c'mon – candlestick maker!). The jobs had high task autonomy and low cognitive demand. With industrial revolutions we move to factory or office based work (low task autonomy and low cognitive demand). Most economies have moved to a modern occupational setting where there are increasingly skilled employees who are industrial or office based, having moderate task autonomy and moderate cognitive demand. The next level? The digital occupation. Highly skilled “free agent” knowledge workers who are information and team based, with moderate to high task autonomy and high cognitive demand. So what does this history lesson have to do with the workplace of the future?

Employees now have more freedom with how they spend their time (task autonomy), but more mental pressure with constant deadlines and pushes for innovation, problem solving and knowledge acquisition (cognitive demand). This introduces one of the first challenges with open workspaces. Balancing the opportunity to collaborate with the need to eliminate distractions. One solution is to go back to our past, homeworking. While this working environment has shown increases of productivity by as much as 20%, due to a reduced feeling of observation, most organizations have failed to move their ergonomics programs to the home office. This

leaves many home workers with increased discomfort, eliminating or reducing any potential productivity advantages.

Now that we know the journey of the worker, we can begin to focus on the present and consider the implications of “place”. Most implementations of open workplaces are taking on a similar path. They start with a space use survey to understand how groups use their space. However, many of these surveys focus more on amenities than work – if you build it (comfortable and cool), they will come. The rest of the surveys turn to a focus on work situations (i.e. meetings, private time, collaboration and storage). A typical result is then a space plan that tries to accommodate as much as possible in the minimal amount of space. While the aesthetics can be inviting and even inspiring, the core components have become quite predictable (open working desks, huddle/private rooms-phone booths, meeting rooms and some café/lounge area for collaboration). What's missing? These plans consider situations – how much time do you spend in meetings, private phone calls, working at your desk? The missing element is the study of how these knowledge workers move from information to deliverable. This is where the present focus for designing the workplace needs to consider personas. Some may think of persona as a character from the arts, or user group (marketing), and even the method for creating use cases in software design. In our case, we simply want to categorize types of workers. When we use a persona, we want to focus on empathy, understanding motivations/perspectives/issues, identify engagement options, and anticipate and overcome objections.

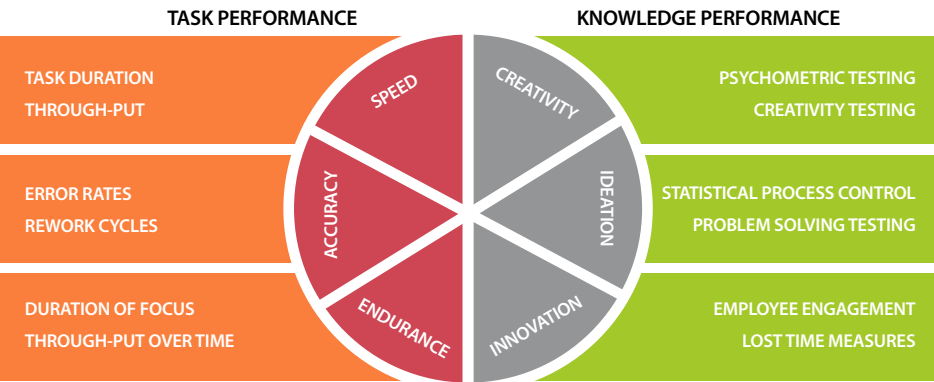
Briotix uses 5 main personas when assisting clients with workplace planning. Most open



workplaces cannot easily accommodate those that are desk tethered (i.e. call center or surveillance positions) or desk assigned (employees who keep the same desk each day), so we will not focus on these personas. However, consider the “highly mobile” persona. If the highly mobile worker is given an assignment that requires collaboration and delivery of content, where do they start? Do they go to the open work area and start a conversation (potentially interrupting others), or do they schedule a meeting in a room? What do they do when they have to focus on delivery? Do they go the work area, and battle with distractions, do they use a private room? These questions illustrate the gap between open space plans and the knowledge worker. Not only are these scenarios missing from the plan, they can differ with each work group that has different working protocols, technology and micro cultures. Once these personas are integrated into the plan, the organization has to consider how it can help employees learn these new behaviors. Most organizations role out a general orientation to the new workplace. However, lacking the persona based use cases, employees quickly begin to develop rules and practices that were never intended for the space.

