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Welcome

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

This is the third magazine we have produced following the popularity of the first issue of *Connect* and *Fleet*, the road risk management magazine we launched in spring.

We have had some very encouraging feedback on both magazines and this has spurred us on to add this ergonomics special to our publishing portfolio.

Some of you might be wondering why a risk management and health and safety training provider would want to get involved in publishing when there are so many great magazines out there already. It's a fair question and when we look at the resources required to create something like this, I don't blame you for asking. I have wondered myself!

But I think the answer lies in our commitment to great customer service. Cardinus has a very deep relationship with its customers – we know most of you personally and we care about you and your businesses. This close relationship allows us to produce magazines like this, that we know are full of topical, relevant articles that will help you to manage risk in your businesses effectively. So each magazine we produce is made with our knowledge and understanding of our customers' needs in mind.

Another reason we choose to do this is because we can, and we can do it very well. The way we work and the way our organisation is structured, we can invite the world's expert professionals to contribute. The list of

people available to write about their area of expertise in our magazine reads like a health and safety *Who's Who*.

Bringing together contributions from renowned experts is something Cardinus has always been good at – our health and safety forums and annual user group meeting are testament to that. And in this issue we have assembled some expert ergonomists to inform and advise you.

The world of ergonomics is very diverse and this issue of *Connect* reflects this. Professor Nick Nunnington looks at the changing demands of 'always-on millennials', or 20-40-year-olds, in a working environment. From there we look to the young and how to make sure children are sitting properly at school; and then we go to the very youngest and consider the ergonomic challenges of protecting staff during pregnancy.

At the other end of the scale, quite literally, Cynthia Roth looks at the effects of an ageing workforce. We also have expert-written articles on smart working, sit/stand furniture and travel comfort, while my contribution is an article on stress – a subject I can now relate to, having added 'author' to my ever-growing list of duties.

I hope you think our efforts have been worthwhile and that you enjoy the magazine. If you have any questions for me, my team or any Cardinus partners please do not hesitate to contact me on 020 7469 0200 or by email jon.abbott@cardinus.com



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Game changer

Four ways smart working is changing the game for ergonomics, according to flexible working expert **Andy Lake**

There's a new world of work emerging, creating new contexts for ergonomics. As signs of the changing times, in the UK we've seen two government initiatives this summer. First, the introduction of a right to request flexible working for all employees. And second, the publication of *The Way We Work – A Guide to Smart Working for Government*. This advocates, among other things, 'flexibility as normal', new smart workplaces and new technologies for the civil service. Many leading organisations are already in this space and moving forward fast.

Specialists in ergonomics and occupational health need to keep pace with this rapid evolution. Here are four ways that these changes provide new challenges:

1. Smart working environments in offices create many new shared spaces for work.

We've become used to a combination of desk work and meeting rooms for working. An assigned desk – open plan or in a cellular office – with a desktop computer and screen. This was never a good way to work. Excessively sedentary and typically with poor acoustics in open plan, we can happily say goodbye to this norm.

Instead modern workplaces have a range of 'activity-based settings'. You choose a space to work in according to the task you are doing. Typically spaces comprise unassigned desks (usually in a team area), informal breakout areas, formal meeting rooms of

various sizes and furnishings, confidential pods, small unbookable meeting spaces (sometimes time-limited), areas for standing while working, confidential pods for calls and conferencing, quiet areas and cafés. Challenges include people knowing how to adjust chairs, desks and screens in shared desk areas, postural issues in areas of soft seating and issues around prolonged use of portable devices (see below). Having input into the design of new spaces is important for ergonomists.

2. Work is everywhere

Work previously confined to the office is becoming ever more mobile owing to the portability of devices and all-electronic processes allowing information and systems to be accessed from anywhere. In effect, most office workers can be mobile workers, at least some of the time.

The new context here for ergonomists is the rapidly changing nature of the devices we use – primarily laptops, tablets and smartphones. As well as postural issues there are issues around prolonged use of tablets and smartphones as input devices.



Understanding the nature of the work being done is important, and recommending the appropriate solutions, if needed, such as attachable keyboards for tablets. Or it may be using alternative devices when appropriate, which should not be a problem with cloud-based systems or synchronisation of devices, if systems have been set up correctly.

