



# the monitor

keeping industry informed of developments in occupational health and safety



## Latest national workers' compensation statistics confirm safety leadership of the mining sector

The Compendium of Workers' Compensation Statistics for Australia for 2008/09 released by Safe Work Australia confirms the mining industry's continued trend downward in the incidence of serious injury claims at the national level.

Over the period 2003/04 to 2007/08 serious injuries in the mining industry fell 27% (from 26.4 serious claims to 19.3), the largest decrease in incidence rates for any industry and almost double the 16% fall in incidence rates across all industries.

### Nature of injury or disease

Two thirds of all serious claims were the result of injury with sprains and strains of joints and adjacent muscles alone accounting for 43% of all serious claims.

The most common diseases involved in serious claims were disorders of muscle, tendons and other soft tissues, disorders of spinal vertebrae and mental disorders.

### Bodily location of injury or disease

The back was the most common location of injury or disease representing just over one fifth of serious claims. The next most common bodily locations were hand (12.5%), shoulder (9.2%), knee (8.8%) and ankle (4.8%).

### Mechanism of injury or disease

Body stressing (manual handling), falls, trips and slips of a person, hitting objects with a part of the body and being hit by moving objects accounted for 84% of all serious claims.

The Compendium which is produced annually by Safe Work Australia is an extremely useful reference which should be available to all OHS professionals. However, it should be noted that the statistics are national and may not reflect respective state performance.

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Vol 14 June 2011

## Management Committee

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## MARCSTA training packages

As a Registered Training Organisation, MARCSTA delivers occupational safety and health units of competency for the following national training packages:

- Transport and Logistics
- Business Services
- Resources and Infrastructure Industry
- Construction, Plumbing and Services Integrated Framework

Applications for recognition of prior learning may be lodged for all training programs.



**Latest national workers' compensation statistics confirm safety leadership of the mining sector**  
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### Serious claims incidence rate by industry 2008-09

Industry Sector	Claims/1000 employees
Agriculture, Forestry and Fishing	25.2
Transport and Storage	25.0
Manufacturing	23.4
Construction	21.8
Personal and Other Services	16.6
Wholesale Trade	15.1
<b>MINING</b>	<b>14.7</b>
Health and Community Services	14.0
Govt Admin and Defence	12.1
Accommodation, Cafes, Restaurants	11.3
Retail Trade	8.6
Cultural and Recreational Services	8.6
Property and Business Services	7.8
Education	6.5
Electricity, Gas and Water	6.3
Communication and Services	5.4
Finance and Insurance	2.8

### Compensated fatalities

Employees in the Agriculture, forestry and fishing industries experienced the highest incidence rate (fatalities 13.5 per 100,000 employees) followed by Transport and Storage employees (8.8) and Mining employees (7.4).

Source: Compendium of Workers' Compensation Statistics Australia 2008-09



## SIGNIFICANT INCREASES IN WORKERS' COMPENSATION PREMIUMS FOR MOST INDUSTRY SECTORS



The Chairman of the WA WorkCover Board has released the 2011/12 recommended premium rates for compulsory workers' compensation insurance advising an overall increase of 3.3% which represented "a modest increase over the 2011/11 rate".

He pointed out that the rates are independently calculated by an actuary and were based on data provided by insurers, as well as broader economic factors such as movements in wages.

The Chairman's comments will be cold comfort for most major mining sectors.

Average increase for the metal ore mining division is 15.1%

The scale of the premium increases do not reflect the health and safety performance of the mining industry and therefore requires some justification.

Increased premiums could cost the employers approximately \$10m.

**No other major industry sector has had comparable premium increases.**

	Premiums 2010/11	Premiums 2011/12	% Increase (Decrease)
Iron Ore	0.48	0.66	37.5
Bauxite	0.85	1.00	17.6
Copper	1.64	2.17	32.3
Gold – Surface	0.88	1.03	17.0
Gold – Underground	3.92	4.41	12.5
Mineral Sands	0.82	0.91	9.89
Nickel	1.55	1.49	(3.8)

These increases do not reflect the performance of the industry for the three years from 2007/08 to 2009/10 as measured by lost time injury incidence.

Major Employment Sector	Lost Time Injury Incidence		
	2007/08	2008/09	2009/10
Iron Ore	3.6	5.1	3.1
Bauxite-Alumina	7.3	5.5	8.8
Copper/Lead/Zinc	17.2	9.3	14.5
Gold	6.8	4.1	6.0
Heavy Mineral Sands	6.7	7.3	8.8
Nickel	4.5	4.9	6.3
All Mining	6.6	5.6	6.1

Source: Department of Mines and Petroleum WA

## Age discrimination in workers' compensation to be removed

The State Government is legislating to abolish age-based limits on workers' compensation entitlements.

Commerce Minister Simon O'Brien said all workers will have the same entitlements regardless of age.

The Bill will also bring significant and much-needed improvement to workers' compensation dispute resolution arrangements by creating a new, easy conciliation and arbitration service.

Source: Govt of WA Media Release March 2011

## Failure to have workers' compensation cover proves costly

A Canberra manufacturer who did not have workers' compensation for his workers has been fined \$100,000 by the WorkSafety Commissioner, Mark McCabe, who reminded employers that sanctions include not only substantial fines but also prosecution and orders requiring the business to cease trading.

Source: SafetySolutions April 2011

## Vocational rehabilitation shows little evidence of improved return to work performance in South Australia

A review of WorkCover, South Australia, by PriceWaterhouseCoopers, has found little evidence of improved return to work performance in spite of very heavy referrals to, and cost of, vocational rehabilitation compared to other schemes.