Considering the challenges presented by the digital knowledge worker, and the gaps that exist with open workplace plans that don't accommodate persona thinking and

behavior change, what does the future hold for the results of the future workplace? The answer is productivity. While many of you managing an ergonomics program may still think of productivity with knowledge workers as the “holy grail”, and only something that can be applied in industrial settings, there is hope. The following image looks at data that can be measured to demonstrate both task performance and knowledge performance. Some of these items (error rates) are easy to measure with tools that you can implement – see www.efficiencysoftware.com. Other measures may be already implemented at your organization (employee engagement).



The bottom line is that the tide driving the workplace of the future is one of reduced costs. While some progressive organizations aspire for the additional benefits of these “places”, the lack of measurement on the gaps will keep employees from performing at their best. To deliver a durable workplace of the future, the typical players who are creating these plans need the experience and perspective of those involved in ergonomics. This article is for those that will fight for a seat at the table, hopefully you! If you have questions or want to discuss further, we welcome the conversation (contact@briotix.com). See you in the future!



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Sustainability & ergonomics – the easy bedfellows

Going green presents a great opportunity for ergonomic advancement, as Jessica Ellison and Danny Nou explain

By integrating ergonomics into sustainability there is a huge opportunity for ergonomics professionals to capture attention in the boardroom. This visibility will help get programmes and solutions funded and bring ergonomics into strategic boardroom discussions, which can result in more proactive programmes. This will benefit not only employees but can triple the bottom line of the company.

Sustainability is an important trend for ergonomists because it will be around for a long time. The concept of creating economic value through environmental and social impact has come to the forefront in business around the world. The 'green' label has captivated corporate mindshare and corporate funding. Recently, the Hedge Funds Review showed that more the

\$13trillion has been invested globally in socially responsible companies that demonstrate strong sustainability practices. Investors are making an impact on the world by putting money into investments that are listed on the Dow Jones Sustainability Indexes or the FTSE4Good index series. Socially responsible investment funds like Calvert and Domini will buy shares only in socially responsible companies. This is affecting decisions in boardrooms around the world and driving change without resorting to the stick of regulation.

Corporations are even restructuring to organize for sustainability. Many Fortune 500 companies such as Google, Verizon and Ikea have corporate sustainability officers (CSO) and/or vice presidents of sustainability,

according to the New York Times. The fact that sustainability is being given as much attention as the CEO, CFO or COO speaks to this movement's longevity.

Corporate sustainability initiatives can provide many benefits to companies that voluntarily commit to the movement. The most obvious examples are the millions of dollars that have been saved. According to the MSNBC, Wal-Mart has shown that by improving the fuel efficiency of its fleet by one mile-per-gallon it could save between \$35million and \$50million. GreenBiz.com reported that Alcoa had implemented and energy reduction strategy that had already realized \$20million in savings.

In another example, the IRS won an award from Telework Exchange for a pilot telecommuting programme of 150 participants that reported real estate savings of \$585,000. After all, if people work from home the organization does not even need to construct a building.

In addition, companies are learning that practicing sustainability gives them a higher ability to recruit and retain top talent. A survey by MonsterTRAK.com showed that 92 per cent of generation Y employees (people born between 1977 and 2002) are more likely to work for an environmentally friendly company. And according to a USA 2008 Workplace Insight Survey, Generation Y workers are willing to sacrifice six per cent of their salary to work for a green company as opposed to a traditional one, reported Cosemindspring.com just last year.

Linking up with ergonomics

Ergonomics shows value by having a direct and positive financial impact on the company's bottom line and affecting the lives of people by creating a more sustainable work environment. Ergonomists need to know how to market their programme internally and take advantage of the sustainability trend by making connections where they exist in both programs.

These links can include people, corporate responsibility reports, green building certification and telecommuting programs. Various ergonomic associations offer plenty of information on how to achieve these goals. Darryl C. Hill is the president of American Society of Safety Engineers. He says, "Safety should be viewed as the cornerstone of the people component. In this context sustainability means implementing and maintaining programs that keep people safe,

facilities intact, communities protected, supply chains secure and the organization's mission uninterrupted. Sustainable organizations are, by definition, safe organizations, and we play a key role in ensuring that safety."

On its external corporate website Xerox states, "Xerox creates safe and efficient products, maintains a safe workplace for our people, supports health and wellness programs and reduces injury and exposure to hazardous materials."

Nintendo of America reported in its corporate sustainability responsibility report that it has an ergonomic task force focused on annual training of fixed and non-fixed workstations.

