

# MONITOR

Official publication of the  
Mining and Resource Contractors Safety Training Association

## The missing link...is much more than safety

**SAFETY INCENTIVE PROGRAMS CAN SUCCEED IN RAISING SAFETY AWARENESS, PROMOTING SAFE WORK PRACTICES AND LOWERING WORKERS' COMPENSATION COSTS. SHORT TERM SUCCESS, HOWEVER, DOES NOT ALWAYS RESULT IN MAINTAINING IMPROVEMENT IN THE LONG TERM.**

Safety managers may often miss or even ignore the critical link between safety and the other important areas of absenteeism, staff turnover, training and wellness.

Some of the reasons for this could be:

- They don't know where to begin; or
- They focus too narrowly (can't see the forest for the trees, so to speak); or
- They are satisfied with "safe" gains achieved; or
- They are intimidated or overwhelmed by the notion of collecting and analysing data.

To realise the full benefit of safety incentive programs, safety managers should consider a long term solution which involves a more holistic approach to overall employee performance.

In recent years, a number of studies have shown connections among activities or behaviours:

- High turnover linked with a poor safety record and lack of training;
- High job satisfaction linked with low absenteeism;
- Low absenteeism linked with low injury rates; and
- Wellness programs linked with decreased absenteeism linked with decreased accident rates etc.

Managers will find that by analysing data, trends and relationships across areas and then addressing root causes directly, their resulting programs will be more strategically aligned, integrated and effective.

Few companies today are measuring, tracking and reporting to quantify the performance not only of safety programs but related programs that touch safety as well, like absenteeism, turnover and training.

*Source: The Missing Link ... is much more than safety, Rob Miklas, Occupational Health and Safety, September 2006, Stevens Publishing*

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MARCSTA is a not-for-profit Association. All proceeds are reinvested into the industry for future development of safety and training.

### MARCSTA Scope...

As a Registered Training Organisation, MARCSTA has the following nationally accredited programs in place:

Work Safely (General Safety Induction)  
Apply Fatigue Management Strategies (Extended Working Hours and Your Health and Safety)  
Conduct Local Risk Assessment  
Follow Occupational Health and Safety Procedures  
Safety Awareness Training Certificate (Construction)

MNMC5 Metalliferous  
TDTF1097B Transport and Distribution  
MNMC205A Metalliferous  
TDTF197B Transport and Distribution  
National Code 51466

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

## Workers' compensation and OHS schemes to be harmonised

The Victorian and NSW Governments have announced a harmonisation of their WorkCover schemes including workers' compensation forms, payment options, claims and premiums, mutual recognition of construction induction certificates and common guidance material for business sharing advertising campaigns to improve workplace safety.

Other options for harmonisation include key residential construction issues and managing major hazard facilities.

The proponents claim the initiatives will make the systems better and easier for employers and workers.

Reports suggest that South Australia, Tasmania and Queensland have been involved in early discussions regarding harmonisation with the major states.

*Source: Compensation and OHS schemes to be harmonised, OHS Reps SafetyNet Journal, Issue 98, September 2006.*

## NSW construction site shut down over non-English speaking overseas workers

Following inquiries by WorkCover NSW, a \$60m construction project was temporarily closed down following the issue of almost 40 safety and infringement notices.

Australian workers on the site claimed that none of the overseas workers could speak English, read safety signs or follow emergency procedures. It was also alleged that machinery operators were unlicensed.

The site was re-opened after it complied with WorkCover improvement notices.

*Source: OHS Reps SafetyNet Journal, Issue 98, September 2006*

## Worldwide asbestos legacy

ACCORDING TO THE INTERNATIONAL LABOUR OFFICE (ILO), ASBESTOS KILLS 100,000 WORKERS A YEAR WORLDWIDE.

Although about 40 countries have eliminated the use of asbestos, it is still being used in several countries. The European Union and the ILO have decided to start promoting a global asbestos ban.

The European campaign began on September 1st.

The ILO encourages its members to start national asbestos elimination programs.