- The case management structure has not been successful in identifying those injured workers most likely to benefit from vocational rehabilitation.
- There is a lack of active engagement between case managers and the vocational rehabilitation sector to provide injured workers and employers with constructive return to work support.
- Return to work outcomes remain poor while the cost of vocational rehabilitation is high.
- The nature of the rehabilitation services seems more frequent and prolonged than in other jurisdictions.

Source: ABC





## SAFE WORK AUSTRALIA REJECTS CRITICISM OF THE DRAFT MODEL REGULATIONS

The Chair of Safe Work Australia has reacted to the complaints about the draft regulatory package voiced by major employers by responding that the objective of the harmonisation process is not to reduce the amount of health and safety regulation but rather to ensure uniform safety standards are in place in each jurisdiction throughout Australia.

He pointed out that employers will not need to be familiar with all the regulations, only those relevant to their businesses.

For national organisations, familiarity with only one set of regulations will be easier than needing to know the nine sets that currently exist.

In its submission to Safe Work Australia, MARCSTA commented that while major employers should have little difficulty in complying with the additional regulatory requirements, as they already have in place comprehensive OHS management systems, the small business sector, which employs the majority of the Australian workforce, will simply be unable or unwilling to comply.

Furthermore, unless an extensive, fully funded educational program to inform and train small business in the new requirements is implemented, most Australian employers will simply plead that compliance is 'not reasonably practicable.'

With regard to the inclusion of 'falls from a slippery, sloping or unstable surface', in the Falls from Height category, and also in the accompanying Code of Practice, MARCSTA expressed strong objection.

The exclusion of "Falls, trips and slips of a person' from the regulations and codes of practice was considered by MARCSTA to be a major deficiency.

More than 1,300 submissions were lodged with Safe Work Australia in response to the draft regulations.

Safe Work Australia is now revising the draft regulations to incorporate feedback from the public comment.

Source: SafeWork Australia Media Release 11 April 2011



## QUEENSLAND, NEW SOUTH WALES AND SOUTH AUSTRALIA INTRODUCE NEW OHS LEGISLATION

In May the Honourable Cameron Dick, Minister for Education and Industrial Relations introduced into the Queensland Parliament the Work Health and Safety Bill 2011.

"The Bill forms part of the national reform agenda that will result in harmonised workplace laws across Australia." Mr Dick said.

"For workers, this means more stringent protections while for business, this translates to reduced red tape and compliance costs.

"Removing the confusion, complexity and duplication caused by Australia's multiple workplace health and safety regimes will help save the Queensland economy more than \$30 million a year.

"The new Bill will replace the Workplace Health and Safety Act 1995 with key changes include broadening the definition of 'worker' to include labour hire, contractors and subcontractors, and imposing the onus of proof on the regulator to prove an offence.

"The Bill also enables the courts to impose significantly higher penalties for breaching the Act.

Similar legislation was also introduced into both the South Australian and New South Wales Parliaments during May in what looks to be a well co-ordinated approach by Safe Work Australia to meet the planned Australia-wide adoption of the model Act.

Here in Western Australia the Minister for Finance, Commerce and Small Business, Simon O'Brien, advised the Legislative Council on 7 April 2011 that the government is working towards implementing the model Bill as a Western Australian statute by 1 January 2012 and that cabinet recently endorsed the drafting of legislation for general industry and for the mining industry, both of which will mirror the model Bill.

This seems to be overstating the case as the Government has already indicated that some unpalatable aspects of the model legislation will not be included in the local legislation.

Each of the Australian states must individually secure endorsement at the state level of the model legislation and it will be interesting to observe whether this process is concluded without modification in each of the states.

Source: Media Release Minister for Education and Industrial Relations Queensland

# RISK MATRICES: IMPLIED ACCURACY AND FALSE ASSUMPTIONS

In a very interesting and important article appearing in the *Journal of Health and Safety Research and Practice* in October 2010, the authors (Alexander Pickering and Stephen P Cowley) question whether the use of risk matrices to categorise and assess risks has any validity as a tool for improving risk related outcomes.

The table shows a typical matrix but with numerical values shown for likelihood and consequence. Imagine these values as lying on the y and x axes of a graph overlaying the matrix.

The authors took a close look at the assumptions on which risk matrices are based. The first problem is that in the usual matrix, likelihood and consequences are subjective (ie. no numerical values). The second problem can be seen in the table. If we multiply the numerical values for likelihood and consequence to obtain a value for risk, this gives a series of curves, each one showing a certain equal risk value. eg. two points on the curve with a risk value of 0.32 are where 0.8 likelihood intersects 0.4 consequence and where 0.4 likelihood intersects 0.8 consequence.

When we plot the equal risk curves, they divide the risk categories shown by the cells on the grid. eg. a risk value of 0.25 could result from 0.5 likelihood and 0.5 consequence, showing that the 0.25 risk curve passes through the middle of the centre cell.

Yet according to that cell in the matrix, areas above and below the 0.25 curve would both be in the High category.

Changing the numerical boundaries between extreme, high, medium and low risk has a major effect on the risk evaluation. The boundaries could be set equally at a 0.25 risk value (low to medium transition), 0.5 risk value (medium to high transition) and a 0.75 risk value (high to extreme transition). Or they could be set at say 0.1, 0.3, and 0.6.