On its corporate sustainability responsibility report, Hormel Foods noted that injury

prevention was a key focus in its ergonomics programs. The company even went as far as showing the soft tissue incident rate and its steady decline year by year. There are more examples, but the clear message is that the link between companies' sustainable programs and their ergonomic programs is that both focus on employees and their well-being.

Right now more than 40,000 projects are participating in the commercial and institutional Leadership in Energy and Environmental Design (LEED) rating systems. Organizations from all 50 states and 117 countries participate, according to the US Green Building Council.

A good ergonomic design is one that creates and maintains a flexible ergonomic environment that properly accommodates building users and promotes healthy, comfortable and productive work. Office ergonomics is a separate line item credit point in the indoor environment section of the LEED rating system, according to Alan Hedge, director of the Human Factors and Ergonomics Laboratory at Cornell University.

What is great for companies who already have an established ergonomics programme is that they simply need to document their efforts and possibly make a few small changes in order to qualify for this point. This is a great opportunity for ergonomists to start getting involved in the design phase and become more strategic and proactive to prevent injury rather than reactively dealing with employees once they are injured. This point further strengthens the role of



ergonomics in supporting sustainability initiatives and focusing on environmental awareness.

Telecommuting is often a centrepiece of corporate sustainability programs. CNN's Money Report on the best ten companies to work for showed that 82 per cent of these organizations allowed their employees to telecommute at least 20 per cent of their time, and the top five have 80 to 86 per cent of their workforce regularly telecommuting. These programs have been shown to reduce the carbon footprint of companies and increase productivity at the same time.

This disadvantage of telecommuting is that the ergonomic risk for computer-based employees are the same as the risks that employees in the corporate office. Many companies have not established a system to address the off-site ergonomic concerns, and some are struggling to devise cost-effective methods to address ergonomics in remote and home offices. However, regulations about workers compensation and rules from the US Occupational Safety and Health Administration and the European Union still apply to those who work outside of the corporate office. Therefore, it is important for companies to establish programs that address ergonomics for workers in telecommuting programs. Some agencies and groups already are recommending that ergonomics be included in the telecommuting policy, including the Environmental Protection Agency, Telecommute, Connecticut, Microsoft Business, the County of San Francisco and others.

Future Links

This seems to be just the beginning of the link between ergonomics and sustainability.

Other ideas where the link could be made include employee recruitment and retention. Organizations can publicize the fact that they make sure their employees have comfortable workstations that are designed with ergonomic principles in mind. Venues to announce the information include a company's corporate sustainability responsibility, press releases and its website.

The industrial engineering focus on lean manufacturing also links up well with ergonomics and sustainability. Ergonomics can improve cycle time and lean metrics, which in turn drive improved safety and profit.


In the future there may be an opportunity to bring technologies together for ease of use, reporting and communication. For example, the tool may be able to assist home office workers in setting up their workstations ergonomically and help capture the true carbon footprint of the company by collecting data on the number of commute miles saved, along with energy and water use. Such information can influence sustainable practices in the home.


Ergonomics initiatives have many parallels with sustainability goals. The two can function effectively as an integrated programme rather than two distinct policies. Ergonomists should start by making an effort to find out who is leading sustainability at their company. You can introduce yourself, share this article and discuss possible common goals. Industry is going greener and sustainability offers a huge opportunity for ergonomists to sustain sustainability efforts and reap the benefit of being allied with such a strong and well-funded movement.





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The trouble with backpacks

Chiropractor Rosina Ghassemi looks at the problem of children carrying overweight backpacks and offers some advice to combat the damage that is being done to young people's bodies

Many kids today prefer to use backpacks to carry their stuff to school. These bags allow them to carry weight on two shoulders instead of just one, and they also leave the hands free for other stuff like smartphones. Also, most kids just consider them cool, especially compared to the alternatives.

But what's not cool at all about backpacks is that they can actually cause some harm to your kids. In 2001, emergency rooms across the US saw a total of more than 6000 cases of injuries to children related to carrying a backpack.

A lot of the problem has to do with overloading. A recommended weight of a backpack should not exceed more than 10 per cent to 15 per cent of the child's weight. It's a simple formula: Student's body weight x 0.10 = total weight the body can handle in the bag.