Work is also in many places over which the company ergonomist has no control – homes, cafés, work hubs and transport. The activity-based settings in the office are in many ways designed to replicate the comfort and advantages of these alternate settings. So training given for the smart workplace and the spaces beyond should have much in common.

But for the ergonomist the spaces beyond are more concerning, as they are out of direct control. A mix of training and online self-assessment processes are key parts of the solution.

3. It's not just work that people do on portable devices

If you look around on public transport and in public places, people are using portable electronic devices all the time. And they use the same devices for recreation and for work. So where does a company's responsibility begin and end when boundaries blur like this? If someone reports with an RSI-related problem, is it a result of their work, or the fact that they spend hours gaming or on non-work social media?

'Bring Your Own Device' approaches, often

referred to by the acronym BYOD, help companies keep up to date with new technologies, and can satisfy employee aspirations for working with the best or their favourite devices. But it heightens this issue around boundaries of responsibility.

4. New interfaces and the demise of the desk

We are on the edge of a further evolution of workplace technology. Input devices are changing. The mouse is no longer required for touchscreens on phones and tablets. Gesturing is now routine for gaming with Wii and Xbox, and will come to a workplace screen near you soon.

The keyboard will become less significant. Already 'soft' keyboards are used on tablets and phones. And with the arrival of truly intelligent artificial intelligence, voice recognition is poised to leap forward. This will reduce the need for a keyboard.

Just stop a moment and imagine the office of the near future, full of people talking to and gesturing to devices, screens, smart walls and surfaces. And these will talk to us. What will we need? Headsets, for sure. Good ones, with effective noise-cancelling. Better office acoustics. And appropriate spaces to go to when we need to escape the hubbub.

And what won't we need? The traditional desk. With no mouse, no keyboard, no desktop phone (thanks to unified communications routing calls to computer or smartphone), what is the desk for except putting your coffee on, and maybe your feet? It's worth thinking

about what this will mean for the traditional focus on correct desk-and-chair set-up. Instead there will be range of types of seating and (mainly small) tables, and a range of screen interfaces: some fixed, some adjustable and many portable.

The latest report from the smart working website Flexibility.co.uk, *It's Work But Not As We Know It*, explores these and other wider impacts of the changing nature of work.

It's both a challenging and exciting new world of work that is already coming over the horizon – and we can look forward to the new ergonomic solutions that will support healthy working, in a world where work is everywhere, and talks to you.



■ **Andy Lake is a specialist in smart and flexible working and editor of Flexibility.co.uk, the online journal of flexible work. He has been involved in dozens of implementations of smart working and conducted leading-edge research into its impacts. In 2014 he produced the new guidelines for smart working in government, for the UK Cabinet Office. His management book Smart Flexibility was published by Gower in 2013.**

Now is the time to take a stand

Our sedentary lives are making us unhealthy. **Guy Osmond** reports on a new trend in UK office furniture that has had foreign workers making a stand on health grounds for years

Sit/stand office desks are still seen as a bit of a 'new thing' in the UK but they have been around for about 20 years and are much more common overseas.

UK employers have started to sit (or stand) up and take notice due to the genuine and substantial evidence that sedentary lifestyles can lead to type-2 diabetes, cardiovascular problems and obesity. Whilst it may seem immediately obvious that too much sitting and not enough exercise might lead to obesity, this combination of likely outcomes represents a major cause for concern. Employers know that these sedentary lifestyles are common among their office workers.

In exactly the same way that a good chair will be wasted unless the user has been trained to adjust it and take advantage of its features, a sit/stand desk option will not benefit individuals fully unless they know when to use its different modes, how to do so and for how long.

So what should employers be thinking about to ensure they don't look back in a few years and think "what a waste of money"? First, don't be bullied into unplanned, knee-jerk action. Whether the pressure comes from

an individual employee or an external third-party warning of dire consequences, you need to be clear about the decisions you make and their likely impact on your business.

Next, look at what work your people are doing. How do they work now? What activities would be done better standing? Or walking? If you have never explored the concept before, this is an excellent time to look at an activity-based working (ABW) approach. Unless you are moving premises or carrying out a complete refit, full ABW will probably be too radical for your organisation but understanding the underlying concept will inform your decision making and allow you to consider the more distant future.