*Source: Asbestos news, OHS Reps SafetyNet Journal, Issue 98, September 2006*

Below: Fibrous Asbestos



## Unguarded conveyors continue to injure workers

A Victorian magistrate has issued a warning to employers that safety policies needed to be backed up with actions.

In the first incident a male worker's arm was dragged in up to the shoulder when it was caught at an unguarded nip point as he removed debris from the machine he was operating. In the second incident, a female's right arm was broken and required significant surgical and rehabilitative intervention.

The magistrate commented that it was reasonably common for established written procedures to be ignored and for machines to be cleaned while they were running.

*Source: Fine increased after appeal to the County Court, Victorian WorkCover Authority, Media Release 7 September 2006*

## Safety groupings earn big savings in workers' compensation in Canada

Safety groups, typically employer or trade associations, are securing rebates for implementation of safety programs in the workplace and reducing the frequency and severity of accidents in Ontario.

Current proposals expected to be introduced could result in rebates of 6% for members of the safety groups.

*Source: WSIB considers removing cap, Network News, Page 1, Construction Safety Association of Ontario*

## Involuntary job loss in older workers increases risk of heart attack and stroke

Researchers at Yale University who conducted a 10 year study of almost 600 individuals who experienced involuntary job loss have found that they had a more than twofold increase in the risk of subsequent heart attack or stroke.

The results suggest that the true cost of late career unemployment exceeds financial deprivation and include substantial health consequences.



The researchers recommend that policy makers and program planners be made aware of the risks of job loss so that interventions can be designed and implemented to ease the multiple burdens of joblessness.

*Source: Occupational and Environmental Medicine*

# Editorial

The ISMSP seminar on serious injuries, better accident investigation and better hearing conservation in November endorsed the view that the plateau in serious injury reduction in mining should be tackled. It also highlighted the need for a taxonomy so that we could consistently and accurately identify worker roles and tasks they perform, and the need for increased effort in hearing conservation.

It noted again the top four types of serious injury – strains and sprains, fractures, bruising and lacerations. And we know the top location to be treatment plants. But we need a second taxonomy, a taxonomy Australian researcher GL McDonald highlighted some years ago-- that which traces injury types back to their sources with a tree diagram showing the frequency for each branch and twig and thus identifying the contributory factors to tackle first.

How many OHS officers simply look at their own serious injury figures? How many study in detail the DOCEP tables, to consider figures and data from situations similar to their own? How many would utilise McDonald-type taxonomies and McDonald-type line diagrams showing cost versus accident class for priority-setting if they were available? MARCSTA does do some further analysis of DOCEP data for example.

As Resources Safety in DOCEP is strapped for staff, it may be these types of analysis should be contracted to a university or similar institution.

The editor can be contacted at Work Safety and Health Associates Telephone 08 9457 6487 or at wsha@inet.net.au

Before ending, can I give you something to think on. It's a quote from Mick Borrill, a jumbo operator on the 925 level at Beaconsfield: "The miners told management time and time again 'you've got to leave pillars there' and they said 'there's too much gold there'."

Last but not least, to you and yours a very Merry Christmas and a safe, happy and prosperous New Year.



Monitor Editor,  
Geoff Taylor



## Living longer with increased disability

**FROM 1988 TO 2003 GAINS IN LIFE EXPECTANCY FOR AUSTRALIANS INCREASED BY 1.5 YEARS FOR MALES AND 1 YEAR FOR FEMALES. GAINS WERE ACCOMPANIED HOWEVER BY INCREASES IN BOTH EXPECTED YEARS WITH DISABILITY AND EXPECTED YEARS WITHOUT DISABILITY.**

In 2003 total life expectancy at birth was 77.8 years for males and 82.8 years for females.

For males, 59 years can be expected to be free from disability, 13 years with disability and almost 6 years with severe or profound core activity limitation.

For females, 62 years can be expected to be free from disability, 12.5 years with disability and 8 years with severe or profound core activity limitation.