For example, if your child weighs 80lbs the weight of his backpack should not exceed 10-15lbs. But about a quarter of all young students bear more than 20 per cent of their body weight in their backpacks. Today thousands of young students carry backpack loads of more than 25 to even 30lb.

When children carry these loads they become tired and they don't adjust their strides like adults do. Instead, they compensate for the inordinately heavy load by dropping their heads a lot more forward, and they exhibit uneven posture.

These reactions cause a stress on the body with both short-term and long-term implications. The stress causes immediate effects on posture leading to a tendency to slouch all the time.

Children may also have problems such as

headaches, neck pain, shoulder pain, muscle soreness, numbness and tingling.

If the problem isn't corrected, then this stress can eventually lead to some long-term damage to the spine. This problem increases the likelihood of back pain as an adult. Of course computer use, texting or video games inflict added harm and damage to the spine and the growing bodies.

There are certain incognito posture supports that are created and designed by chiropractic doctors that help avoid poor posture and allow the body to be supported while under daily load of backpacks. They can be found quite easily online but adults with responsibility for the well-being of children and young people should seek professional help if they are concerned.

Exercises to counteract constant backpack weight

According to some experts, the best exercises to counter the effects of backpack use involve strengthening the muscles involved in carrying a backpack.

Exercises to strengthen the abdominal muscles should be done about three times a week. One example is crunches on a medicine ball, and two sets of eight to 12 crunches are recommended.

Another good exercise is the bicycle manoeuvre. You lie down on your back with your legs outstretched and your hands behind your head. Then pretend that you are riding a bicycle by alternately bringing your right knee towards your left elbow and then your left knee towards your right elbow. Two sets of ten to 12 repetitions should suffice.

Lower back exercises should also be done. One exercise has you lying down on your stomach, while you tighten one leg and raise it a few inches off the ground for ten seconds. Do the same thing for the other leg. You can do the exercise about five times.

Finally, the upper back and shoulders should also be strengthened. Push-ups are good examples of this kind of upper body strengthening exercise.

To encourage your kids to do these exercises, maybe you can do the exercises with your kids. It will help keep you healthy as well!



Dr Rosina Ghassemi DC is a local practitioner and her baX-u posture support won an innovative product of the year award in 2014. For more information about Dr Ghassemi and her work on community posture evaluation visit SanPedroChiropracticAndPosture.com



Employers need to give more support to mental health

Poppy Jaman explains why mental health is a growing issue for employers and describes how one big organisation is doing something about it

One in six UK employees will experience a mental health issue during their working life. One in four people in the UK experience a mental health condition in any one year and depression and anxiety affect 20 per cent of the UK working population.

It seems sensible that mental health first aid should be considered as important as physical first aid, both in the workplace and in society generally. Employers should train staff in mental health first aid so mental health issues can be better identified and those affected can be supported and signposted to appropriate treatment by trained employees.

Mental ill health covers a range of conditions, each with specific signs and symptoms. Mental health first aiders (MHFAiders) are trained to be aware of these and guide the affected person to relevant support. Mental health first aid and physical first aid should go hand in hand and all businesses should have employees able to provide support in both areas.

Very sadly, in recent months the media has

reported a number of high-profile people completing suicide – each as a result of poor mental health. These serve as stark reminders of the tragic consequences that mental ill health can have on an individual and those around them.

Raising awareness of mental health and the risk of suicide continues to be as important as ever, but much like physical first aid, the situations that an MHFAider might encounter are not always life-threatening. Put simply, if an employee breaks their arm in the workplace, the first point of call will be the trained physical first aider. If the same person showed signs of having a panic attack, who would be qualified to support them?

By training people in mental health first aid, we are teaching participants how to spot the signs and symptoms of the most common health conditions and how to guide the affected person to appropriate support. With over 103,000,000 people in the UK already MHFA trained, our mission is to train one in ten people in England to be qualified MHFAiders.

Sadly, mental health in the workplace is a

growing issue, but one that employers are able to contribute to positively. Having staff appropriately trained so that they can help their colleagues, support them as necessary and point them to professional help can contribute to the overall well-being of both employees and businesses as a whole.

Dan Labbad is the CEO of international operations at leading international property and infrastructure group Lend Lease. He spoke at a recent leadership conference and put the issue of mental health firmly on the agenda.

“Those working in the construction business are six times more likely to die from suicide as a result of depression than falling from a height,” said Mr Labbad.