Then see what furniture and space you already have. Are there areas that would lend themselves to different ways of working? Could existing break-out areas be adapted? You probably have areas that have never really worked in their current format: might they achieve that elusive popularity if they were redeployed with sit/stand furniture? What about some sit/stand workstations at the end of each row of sitting desks? Or are there any desks that could be easily adapted to sit/stand?

Sometimes such an adaptation requires hardware on top of the desk but it might be more effective to retain the desktop and simply replace the standard framework underneath it with a sit/stand mechanism. And don't forget meeting tables: could some of these be standing versions instead?

Having thought about what might be done with the furniture, you need to think about the impact it will have on your people. Will it change how they communicate with one another? Will some people feel claustrophobic if others are standing over them? Will everyone have access? If you decide to start with a small number of units in a 'hot desk' environment, will they be hogged by a minority who prevent others benefitting?

It may sound trivial but don't forget the IT infrastructure. Make sure there are lots of extension cables available for mains, keyboards, mice and peripherals.

Finally, plan your training. Ensure people understand the benefits and know how to use the equipment. And that they know how to stand!



Guy Osmond is managing director of

Osmond Group, a privately owned, innovative product supplier in UK workplace furniture and ergonomics.

Osmond Group offers a range of ergonomically designed products, including office furniture and computer accessories which help organisations improve the productivity and wellbeing of their personnel. See

www.ergonomics.co.uk

Working with the bump.

Chartered physiotherapist **Jonathan Daniel** discusses pregnancy ergonomics

For a baby to grow and develop, a woman's body goes through many changes during pregnancy.

The muscles of the pelvis relax due to the release of the hormone relaxin. This softens the pelvis and stretches it in preparation for delivery of the baby. Several joints, especially in the spine, become less stable and show signs of separation and movement to accommodate the growing baby.

The back muscles have additional strain added to them, causing some of the low back pain often experienced during pregnancy. In a non-pregnant woman the centre of gravity is located just in front of the spine and level with the kidneys. In a pregnant woman the centre of gravity is shifted forward, straining the spine and throwing her off-balance.

This may cause her to throw back her shoulders, lean backward on her heels, and place additional strain on her lower back. The ligaments, which add support and strength, are weakened, so she relies only on the muscles of her back to stand upright. The back muscles can become tight and tired, which can lead to low back pain.

When an employee tells their employer they're pregnant, the employer should assess the risks to the woman and her baby. An ergonomic risk factor is any imbalance between the worker and the work environment that results in extra demands on the worker. To reduce the risk of injury, ergonomic risk factors should be identified and reduced as much as possible. These are the main ergonomic risk factors during pregnancy:

- awkward postures;
- high force (e.g. heavy lifting);
- no rest;
- repetitive work.

Working in unfavourable conditions may have adverse effects on the woman and her baby.

The pregnant worker is at her greatest risk of injury during her third trimester when her abdomen is biggest. The amount of stress on the lower back is greater when an object carried or lifted is further away from the lower back due to the increased size of the abdomen. The further away from her body a woman has to carry an object, the lighter it must be.

Workstations should be adjustable to reduce any awkward postures and to accommodate the pregnant woman's changing body. Women in jobs where they sit a lot may develop low back pain which may be relieved with the use of a proper chair with a supporting, adjustable back rest, as well as a footrest.

Due to body postures changing rapidly during pregnancy, sitting support and angles of chairs may need to be adjusted regularly to ensure the best support is provided to the pregnant worker. This is why having an adjustable chair is so important.

Workers whose work is physically strenuous are at increased risk when pregnant. Physically strenuous work includes prolonged standing for more than three hours per day, working on industrial machines, repetitive heavy lifting, assembly line jobs and working in cold, hot or noisy environments. Where there are risks, the employer should take reasonable steps to remove them by offering the employee different work or changing her hours.

Postures that would further weaken and stretch her muscles, such as leaning forward at the waist, should be avoided during the pregnancy. Any necessary lifting, particularly

during the latter stages of pregnancy should be performed with great care. With the growing abdomen, the low back is more vulnerable to injury and the baby's health is at more risk due to straining of the abdominal muscles.