The ageing of the Australian population and the greater longevity of individuals are leading to more people, especially those at older ages, with a disability and a severe or profound core activity limitation.

View the report Life Expectancy and Disability in Australia online at <http://www.aihw.gov.au/publications/dis/leda88-03/leda88-03.pdf>

Source: *Life expectancy and disability in Australia 1988 to 2003, July 2006, Australian Institute of Health and Welfare, Canberra*



## Dementia to explode worldwide

**THIS YEAR IS THE CENTENARY OF THE FIRST DESCRIPTION OF ALZHEIMER'S DISEASE BY A GERMAN PSYCHIATRIST OF THAT NAME.**

The most up-to-date predictions about the global prevalence indicate that some countries are heading for a 300 percent increase over the next few years.

There will be over 80 million people with dementia by 2040 with the majority in poor and middle income countries. China and India will be facing a huge problem. Australia, by 2040, can expect 500,000 cases.

Source: *Ferri CP et al, Global prevalence of dementia: A Delphi consensus study, The Lancet 2005;366:2112-2177*

# HEARING LOSS: can impact on work and home life

A survey conducted by the EAR Foundation and Clarity® in the USA has indicated that nearly one half of the 76 million baby boomers are experiencing some degree of hearing loss – more widespread than previously estimated.

The findings include:

- Twenty three percent (23%) said their hearing loss is affecting their success in the workplace. Twenty five percent (25%) said hearing loss is affecting their earnings potential. The most affected work areas are hearing and understanding phone calls and conversations with co-workers.
- Forty percent (40%) said hearing loss affected their home life in many ways such as difficulty having conversations with loved ones.
- Sixty five percent (65%) were having trouble hearing television.
- Fifty seven percent (57%) of those with hearing loss had difficulty hearing on a mobile phone.

Most of the affected were aware of the available solutions that can help improve hearing but most were not doing anything about it.

Further information on the study can be found online at [http://clarityproducts.com/boomer/Clarity\\_Boomer\\_2006.pdf](http://clarityproducts.com/boomer/Clarity_Boomer_2006.pdf)

Source: *Hearing loss impacting work, home life for baby boomers, Occupational Health and Safety, November 2006, Stevens Publishing*

## Safe driving practices for employees

The US Occupational Safety and Health Administration has produced some useful information for employees on work-related safe driving practices under the following headings:

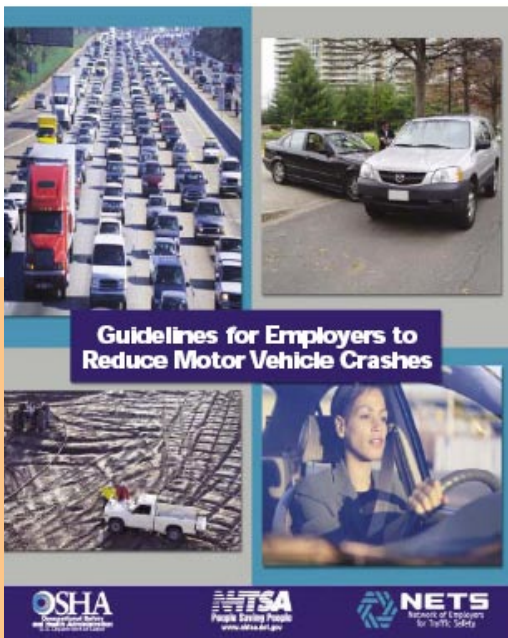
**Stay Safe**

**Stay Focused**

**Avoid Aggressive Driving**

For this and further information on safe driving for work refer to [http://www.osha.gov/Publications/motor\\_vehicle\\_guide.pdf](http://www.osha.gov/Publications/motor_vehicle_guide.pdf)

Source: *OSHA, US Department of Labor Media Release, November 2006*



**Guidelines for Employers to Reduce Motor Vehicle Crashes**

OSHA  
TSA  
NETS

## Hand injuries – workplace factors that increase risks

A Hong Kong study examining 196 workers with work-related hand injuries has identified seven workplace factors that increase the risk of these injuries.