1.0  
0.8  
0.6  
0.4  
0.2  
0

Likelihood	Consequence				
	Insignificant (e.g. no injury)	Minor (e.g. First Aid)	Moderate (e.g. Medical Treatment)	Major (e.g. Extensive Injuries)	Catastrophic (e.g. Fatality)
Almost certain	High	High	Extreme	Extreme	Extreme
Likely	Medium	High	High	Extreme	Extreme
Possible	Low	Medium	High	High	Extreme
Unlikely	Low	Low	Medium	High	High
Rare	Low	Low	Medium	High	High

0                      0.2                      0.4                      0.6                      0.8                      1.0



The areas between the curves represent the extreme, high, medium and low risk categories, so changing the numerical boundaries has a major effect on the risk category which is to be assigned to a particular hazard.

Neither does a matrix guarantee correct ordering of risk priorities. It is possible to show that when likelihood multiplied by consequence gives a risk value of 0.05 this can yield a Medium category, while when likelihood multiplied by consequence gives a risk value of 0.03 this can yield a High category.

The authors of the journal article concluded that there appears to be little scientific analysis of the value of risk matrices in improving risk related outcomes and suggest that a shift of emphasis from the risk assessment stage to the risk control stage of a hazard management process may lead to better and more timely decision making and better use of resources. But that leaves us short of a useful tool for prioritisation.

The article includes an excellent list of references and is a must read for all safety professionals.

Source: *Journal of Health and Safety Research and Practice*.

# LOCAL DIESEL PARTICULATE RESEARCH INITIATIVE



An important diesel particulate research study is currently underway which aims to investigate exposure of current employees at a WA underground mine, and whether exposure is potentially associated with irritant effects.

The study is being carried out by a Master's research student from the School of Public Health, Curtin University of Technology.

Data will be collected through personal air monitoring, positional air monitoring from different sectors of the minesite and emission data from different vehicle and equipment engines.

CONTAM data collected since 2003 will also be used.

The study will provide recommendations for future management and establish the foundation for future research studies.

The preparedness of Barmingo to commit to the study comes at a time when in the USA, a long-delayed governmental epidemiological study of possible ties between diesel exhaust and lung cancer due to be published shortly, has already attracted the attention of industry lawyers who can be expected to oppose its findings.

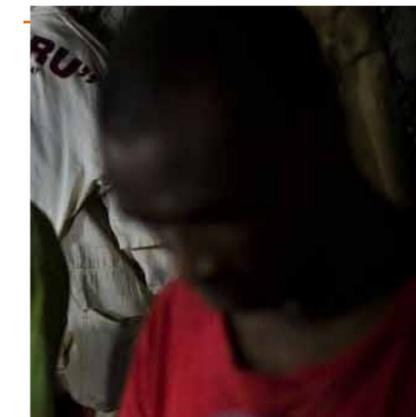
The goal of the governmental study of more than 12,000 current and former workers from eight mines that produce commodities other

than coal has, as its goal, to determine whether ultra fine diesel particulate matter – a component of exhaust from diesel-powered machinery – poses a serious hazard to miners in confined spaces.

MARCSTA will report on the progress of the local study.

Below:

Master's Research Student, Ms Sara Fernandez



Gold miners pray underground before beginning a shift.

## CLAIMS FOR SILICA RELATED DISEASES IN SOUTH AFRICA COULD RUN INTO BILLIONS

South Africa's highest court has ruled that the employees who qualify for benefits in respect of the Occupational Diseases in Mines and Works Act may, in addition, lodge civil claims for compensation.

Litigation which commenced in 2004 and is expected to go to trial next year has two objectives:

- to establish the legal principles on which the mining industry should compensate silicosis victims
- to establish an effective TB-silicosis medical monitoring scheme for former miners.

Plaintiffs will seek compensation for pain and suffering and financial losses, in particular, lost earnings, medical expenses and the cost of voluntary nursing care provided by relatives.

The number of mine workers who contracted various lung ailments runs into hundreds of thousands over the past 100 years.

A national program has been introduced by the South African government to significantly reduce the prevalence of silicosis by 2015 and to totally eliminate the disease by 2030, in line with the International Labour Organisation and the World Health Organization's Global Programme for the Elimination of Silicosis.

Source: [www.labour.gov.za](http://www.labour.gov.za)

## Gender-based differences important to occupational exposures

Researchers from New Zealand and Great Britain have found that gender-based differences in occupational exposures are significant, even among men and women in the same occupation.

Male workers were two to four times more likely to report exposure to dust and chemical substances (like welding fumes, herbicides, wood dust and solvents), loud noise, irregular hours, night shifts and vibrating tools.

Women, on the other hand, were 30% more likely to report repetitive tasks and working at high speed, and more likely to report exposure to disinfectants, hair dyes and textile dust. They were also more likely to report awkward or tiring positions compared to men in the same occupation.

The researchers concluded that because of the substantial difference in occupational exposure patterns between men and women "the influence of gender should not be overlooked in occupational research".

Source: *Occupational and Environmental Medicine* April 2011

A new study that will look at possible health effects of the Gulf of Mexico's Deep Water Horizon Oil Spill on 55,000 clean-up workers and volunteers began in February in the states of Louisiana, Mississippi, Alabama and Florida.

It is the largest health study of its kind ever conducted and is one component of a comprehensive federal response to the Deep Water Horizon oil spill. It is being conducted by the National Institute of Environmental Sciences (NIEHS). It is expected to last up to 10 years.

The goal of the Gulf Study is to help learn if exposure to crude oil and dispersants from oil spills affects both physical and mental health.

It is hoped to enrol 55,000 or approximately one half of the people who took the cleanup worker safety training and to others who were involved in some aspect of the oil spill cleanup.