Prolonged sitting or standing increases the risk of problems in pregnancy. There are many benefits to keeping active during pregnancy, both for the expectant mother and baby.

These include:

- decreasing the risk of developing gestational diabetes;
- decreased insomnia and anxiety;
- improved body awareness, balance, co-ordination and posture;
- increased sense of well-being;
- a body better prepared for labour;
- a quicker post-natal recovery.

One example of how you can keep active at work includes walking during lunch breaks. A fitter and healthier pregnancy will also mean a happier, healthier time at work and less time off work due to the aches and pains that pregnancy can bring.



■ **Jonathan Daniel** is a director at

FitBack & Bumps Ltd, which runs specialised health and fitness workshops throughout the UK for pregnant workers. For further information contact info@fitbackandbumps.co.uk

Generation Y – who are they? And why are they different?

Professor Nicholas Nunnington, visiting professor of corporate real estate at Nottingham Trent University, looks at the changing needs of the 'always on millennials' in an office environment

Generation Y, also referred to as 'echo boomers' and 'millennials' or even 'always on millennials' were born between 1977 and 1994 so they are now aged 20 to 37. They represent new graduates, middle managers and high-flying leaders.

You'll hear it said that generation Y individuals are different from previous generations. Look at the way they act, connect and operate within office environments. Listen to the music they have on their phones. Some people, usually older people, think they're weird.

They can tap into technology seamlessly; blur the boundaries between work and social contexts; have fun at work; and be continuously professionally, socially and globally connected. But research suggests that in many ways they have the same basic needs and respond to the positive and negative aspects of office environments just like everybody else.

Always on millennials tend to have multiple devices and blur boundaries between the use of employer-provided equipment and their own. Many have more than one mobile device and prefer to use these devices rather than laptops or static, desk-based equipment. Couple this with a move to more flexible working, non-territorial desks and project-based environments and it is unlikely that traditional approaches to office configuration and ergonomic solutions will be suitable for this generation.

Yet the one-size-fits-all approach is still being adopted in many organisations with uniform solutions for all generations, all personality types and cultures. So I've been working with Officeworks and Dr Barry Haynes of Sheffield Hallam University to examine the positive and negative drivers of productivity within office environments in Europe and the Middle East. Our research illustrates dramatic differences and similarities between these groups.

One example is an assumption that because this generation is 'always on' they cope with noise, distractions and densely occupied open plan floor spaces with ease. This assumption is driven by the fact that teamwork is a very high priority for them and regular connectivity both real and virtual is essential. In this regard collaborative open plan environments work well for them. However, to assume that they are immune to distractions, according to our research, is a fallacy.

In many studies we have examined what employees regard as the most negative aspects of their workspace. We were surprised to discover that whilst the profile of the three generations making up the workforce of the organisations surveyed have significant differences, all generations have very similar negative responses to distraction from noise created by people. In fact, distractions from people, equipment and movement in open plan offices continues to be the consistent big issue for most workers regardless of which generation they are from.

Whilst always on millennials may be seen as the generator of some of these distractions, because of their work-style, our research shows they are equally aware of the negative impact of productivity that noise and other distractions create upon them.

So why are we still designing one-size-fits-all offices, when our own research demonstrates wide variations in what positively and negatively impacts on productivity between gender, culture, generation and personality type?

Personality type is interesting. We are starting to appreciate the introvert or 'data analytic'. Our research demonstrates that it is dangerous to generalise that always on millennials are extroverts. Many use technology for data analysis and have introvert personality types so again one-size-fits-all solutions will not work.

Our research is building up a comprehensive data set as to what positively and negatively impacts upon all types of employees based on gender, cultural background, generation and personality type allowing a more informed approach to office design and configuration.

There is no doubt that always on millennials rarely use a PC or even a notebook, yet in most cases they sit at a desk which at best has been ergonomically configured for a static notebook solution. What does this mean for posture when using an iPad or other tablet or mobile device?

Tim Hanwell, an expert in musculoskeletal disorders associated with sitting, explains that ideally a PC screen should be at eye level to encourage good spinal posture and to help reduce the risk of developing a thoracic kyphosis (forward flexed spine in between the shoulder blades or hunchback) which he commonly sees patients presenting with at his osteopathic clinic.