They are:

- using malfunctioning equipment or unsuitable materials;
- using a different work method;
- performing an unusual work task;
- working overtime;
- feeling ill;
- being distracted; and
- rushing.

Researchers said efforts should be made to avoid exposures to these factors by means of engineering and administrative controls, supplemented by safety education and training.

Source: *Transient Risk Factors for Acute Traumatic Hand Injuries – A Case-Crossover Study in Hong Kong, Abstract, September 2006*

## MARCSTA members

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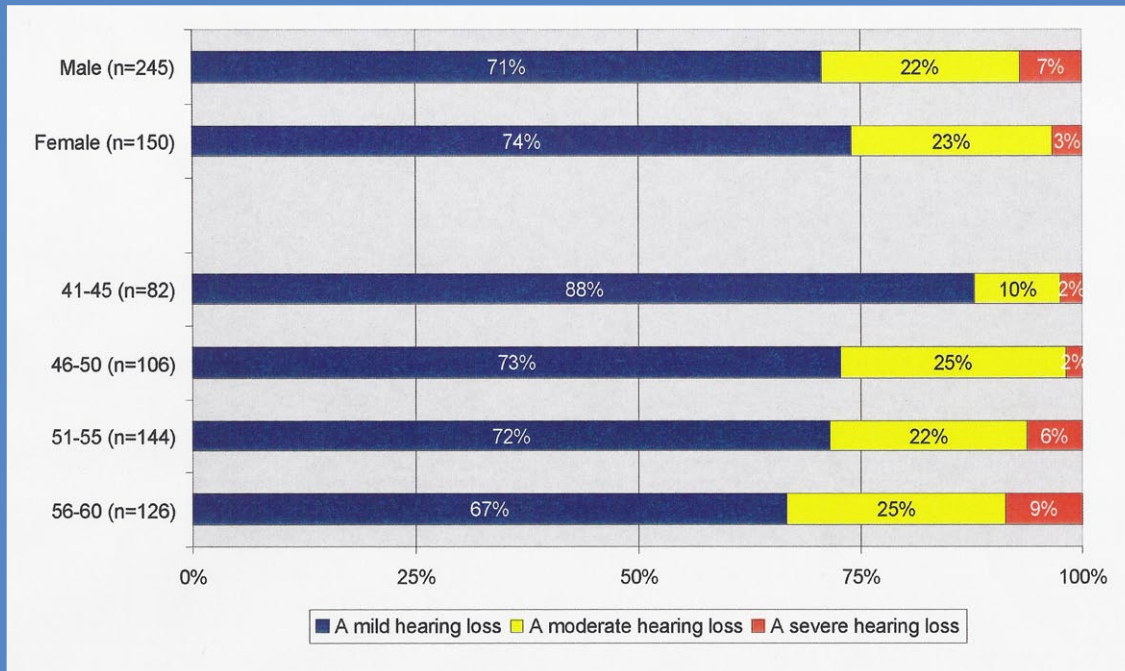
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Jako Industries Pty Ltd  
Mandurah Safety and Training Services Pty Ltd  
QFS Australia Pty Ltd

## Degree of Hearing Loss 2006



## New national standard for high risk work

A NEW NATIONAL STANDARD FOR THE FOLLOWING HIGH RISK WORK WILL TAKE EFFECT IN WESTERN AUSTRALIA AS FROM 1 JULY 2007.

High risk work includes:

- scaffolding;
- rigging;
- crane and hoist operation;
- forklifts, pressure equipment.

High risk work will require a person to hold a licence which will be valid for five years.

Anyone certified prior to July 2007 will have five years to renew certificates of competency.

Full details can be found online at [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au).

Source: *New national licensing standard for persons performing high risk work, DOCEP Media Statement, 4 October 2006*

## China to improve safety in industrial workplaces

According to the state media, China is to spend nearly A\$80 billion over the next five years to improve workplace safety.

The program will particularly target the coal mining industry which reports more than 5,000 deaths annually.