He is certainly not alone in his view that construction companies should be investing far more in protecting and supporting the mental health of their employees. The Trade Union Congress TUC states in its Time to Change manifesto that: “Occupational stress should be given the same priority as injury prevention by employers.”

But what should the construction sector be doing to promote good mental health and how can it support employees when a mental health issue arises? Lend Lease has invested a significant amount of time and energy into working out how, as a leading international property and infrastructure group, it can provide meaningful mental health support to its workforce. Leading the way in the organisation is the newly created Mental Health Working Group. This purpose-led group has recently started to roll out an internationally recognised mental health awareness training programme called Mental Health First Aid (MHFA). This training has

been funded by the Lend Lease Foundation programme, which invests in its employees’ health and well-being.

Martin Coyd, Lend Lease’s regional head of environment, health and safety in Europe and head of the Mental Health Working Group, says, “The construction industry has a stereotypically macho reputation and, perhaps as a result, mental health has not been something that people have been prepared to discuss openly, but that doesn’t mean it’s not an issue. Working away from home, long hours, pressing deadlines, environmental conditions and high levels of physical exertion are all factors that we have recognised could contribute to a person’s stress level and mental health. That’s why we decided to invite employees to join the Mental Health Working Group.

“The reaction amongst staff to the launch of this initiative was tremendous.”

A fully qualified MHFA instructor himself, Coyd continues, “The introduction of Mental Health First Aid into our business is an important step in the right direction, because we are not only breaking down the stigma that is so often associated with talking about mental health, but we are providing a first point of call for someone who might be experiencing a mental health issue. So far, out of our 2,500 employees in the UK, we have 80 trained Mental Health First Aiders, with further training courses arranged. We have posters up on every floor in every Lend Lease office in the UK identifying who our qualified MHFAiders are and how to contact them.”

The Mental Health First Aid educational course teaches people how to identify, understand and help a person who may be developing a mental health problem. In the same way that we learn physical first aid, MHFA

teaches people how to recognise those crucial warning signs of mental ill health, provide help on a first aid basis and effectively guide others in the right direction towards support. By offering MHFA training, Lend Lease is sending out a message to its employees that mental health is not something to be ashamed of or embarrassed about and that the earlier someone is supported, the more positive their recovery will be.

With more than 80 MHFAiders throughout the organisation, Lend Lease is encouraging its employees to look out for one another and offer support when it is needed. The model adopted by Lend Lease is one of cultural change and is a hearts and minds exercise. It is not about allocating a person to become responsible for all matters relating to mental health but about educating and increasing mental health literacy throughout the organisation so that the emotive subject is no longer taboo.

Along with the continued roll-out of MHFA in the UK, Lend Lease has also introduced a mandatory stress awareness course for every employee. First Assist, the company’s Employee Assistance Programme is also promoted widely as a fully funded support service for those who may wish to speak to someone in a more anonymous setting.

Lend Lease is recognised externally for best practice in this area and was the only company in its sector to be included within the Confederation of British Industry (CBI) report Getting Better: Workplace Health as a Business Issue. This report was highlighted for its approach to health and well-being, including mental

health as one of its six focus areas. Further to this, Lend Lease is one of the founding members of the City Mental Health Alliance – a coalition of organisations that have come together to improve mental health in the City of London. The CBI report said, “Sound physical and mental health are essential both to Lend Lease’s employees and the communities in which they operate. The firm is developing a mental health management strategy which includes detailed impact measurement.”



Poppy Jaman is an internationally respected mental health advocate, national policy advisor and the CEO of successful social enterprise, Mental Health First Aid England (MHFA). With 18 years’ experience of influencing and leading change in public mental health, Poppy has worked in a number of roles which have required her to challenge the public’s perception of mental ill health. To find out more about MHFA England and its workplace training visit www.mhfaengland.org or email info@mhfaengland.org



Let's take it easy... and do more

Health and safety requires a long-term approach that sometimes conflicts with the short-term needs of both employer and employee.

Stefan Imjker thinks he has the answer

A recent survey of consultancy firm Morgan Redwood revealed that worker morale dropped significantly between 2009 and 2015. This was alarming news, since worker morale is the direct driver of employee productivity.

The recent economic crisis left organisations with fewer staff than before. Also we see increasing customer demands in both the public and private sector that organisations need to satisfy. You could argue that worker morale has never been more critical.