As mobile devices with a fixed keyboard and screen including iPads, touch screens and smartphones are often held in the hand this encourages spinal flexion and tension in the upper thoracic/shoulder muscles.

This problem has become so acute that some furniture providers have released innovative products to support the body in the unique postures associated with the use of laptops, tablets, and smartphones.

The positive aspect of always on millennials' behavior is that they tend to be much more mobile, agile and fluid than previous generations, so even if their posture at their workstation is not ideal, they do not tend to be static for long and movement can mitigate problems of the use of mobile devices.

The single biggest problem with avoiding musculoskeletal pains whilst using a PC (or mobile device) is the lack of variety for our bodies. We tend to adopt a sitting posture and maintain it for many hours. The human body adapts to the stresses put upon it and therefore variety is key to maintaining musculoskeletal health. Regular breaks from sitting can also help reduce weight as research by Dr James Levine from the Mayo Clinic, Rochester, USA has highlighted.

Following various studies including the use of 'smart pants', which use sensors to measure a subject's every movement, he has come to the conclusion that regular daily gym workouts are not enough to combat the sitting disease but that getting up and moving about for ten minutes every hour is more beneficial.

Therefore the always on millennials have an advantage as they are regularly switching between devices and are more likely to be on the move.

A 2013 Gallup national poll of the US workforce found a disturbing number of people disengaged and uninspired in their workplace. This is not just about horrible bosses but arises from misguided and uninformed one-size-fits-all solutions and a lack of understanding of an increasingly diverse workforce.

So, treat one-size-fits-all solutions with extreme care. Your workforce is highly diverse in so many dimensions and our research shows that not understanding this and providing generic layouts leads to less than optimum productivity and performance.



■ **For more information about Professor Nick Nunnington's work with Dr Barry Haynes on workplaces and productivity, visit officeworks.co.uk or contact Craig Phillipson at 01442 875666.**

Time to act on stress

As increased stress among workers takes its toll on productivity, employers must look to effective ergonomic risk management for the answers, says **Jon Abbott**

STRESS is on the increase. Hardly surprising when you consider the state of the economy. Lack of job security and an increased workload, often as a result of co-workers being made redundant, are resulting in higher levels of stress among employees than ever before.

According to a recent poll conducted by Electoral Reform Research, one in four workers is experiencing more stress at work than a year ago. Researchers surveyed 750 working adults and discovered that 20 per cent have to work harder as a result of job cuts at their place of work. One in seven is in fear of losing their job.

Too often, workers under pressure slide into poor working practices, forsaking health and safety for what they perceive to be greater efficiency. Any benefit is usually short-lived and leads to far greater problems. In almost every case, the healthiest, safest way of doing something is also the most efficient.

The need to hit deadlines, prove their worth and the fear of redundancy can also result in employees failing to report injuries and ill-health. They don't want to be seen as weak or letting the side down in difficult times. The psychological pressures on workers to be more productive are having the opposite effect and are taking their toll on their relationships, work/life balance and, inevitably, their health. Something needs to be done, and soon.

The European Commission is seeking to update EU health and safety law and bring display screen equipment legislation, manual handling rules and psychosocial factors, like stress and work pressure, together into a single directive – the Musculoskeletal Disorders Directive. Three significant ergonomic risk factors brought together into one directive. It's a simplification.

Bizarrely, some employer organisations are not seeing it like this. They believe that combining separate threads of legislation into one directive is adding to the legislative burden. I'm afraid I don't agree. For a long time, Cardinus has considered stress as part of ergonomic risk management. Get the ergonomics right and stress is reduced.

Ergonomics is a discipline that considers three main factors: tasks, environment and people. In considering people's ability to carry out a task safely and efficiently, psychological and social factors need to be examined. Any individual suffering psychological or social pressure will have their ability to perform affected.

It's not just Cardinus that says this. Research into the links between psychosocial factors and work-related injuries has been going on since the 1970s and the evidence is widely accepted. Back in 2007 psychologist and Cardinus consultant Rick Spencer compiled a 20-page report on this evidence. Rick's report confirms that many specialists, experts and academics have found links between stress and physical injuries.