## The Process

All participants will be asked to complete an initial telephone interview and provide updated contact information once a year.

Participants will be asked questions about the work they did and about their health, lifestyle and job history. About 20,000 will be invited to take part in the second phase of the study, which will involve a home visit and follow-up telephone interviews in subsequent years. Small samples of blood, urine, toenail clippings, hair and house dust will be collected during the home visit and clinical measurements such as blood pressure, height and weight, urinary glucose and lung function will be taken.

If the need for mental or medical care becomes evident, participants will be given information on providers and a medical referral process put in place as part of the study.

Source: EHS Today



Above and below: Clean-up volunteers



# MINT RELIEVES BOWEL DISORDER



University of Adelaide researchers have shown for the first time how peppermint helps to relieve Irritable Bowel Syndrome, which affects up to 20 per cent of the population.

In a paper published in the international journal *Pain*, researchers from the University's Nerve-Gut Research Laboratory explain how peppermint activates an "anti-pain" channel in the colon, soothing inflammatory pain in the gastrointestinal tract.

Dr Stuart Brierley says while peppermint has been commonly prescribed by naturopaths for many years, there has been no clinical evidence until now to demonstrate why it is so effective in relieving pain.

"Our research shows that peppermint acts through a specific anti-pain channel called TRPM8 to reduce pain sensing fibres, particularly those activated by mustard and chilli. This is potentially the first step in determining a new type of mainstream clinical treatment

for Irritable Bowel Syndrome (IBS)," he says.

IBS is a gastrointestinal disorder, causing abdominal pain, bloating, diarrhoea and/or constipation. It affects about 20 per cent of Australians and costs millions of dollars each year in lost productivity, work absenteeism and health care.

Dr Brierley says the recent floods in Queensland and Victoria could result in a spike of gastroenteritis cases in Australia due to the contamination of some water supplies in affected regions.

He said case studies in Europe and Canada showed that many people who contracted gastroenteritis from contaminated water supplies went on to experience IBS symptoms that persisted for at least eight years.

Peppermint tea or even peppermint aroma may be all it takes to soothe a queasy stomach or settle one that's gassy and bloated. But it may take a stronger dose to ease IBS. That's where peppermint oil capsules come in, using enteric-coated versions to avoid heartburn.

Source: ScienceAlert

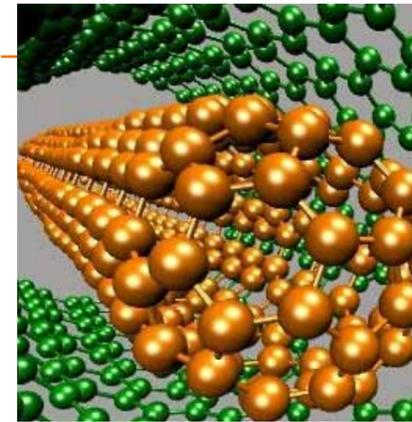
## MINERS' VILLAGE BOOSTS CALLS FOR NEW DOCTOR

The Mayor of Blayney in NSW says that the Council's approval of Newcrest Mining's proposal to accommodate 200 mine workers in a temporary village will increase pressure on the State Government to provide a doctor for the local hospital's emergency department.

He says that with extra miners coming into town, the need for an emergency doctor has become critical.

The Health Department have been instructed by the Minister for Health to advertise for the additional doctor.

Source: ABC News Release



3d illustration of carbon nanotube

## Certain types of carbon nanotubes can induce asbestos-like responses

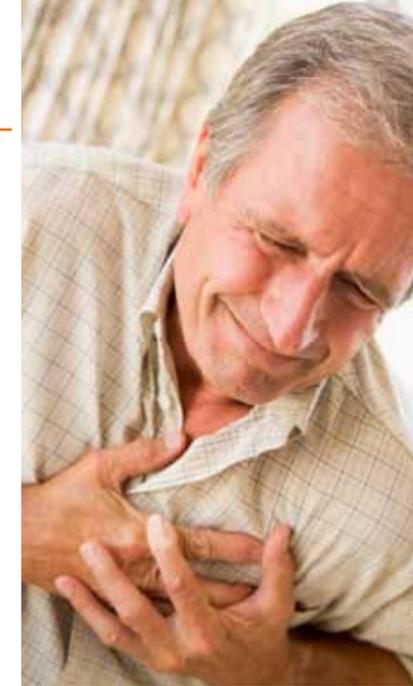
Safe Work Australia has released a new research report on durability of carbon nanotubes and their potential to cause inflammation, two indicators of potential asbestos-like behaviour, if inhaled.

The report's key findings include:

- Some types of carbon nanotubes can be durable, but others may also break down in simulated lung fluid.
- Carbon nanotubes of a certain length and aspect ratio can induce asbestos-like responses in mice, confirming previous findings. However, this response may be reduced if the nanotubes are less durable.
- Tightly agglomerated particle-like bundles of carbon nanotubes did not cause an inflammatory response in mice.

Shorter carbon nanotubes or bundles of carbon nanotubes may not be an asbestos-like hazard, but they can still cause an inflammatory response and be hazardous in the lungs. "These results indicate that durability and hazards of all types of carbon nanotubes are not necessarily the same. However, carbon nanotubes should be handled with high levels of caution in the workplace to avoid inhalation." Carbon nanotubes can be durable but may also be subject to bio-modification in a sample-specific manner, according to the report.

Source: SafetySolutions



## Many countries hit by health threats from infectious, chronic diseases

An increasing number of countries are facing a double burden of disease as the prevalence of risk factors for chronic diseases such as diabetes, heart disease, and cancer increase. Many countries still struggle to reduce maternal and child deaths caused by infectious diseases, according to World Health Statistics 2011 released by the World Health Organization.