In the Morgan Redwood survey there was a large discrepancy between the priorities of management and the factors driving low worker morale. Management prioritizes improving the entrepreneurial culture and team work, whilst three important factors contributing to a lower morale were poor work-life balance, increasing pressure to perform more during a workday and increasing general work stress levels.

Fewer staff need to have a deadline focus to complete large amounts of work and at the same time need to be creative in order to

respond meaningfully to a rapidly changing environment. If we could boost worker morale and solve the concentration-creativity paradox, maybe we could solve the short-term needs of both employer and employee.

The main cause of low worker morale is stress. Stress is the situation in which a person feels a lack of control over a situation. Stress is needed for a deep focus on one thing – think about a deadline forcing you to action. On the other hand, stress kills creativity, since for creativity the requirement is to think about a lot of things in a general sense and combing them in an unusual way. Creativity is what employees with too many tasks need and what organisations need to respond to changing customer demands. We need to find a way to de-stress and enhance creativity.

What do you do to solve a really hard problem at work? Stick at it or leave the problem for a while and maybe get a good night's sleep? And when do you often get that 'Aha!' moment of sudden insight? Science tells us these moments are usually when you are not working. You can't push your brain to creativity, but you can help it.

Ten minutes of walking, especially in the afternoon, changes the way you look at problems and increases creativity. You provide your brain, especially the unconscious parts, some time for reflection on their own while walking breaks down your stress hormones. Your brain calms down and gets thinking time. That's where creativity comes from. In order to solve a really hard problem, you're better walking away from it.

Creativity is closely related to our memory. If we can't remember things by heart, how can we then combine them in an unusual way? In our brain we have a seahorse like structure which is called the hippocampus and is located just above your ear. This structure is essential in storing and remembering past experiences. During their years of training, cab drivers in London show an increase in cell density in their hippocampus, especially among those who pass the exam. So learning strengthens the hippocampus, like gym work strengthens a muscle. When we are in a gym we generally do an exercise, take some

rest, and perform maybe two or three more sets with some rest in between. Then we rest for a day or two before working out again. We do this so our muscles have the chance to get stronger. Not taking enough rest time in between leads to injury: our muscles get weaker.

In the workplace this works the same way. Working under high stress levels makes your hippocampus actually weaker. Studies have shown that new brain cells formed in the hippocampus literally die off in a situation of constant stress. If stress damages your creativity muscle, it makes sense to add some breaks.

It has been known for some years that our concentration cannot be extended for hours. Our reading comprehension drops off sharply after an hour, filling out forms by combining data goes slower after an hour and keeping the pace constant results in more mistakes being made.

Employees who do not take breaks are doing a disservice to themselves and their organisations.

First, this leads to lower concentration levels. The pace of work drops and/or more rework needs to be done to correct mistakes. It takes longer to finish tasks. In addition, the number of tasks piles up. Not walking away from work leads to lower creativity levels. Reflection on the available tasks and the most important is non-existent.

'Don't complain, just work harder' is the motto. In the end we are working longer and longer hours. We have less downtime to work on the nicer things in life like hobbies, families and friends. Because there is less downtime after work, and no time to work out after work, stress levels remain higher. This causes sleeping problems. And for high performance we need at least seven hours of sleep. Little wonder, then, that poor work-life balance and high work stress levels are being reported. The fix is taking more breaks, including down time after work, and move around more.

The benefits of this approach are well known in the traditional health and safety realm. Taking breaks during VDU work alleviates discomfort

and pain. Movement does as well. Preventing too much time working is a preventative action for burn-out. Sitting has been declared the 'new smoking' by British-born professor James Levine. Sitting all day shortens your life by years. Hot off the shelf research from the US with subjects that wore measurement devices to record movement throughout the day shows that we can balance the negative effects of sitting by walking two minutes for every hour we are awake. To live a few years longer, start taking some small walking breaks throughout your working day.

We need to change how employees and organisations are working. They need to take more breaks in the first place. Most employees know it is important to take breaks, but they simply get caught up in work and forget to take them. Reminders are simply needed. This is where software such as CtrlWORK from Efficiency Software can help employees. CtrlWORK informs employees about the positive effects of taking breaks on concentration, creativity, health and, most importantly reminds them to take a break.

We need to change the way we work by taking more breaks and moving more. Employees will get their work-life balance back by taking more breaks and walking more during work and having more downtime in general. Organisations will benefit from the enhanced concentration and creativity by boosting worker morale, employee productivity and responding better to the rapidly changing customer demands.



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