The concept of psychosocial factors at work can be a difficult idea to grasp. Psychosocial factors represent worker perceptions and experience. Additionally, psychosocial factors include many other considerations that relate to the worker, conditions of work and the work environment. There can also be social and economic influences outside the workplace that can have repercussions within it.

The term 'psychosocial factors' came to prominence in psychological literature in the 1970s. Since then a vast quantity of literature has suggested psychosocial factors at work contribute to a variety of workers' health disorders. The first extensive review

on this topic, published in 1993, concluded that monotonous work, high-perceived workload, and time pressure were related to musculoskeletal symptoms. The data also suggested that low 'on the job' control and poor social support may be associated with musculoskeletal problems and that stress symptoms contributed to the development of the disorders.

Stress levels among workers have continued to rise and now we see stress at an all-time high. That's why I believe that the EU proposal to consider work-related stress, or 'wellness', as part of an ergonomic risk assessment is a good idea. Given the clear evidence showing how ergonomic risk management can help improve productivity through reduced absenteeism, fewer work-related injuries and improved staff health, well-being and morale, the benefits of including psychosocial factors in ergonomic assessments are obvious.

It's frustrating that there is little appetite for this in industry. I would like to throw my support behind the single Musculoskeletal Disorders Directive as it helps to make companies and the UK more profitable. It's a shame so many short-sighted individuals see health and safety professionals as Hush Puppy-wearing safety weirdoes. To me they're the fleet-footed efficiency heroes, once again saving UK plc.

Cardinus has been developing effective ergonomics programmes for more than 15 years. Its customers include many of the world's leading organisations, central government departments and unions.

The Cardinus approach to effective ergonomic management is to apply simple programmes that provide a modular, adaptable solution. Workstation Safety Plus, the innovative online DSE assessment and e-learning solution, provides award-winning solutions that are fully

endorsed by the International Institute of Risk and Safety Management.

Cardinus provides on-site and telephonic DSE assessments and, when needed, will supply DSE triage and case management solutions. For more information about ergonomic risk management services and other Cardinus products telephone 020 7469 0200.



Jon Abbott
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Jon has 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 was instrumental in setting up Cardinus operations in America and Holland and is currently responsible for the sales and marketing strategy for Cardinus Risk Management Limited.



They're not getting any younger

As employees age there could be an impact on the performance of your business. **Cynthia Roth** looks at what you can do to mitigate the risk

Many UK manufacturing facilities are discovering that most of their employees are more than 50 years old. As people retire later and senior employees work longer they become more susceptible to illness and injury. An ageing workforce provides challenges in devising and maintaining health and safety programmes.

Statistics indicate that the general population from which the workforce is selected has a number of age-related, non-occupational medical disorders that may directly contribute to the risk factors for ergonomic related disorders. These include obesity and diabetes.

And don't get me started on the increases in cardio-vascular and pulmonary conditions we are starting to see across the population in general. I could go into detail about the problems of high cholesterol, hypertension, hyperlipoproteinemia and high triglycerides, but you'll probably stop reading.

This provides a challenge for the health and safety manager and ergonomists since only authorised personnel can enquire about the details of a worker's medical circumstances. However, there are ways to protect workers without actually knowing an individual's medical conditions.

Work place, work methods and tool designs, taking into consideration the ageing workforce will at the same time protect younger employees. Applied ergonomics is a proven and practical bridge between risk factors in jobs, and the ability to develop cost-effective solutions that will mitigate the high risks and allow the employee to work safely and without risk of injuries.

Risk factors occur in jobs that possess forceful manual exertions and repetitions, awkward postures, a lot of manual material handling and local mechanical contact stress. Environmental factors such as extremes of heat and cold are also primary reasons to develop a strong ergonomics process.

As we age we experience a loss of physical and cognitive capacity. This leads to errors and injuries particularly in the heavy industrial and construction industries. Over-complacency is another problem with the older worker who feels that he/she has been doing it his/her way and that was always good enough. There are more longer-lasting injuries that the older worker does not always acknowledge; they are slower to heal and often don't get early intervention

One of the requirements of addressing this

problem is to understand the impact of the change in demographics to older workers. There are big differences in values and beliefs of older workers versus younger workers. Many safety professionals don't understand older workers as much as they should; education on ageing is needed.