Noncommunicable diseases such as heart disease, stroke, diabetes and cancer now make up two-thirds of all deaths globally, due to the population aging and the spread of risk factors associated with globalisation and urbanisation.

**The control of risk factors such as tobacco use, sedentary lifestyle, unhealthy diet, and excessive use of alcohol is becoming more critical. The latest WHO figures showed about four out of 10 men and one in 11 women are using tobacco and about one in eight adults is obese.**

In addition, many developing countries continue to battle health issues such as pneumonia, diarrhea, and malaria that are most likely to kill children under the age of five. In 2009, 40 percent of all child deaths were among newborns (aged 28 days or less).

Source: ohs online

# MALNOURISHMENT A MAJOR CONCERN AMONG OLDER PEOPLE IN AUSTRALIA



Associate Professor Karen Charlton of the School of Health Sciences at the University of Wollongong says that the malnourishment of older people is an issue that needs addressing now.

As we become older our dietary needs change and we need to ensure we get enough of the nutrients we need, such as calcium, zinc and folate.

This can cause problems from a higher risk of infections to an increased risk of falls.

## Reasons for malnourishment

These can include:

- illness like cancer reducing appetite
- many medications increasing our requirement for vital nutrients such as calcium and iron

- older people tending to use lots of prescribed medications which can interact causing problems with nutrient absorption, digestion, appetite
- depression and loneliness impacting on willingness to eat
- social and financial issues
- older people often not having the available funds to spend on food as they did when they were working.
- the cost of food playing a part in a limited diet
- mobility, affecting how often they can get to the shops.
- poor oral health.

## In sickness and in health

Few researchers have examined the issue of malnutrition risk among older people living

independently in the community, but Charlton says about 10 per cent are thought to be malnourished at a given time. More attention has been paid to the problem of inadequate dietary intake in older people in residential aged care and also in hospital.

Charlton calls malnutrition a “skeleton in the closet” for many hospitals and says that it’s often not considered a priority by medical staff due to heavy workloads and a lack of clarity about whose responsibility it is to ensure patients are eating to meet their needs.

**Charlton’s own research last year found that on average, elderly people who are malnourished stay in hospital 18.5 days longer than those who aren’t.**

“There are lots of other competing assessments that take place when an older person goes to hospital. Studies from Australia and other places show that probably less than a quarter of malnourished patients are picked up by hospital staff,” she says.

**Meanwhile, a study published in 2009 found that up to 70 per cent of older people in residential aged care, such as nursing homes, may be malnourished.**

The reason people under care appear to be at higher risk of malnutrition than those who live in the community could be because these people are more likely to have illnesses, such as dementia so they simply forget to eat.

Source: University of Wollongong

## Hearing protection for workers in the USA below Australian Standard

The OSHA permissible exposure level for noise continues to be 90dBA despite overwhelming evidence of hearing loss occurring at that level.

This was acknowledged at the 26<sup>th</sup> Annual National Hearing Conservation Conference in Arizona in February.

Suggestions as to what needs to happen in the USA included:

- lowering the exposure level for noise to 85dBA
- fund the EPA Office of Noise Control and Abatement which has had no budget for 30 years
- offer tax incentives for implementing quieter equipment
- put noise reduction labelling on quiet equipment as is done in Europe

Source: ISHN February 2011

## Increased health risks for frequent business travellers

People who travel extensively for business purposes can be at risk from increased rates of obesity, higher cholesterol levels and higher blood pressure.

Although business travel often is equated with long airline flights, relatively short business trips in personal cars are more common.

Researchers noted that several factors including poor sleep, fattening foods and long periods of inactivity could contribute to health risks in frequent business travellers.

Source: EHS Today

## Muscle biofeedback assessment reduces injuries, improves worker productivity

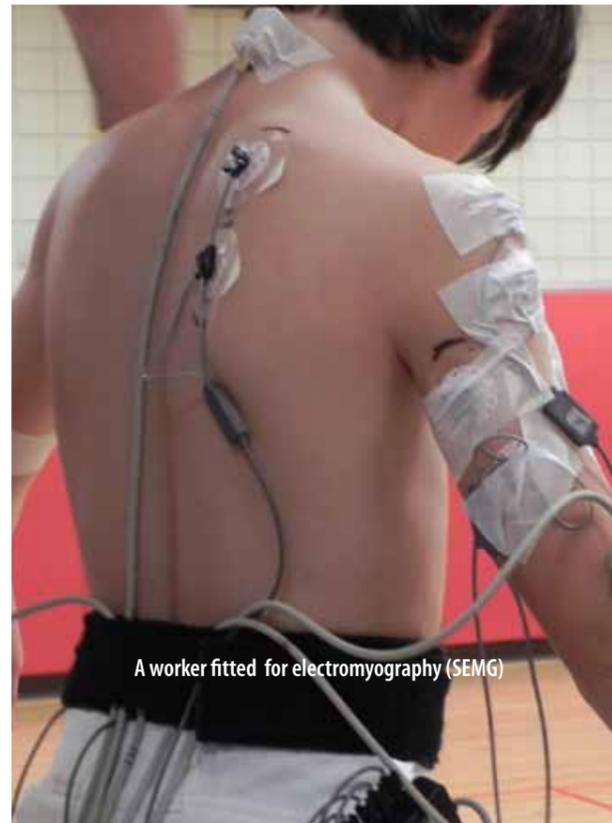
According to a new study, surface electromyography (SEMG), a biofeedback instrument used to measure muscle tension, can help create an ergonomic analysis of worker behaviour, posture and movement to determine how injuries occur and how to prevent them in the future.