The older worker often gets the 'softer' jobs. In many companies this is accepted and seen as the right thing to do. But it can introduce problems and so needs to be managed carefully. All staff should be protected from discrimination.

Your older workers will probably be your most experienced and have an enormous amount to offer the company in terms of knowledge and wisdom. Good employers will look to harness this asset and use it to 'bring on' younger employees. Losing your oldest and longest-serving staff can be a bit like losing some of your history and a lot can be done to help them to continue in a valued role – maybe a role that will ultimately shape their replacements can provide older staff with continued fulfillment.

Older workers might benefit from more flexible working hours. You could consider offering free membership to health clubs and encourage older workers to offset some of the effects of ageing.



Cynthia Roth founded the **Ergonomic Technologies Corporation** in 1993. Cynthia was recently elected **Chair of the American Society of Safety Engineers Foundation** and has lectured at hundreds of companies and conferences on ergonomics. www.ergoworld.com

Take the pain out of business travel.

Business and travel writer and former editor of *Fleet News* **Martyn Moore** provides some useful advice for workers on the move

For many of us the summer holidays are now a memory, fading faster than our suntans. But coming back to work doesn't necessarily mean the end of our travels. Although our longest journeys tend to be the ones we take on holiday, our business travels come a close second.

Predictably, commuting accounts for the greatest number of trips made, followed by business travel and the longer the trip, up to 350 miles, the more likely it is to be for

business purposes. It all adds up to a lot of time sitting in cars, on trains and in aeroplanes and if you're not comfortable you could be storing up problems for yourself.

Fortunately, there are things you can do to minimise the long-term effects of regular business travel.

Driving involves adopting a static, non-neutral posture and maintaining high levels of awareness and concentration. You don't need to be a genius to work out that this is

not sustainable for long periods. Take a break to get out of the car and stretch every couple of hours.

Business drivers also tend to jump out of the car and immediately unload luggage or work-related equipment as soon as they arrive at their destination. This sudden manual handling activity after a prolonged exposure to awkward static postures is the quick way to lower back pain and injury. Don't do it.

Heading out to see a client or visiting another of your own company's locations might never be as much fun as the holiday you enjoyed this year but by following this sensible, if rather obvious advice, your business travel will be a relaxing, enjoyable experience. After all, you could be chained to your desk working on that spreadsheet instead. So don't let the work perk hurt.



Here's a handy checklist to help you stay comfortable and safe on your next business trip:

- Plan your journey. Familiarise your route before setting off. Programme any navigation devices when stationary.
- Adjust your car seat properly. The seat should support your thighs and you should sit with your hips all the way back in the seat. You should be able to reach the steering wheel with your arms slightly bent without leaning forward and the foot controls must be comfortably within reach. The seat must be high enough for you to see ahead clearly.
- Adjust your mirrors. Do this after adjusting your seat and make sure you have good rear vision coverage without moving your position.
- Sort your clothing. Don't drive long journeys in bulky outerwear. Empty your trouser pockets to avoid the discomfort of sitting on wallets and phones. And turn off that phone, even if you have a hands-free kit. Phones are a dangerous distraction and cause y accidents.
- Take regular breaks. Don't drive for more than two hours without stopping to stretch your legs, breath some fresh air, take on fluids and maybe let some out.
- Get rid of heavy luggage for the hold as soon as possible at the check-in desk.
- Pack a lightweight carry-on bag that fits easily into the overhead compartment, lifting it first to the seat and then from the seat to the locker.
- Place a small pillow or rolled blanket behind your lower back for increased lumbar support.
- Stand up and move around the cabin. We might be travelling on business but that doesn't mean we'll be travelling business class. Seats have little to no adjustability and minimal knee and leg clearance. Stand, stretch and stroll down the aisle to relieve awkward posture and improve your circulation.

Air travellers can also take steps to reduce stress and fatigue, ensuring they arrive for their business meetings in good shape:

- Always arrive early at the airport, allowing for possible delays on the way.
- Use four wheeled luggage for maximum manoeuvrability.