The study focussed on pressmen working at print facilities of a major US news publishing company.

Ergonomic analysis identified excessive workplace injuries to the neck and shoulder, most commonly the rotator cuff on the right side.

With the use of SEMG, researchers determined whether improvements to the workstation, worker technique or both were more likely to lower the risk of injuries while performing routine tasks.

Source: EHS Today February 2011



A worker fitted for electromyography (SEMG)

## AROUND THE GLOBE



### USA

The 2010 Liberty Mutual Workplace Safety Index which identifies the top causes of serious workplace injuries in the USA identifies the top five injury causes that occurred in 2008 (the most recent year for which data is available) as:

- over-exertion
- falls on the same level
- bodily reaction
- struck by object
- fall to lower level

Over-exertion, which includes injuries related to lifting, pushing, pulling, holding, carrying or throwing maintained its first place rank costing business US\$13.40 billion in direct costs.

Consistent with past years this event category accounted for more than one-quarter of the overall national burden.

### Walk quickly, don't shuffle – on slippery surfaces

Biomechanics in the USA, by studying helmeted guinea fowl that react to slips and falls, much like humans do, have concluded that moving quickly in a forward, firm-footed stance across a slippery surface is less likely to lead to a fall than if you shuffle or move slowly.

Slips are a major cause of falls that cause injuries or even deaths and accounted for

about 44 per cent of fatal and non-fatal work-related falls according to the US Bureau of Labor Statistics.

The researchers say that these findings can be useful in helping humans, especially older ones, to make their way across surfaces that are wet, icy or oily.

Source: EHS Today April 2011

### Workplace stress highest for dedicated workers

A recent study by the Canadian Centre for Addiction and Mental Health showed that 18% of workers felt their jobs were highly stressful, with more engaged employees twice as likely to report high stress.

Workers were more likely to describe their job as "highly stressful" if they were managers or professionals, worked at a site remote from home, or if their jobs required them to entertain, travel or work long or variable hours (shift work, being on call, compressed work week or overtime).

Information was gathered and analysed from a survey of 2,737 Alberta adult workers who worked in the business, manufacturing, construction, farming and services industries.

Source: Canadian Centre for Occupational Health and Safety

### Workplace violence and harassment on the increase in Europe

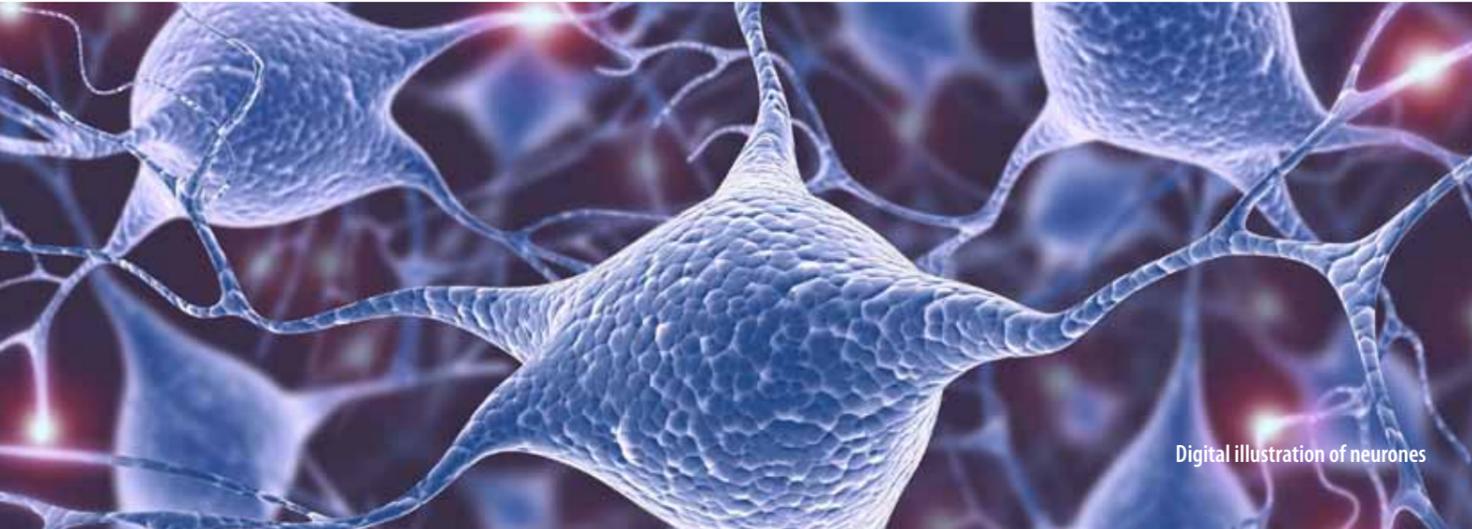
The European Agency for Safety and Health at Work has reported that violence, harassment and bullying are becoming increasingly common features of European workplaces. The response from business and governments is considered to be inadequate.

The problem is acute in health and social work and in education with more than 50% of managers identifying it as a health and safety problem.

For the full report view <http://osha.europa.eu/en/publications/reports/violence-harassment-TERO09010ENC/view>.

Source: EU-OSHU

# SLEEPING NEURONES LINKED TO MISTAKES



A study carried out by a research team at the University of Wisconsin-Madison in the USA has found that when you are sleep-deprived, some of your neurones actually fall asleep and can lead you to make mistakes.