■ **Martyn Moore has been filming, photographing and writing about the world of business for more than 30 years. He edited *Fleet News*, the magazine dedicated to vehicle fleet professionals, and continues to contribute to a wide variety of magazines. He also runs his own corporate film production business.**

School chairs can be bad for kids

Bucket seats can mean bad backs for children. Paediatric physiotherapist **Lorna Taylor** helps you choose the best chairs for children's formative years

Recent research shows that 72 per cent of primary-age children and 64 per cent of secondary school children have experienced back and/or neck pain in the past 12 months, but it seems little consideration is given to the chairs they sit in for more than 800 hours each year.

We know seating at work is important for both employees and employers in terms of comfort, concentration and productivity. It is considered so important, employers have legal duties to provide seating for employees that is suitable and safe. It should meet the needs of the individual and the requirements of the task.

The Health and Safety Executive Seating at Work Guidance states: "Unsuitable seating can cause people to adopt awkward postures which can lead to discomfort, back pain and upper limb disorders. This may prove costly to employers in the form of staff absences, potential civil claims and lost production. Individuals also bear some of the costs in the form of suffering and lost income."

Unfortunately, children are not yet covered by regulations which help protect them in their workplace, their school.

In addition to reducing and preventing musculoskeletal injuries in children, a recent study looking at the benefits of improved sitting posture at Nunney First School observed:

- Better quality learning can take place without distraction from 'off task' movement.
- Better focus and concentration while sitting continues in a habit of more effective learning behaviour in other situations.
- Children are developing an awareness of other factors affecting their ability to learn effectively and need fewer prompts for improving learning behaviour.

The new Ofsted School Inspection Handbook makes it clear that the most important role of teaching is to promote learning, the acquisition of knowledge by pupils and to raise attainment. Maybe the importance of creating healthy, inspiring back-friendly learning environments should be given greater consideration in future?

Here, for schools that want to offer pupils the most suitable and safe seating and anyone in a position to influence school furniture decisions, are the top ten school chair-buying tips:

- 1.** When choosing or assessing seating design, consider the needs of the user e.g. folding chairs may save space and be cheap but a hindrance when trying to concentrate for a three-hour exam. Similarly, before purchasing for a dining hall, can younger children safely get on/off them to enable their independence and to avoid mid-day supervisors lifting children?
- 2.** Is the chair comfortable for the intended purpose? The best way is to ask current users or trial new potential options.
- 3.** Is the lower back adequately supported? Children's growing spines are vulnerable.
- 4.** Is the seat shaped at the front to enable the pelvis to move to a healthy position, to prevent uncomfortable pressure on thighs and enable lower limb circulation?
- 5.** Does the chair offer the recommended height ranges, meeting British and European Educational Furniture Standard, BEN1729 Part 1?
- 6.** Is it strong and durable enough for an educational environment and fit for purpose, again meeting BSEN1729 but this time Part 2?
- 7.** Does the design inspire? Innovative designs add value to learning environments, instilling pride in students and their school.
- 8.** Is anti-tip design offered to stop children rocking backwards, causing injury to themselves and others.
- 9.** Is the chair FIRA (Furniture Industry Research Association) School Certified?



The FIRA Certification Scheme for school furniture is the only validation programme specifically for educational furniture, and surpasses the requirements of existing standards. Products that meet the criteria are tested thoroughly; ergonomic, technical and sustainability factors are all assessed by experts. Those that have achieved the standards necessary display the Certification Scheme mark, recognising product excellence.

- 10.** Does the chair offer good value?
Remember, decisions should never be just about colour and price!

Educational chair checklist:

- 1.** Lower back support.
- 2.** Shaped front seat.
- 3.** Available in different heights.
- 4.** Ergonomically designed (meets BSEN1729 part 1).
- 5.** Strong and durable (meets BSEN1729 part 2).
- 6.** Anti-tip backwards.
- 7.** Backrest ventilation.
- 8.** Innovative and inspiring design.
- 9.** FIRA School Furniture Certified.
- 10.** Stackable.



■ **Lorna Taylor**
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Physiotherapy, MCSP, HPC is the founder of Jolly Back, the leading advisor on back care and posture for children and teachers, and creator of the Jolly Back chair (jollyback.com). Her organisation has just won the highly-coveted Supplier of the Year (less than £1 million turnover) in the 2014 Education Resources Awards.

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