The research team kept rats awake for four hours beyond their normal bedtime and recorded the activity of some individual neurones as they became more and more sleep deprived.

The longer the rats stayed up, the more cells would start to flick into the off state for brief periods. Interestingly, the researchers found neurones in one small area could be asleep, while in another part of the brain they were awake.

Professor Christopher Colwell, an expert in circadian rhythms from the University of California comments that the results are exciting because they raise the possibility that what is happening when performance goes down is that some of the cells involved are moving into the sleep mode and we have every reason to suspect that what is going on in rats is happening in humans too.

This can be very important for some jobs – air traffic controllers for instance.

Source: ABC Science April 2011

## Risk of obesity among shift workers

Japanese researchers investigated the effect of shift work on the risk of obesity in a retrospective cohort study based on a health care database system belonging to a Japanese manufacturing corporation.

The database contained data on annual health check-ups and work schedules for every male worker in the corporation in Japan since 1981.

The researchers found that the risk of obesity among male shift workers was both visually and statistically demonstrated.

Source: PubMed May 2011

## The impact of shift work on people's daily health habits and adverse health outcomes

Researchers at the University of Queensland conducted a review of 17 studies analysing the association between shift work and people's daily habits (as measured by diet, exercise, smoking or alcohol consumption) and adverse health outcomes such as obesity.

The majority of the studies found that shift workers

- had more adverse lifestyle behaviours
- had a less healthy nutritional intake
- were more likely to smoke than non-shift workers and
- tended to be overweight

They concluded that shift work impacts negatively on daily health habits and can lead to adverse health outcomes, such as a poor dietary intake, smoking and becoming overweight.

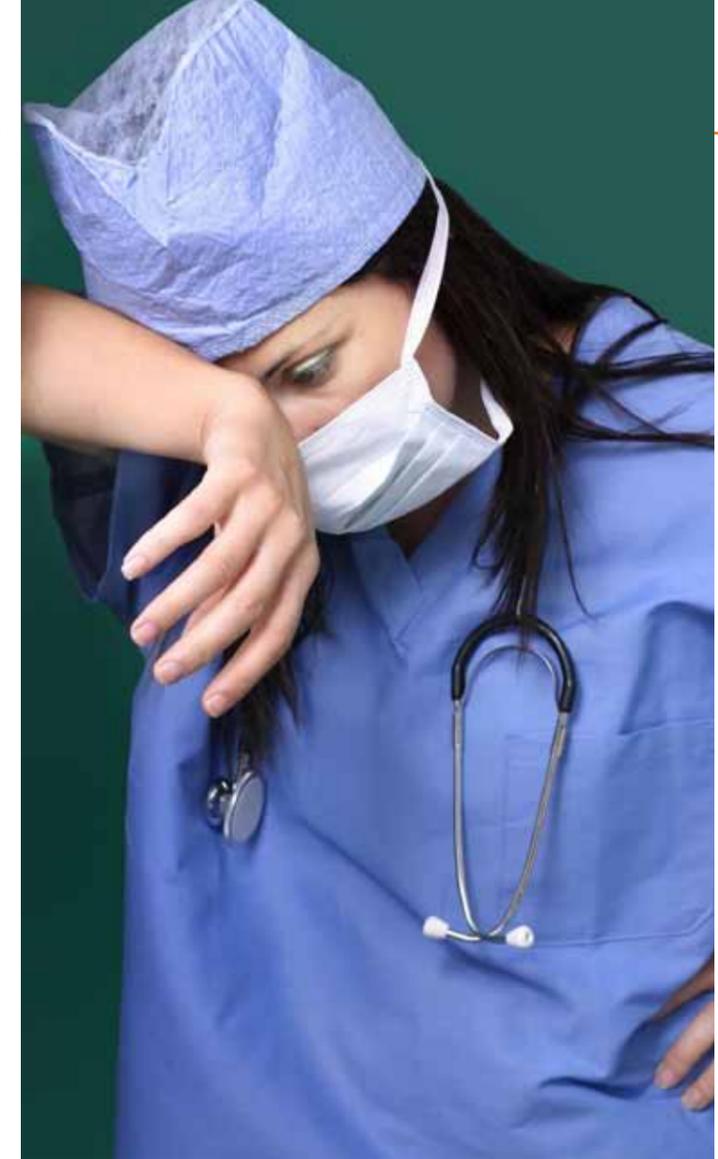
Source: Australian Journal of Advanced Nursing 2008

## Night work in France linked to poor working conditions

A recent study by the French Ministry of Labor has found that 15 or more years exposure to night work increases the likelihood of having nearly 50% reduced ability to perform activities of daily living compared to other workers with the same socio-demographic characteristics.

The working conditions are considered to be responsible e.g. harder working conditions, more physical strain, more frequent exposure to chemicals, greater time pressure and more frequent stressful situations involving co-workers and the public.

Source: HESA etui



## Nurses on shift work schedules go without sleep

A study examining the strategies nurses use to adjust between day and night sleep cycles has found that as many as 25% of hospital nurses go without sleep for at least 24 hours in order to adjust to working on the night shift.

Another study, from the University of Baltimore, has found that nurses working successive 12 hour shifts suffer serious sleep deprivation, a higher risk of health problems and more odds of making errors with patients.

Source: EHS Today

# TO SLEEP PERCHANCE TO DREAM

©Bob Ellis, author and political commentator.

## A plague of sleeplessness is killing our civilisation.

Rudd, who was always jet-lagged and feverishly nitpicking pithy details till 4:00am, made or delayed such decisions as wrecked the Labor Party. Beazley before him flew back and forth to Perth and in his blariness mixed up some names and lost his leadership. Smith after him flew back and forth to Perth and in his blariness misheard some facts and is now at war with the army, needlessly, imperilling the nation. Gillard flew to Europe and, jet-lagged, said she wasn't interested in foreign affairs. Abbott flew via Europe to Afghanistan, said drowsily 'Shit happens' and nearly lost his career.

All over the West college students are up till 4:00am Skyping or Facebooking and getting low marks in their exams. Company executives fly around the world and get back in no condition to do business. Office workers drive three hours a day, work late, rarely see their children, lose the thread of their lives and end up bankrupt, divorced, retrenched, alcoholic or suicidal. Problem gamblers persist at their lunacy for 36 hours straight and end as corpses at Crown Casino's downstairs mortuary.

Even in the siesta town, Barcelona, people carouse till 5:00am and wake black-hearted and self-disgusted there as everywhere. It's a pandemic, and like the hung-over soldiers in Pearl Harbor on that Sunday morning in 1941, and the yawning air stewards that dawn on 9/11, it can cost us dearly in blood and treasure and eventual world wars.

It comes I think from television, which used to close down at 10:30pm, from pubs, which

used to close at 6:00pm and are open now all night, from the new technology which allows intimate communication across oceans at all hours cheaply, from DVDs which keep you up after midnight watching Mad Men or Rome or Entourage, from good quality coffee available at McDonald's after midnight, from Lateline which starts at 10:35pm and the NBC Morning Show at 4:00am and ABC24 which broadcasts round the clock.

But the main reason for it is, like smoking in the 1940s, no-one realises soon enough how big a danger it is and some don't survive it. They fall asleep at the wheel and end crippled or widowed or blind. They make a fool financial decision, selling shares or property, and end up pauperised by it. They snap at their employer or grope a buxom girl at an office Christmas party and are fired for it.

The symptoms are always the same: impatience, snappishness, low-level paranoia, fogginess

in remembering surnames, multidirectional randiness, failures in spelling, punctuation and good manners, and low self-esteem. Drowsiness in high school exams has cost many a university place (it nearly did me) and a future career. An argument can be made that sleeplessness causes the working classes who, housed under flight paths or beside roaring highways in thronged rooms they share with snoring uncles or restless, noisy, late-returning big brothers, or travelling long hours to school on early buses, get insufficient sleep to study well and pass what tests they have to in life to prevail.

Late-night football practice and rock-band rehearsal take a similar toll, and the net result is a West falling far behind the frugal, disciplined, uncarousing Chinese, outsourcing our jobs to them, and wondering where our good times went while we were yawning and scratching ourselves at 8:00am and gulping coffee and running after buses yelling vainly at 8:20.

What do we do about it?

Realising it's a problem could be a start. Realising coffee is not the answer, nor whisky, nor ecstasy. An IA - Insomniacs Anonymous - wouldn't hurt. Calculating how much under 56 hours, the bare minimum each week, you sleep should be a regular kitchen-table calculation, like the domestic budget. Ingmar Bergman's solution, a half-hour's kip after lunch, should be tried by those who can manage it. A pillow at work, and a nap with feet sticking out from under the desk, would be tolerated if essayed by enough public servants. Bed at 10:00pm, and a toasted cheese sandwich and hot Milo before it, works well I find. A wakeful interim at 3:00am, playing back the Lateline you missed, can work well too. Sex at 6:00am and an extra, guaranteed hour, is near infallible when catching up.

My preferred method is having always beside me on the pillow a small radio tuned to LNL or Tony Delroy or the BBC World Service at a level just above, or just below, audibility which lulls me, as did the buzzing of adult conversation around my cradle years ago, into confident, comforted, secure and restful oblivion. Waking in the night for the usual reasons, more frequent in old age, I find it may take 40 minutes, but it always slow-fades me back into unconsciousness, for it reliably provides that universal cause of all sleep, too much information.

Forty minutes a day brisk-walking, in 10-minute grabs, on a treadmill in front of CNN helps of course. And...one other thing.

I scarce dare confess it, but it seems to me fundamental in explaining my energy, sharpness of mind and (relatively) youthful appearance looking as I do at 69 a mere 61.

It is not sharing a bed overnight with my wife, our joint policy for 35 years. It saves us from those shallow interruptions to dreaming that a change of position or light snores bring into the 480 minutes one is wriggling around each other's protuberances and skirmishing for the same pillow. It has saved me over that time about two years of deep sleep, I would calculate, and 15 points of IQ. I cannot understand how other couples survive with marriages uneroded this barbarous peasant habit of shared fitful restlessness which to me is as unimaginable as essaying sleep in a hayloft among calves, copulating possums and crowing roosters.

**We should think on sleep as we do on problem gambling, drunk-driving, ecstasy-taking and schoolyard bullying, not as a minor lifestyle choice but as a daily habit, and a personal tradition, which shapes the human soul and the nation's economy.**

And it's a really crucial mental crisis, lack of sleep - damaging to everyone, helpful to no-one. It keeps many of us crazy for a couple of hours a day. It makes more of us angry for half the day. It makes all of us inefficient, edgy, chafing and hard to bear for half the week. It increases wife-beating, drunkenness, adultery, divorce, harassment, date-rape, stalking, drug abuse, problem gambling, suicide and murder.

It costs us billions ever year and still we ignore it, refuse to treat it, let it multiply.

And it's a pity.

Source: 'Reprinted from the ABC website The Drum/Unleashed'.



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