The plan aims to reduce the reported industrial death rate from 3.85 per 100,000 workers to 2.8 by 2010.

The ILO puts the fatality rate in China's workplaces at considerably higher than official government estimates.

Source: *People's Daily Online, 28 September 2006, <http://english.people.com.cn>*

## Operation of heavy construction equipment dominates fatalities in the Ontario construction industry

Statistics for the first eight months of 2006 reveal that the operation of heavy construction equipment was a factor in 14 of the 24 fatalities recorded in Ontario.

An analysis of the high frequency of equipment-related deaths has not shown any pattern. The numbers of fatalities is double that recorded in 2006.

Source: *Fatalities on the rise, Network News, Page 1, Construction Safety Association of Ontario*

## Early detection of cancer cells

RESEARCHERS AT THE UNIVERSITY OF MISSOURI-COLUMBIA HAVE COMBINED LASER TECHNOLOGIES FROM THE FIELD OF OPTICS AND ULTRASOUND TECHNIQUES FROM ACOUSTICS TO PICK UP THE CHARACTERISTIC VIBRATIONS OF MELANOMA CELLS IN THE BLOOD.

They say their method could let oncologists detect as few as 10 cancer cells in a blood sample, catching a tumour's spread before it can settle in another organ.

Effectively energy bursts from a laser light and is absorbed by melanoma cancer cells which emit sounds that can be picked up by special microphones and analysed by a computer.

Researchers claim that it could take just 30 minutes to find out if there are any circulating cancer cells.

Source: *News in Science, Shh. Can you hear cancer?, Media Release, 18 October 2006*

# INTERNATIONAL SOCIETY OF MINE SAFETY PROFESSIONALS (AUSTRALIA) INC

A WORKSHOP FOR SAFETY AND HEALTH PROFESSIONALS TO DEVELOP METHODOLOGY FOR REDUCING THE INCIDENCE OF SERIOUS INJURIES, IMPROVING ACCIDENT INVESTIGATION AND PREVENTING FURTHER HEARING LOSS IN THE WORKPLACE WAS CONDUCTED BY THE ASSOCIATION AT THE DUXTON HOTEL ON 2ND NOVEMBER.

Speakers included the State Mining Engineer, Martin Knee, Peter Luobikis, KBR Government and Infrastructure, Jerry Wilczewski, DOCEP Resources Safety, Dr Barry Chesson, Alcoa World Alumina and Justin Miller, Sensear Pty Ltd.

Participation was enthusiastic with recommendations agreed on all major matters considered.

Justin Miller, CEO of Sensear Pty Ltd, demonstrated innovative technology that enables speech communication to be heard in high noise environments without the need to remove hearing protection.

The technology can be expected to revolutionise approaches to the use of hearing protection.

The workshop was professionally facilitated by Roy Hegney, Manager Australian Centre for Work Safety - Swan College of TAFE and Geoff Taylor, Work Safety and Health Associates.

THE RECOMMENDATIONS OF THE WORKSHOP ON THE VARIOUS ISSUES CAN BE FOUND AT THE ISMSP WEBSITE [WWW.MARCSTA.COM/ISMSP](http://WWW.MARCSTA.COM/ISMSP).



Above: ISMSP seminar facilitator, Roy Hegney

## ISMSP members

### Associate

David Bies  
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Dr Mike Gouws  
Professor Peter Lilly  
Nick Mabbott  
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Grant Shearwin  
Stephen Smith  
Noel Wendt  
Stephen Woods  
Amanda Youngman

## Foot problems affect 40% of Australians

THE VICTORIAN PODIATRY ASSOCIATION RECENTLY PROVIDED SOME INTERESTING INFORMATION ON FOOT HEALTH.

- In a pair of feet there are some 250,000 sweat glands that produce 500ml of perspiration daily;
- About 40% of Australians will experience some form of foot problem in their lifetime;
- The average person will walk around 128,000 km in a lifetime which is more than three times around the Earth.
- Importantly, nearly 20% of all workplace injuries include the lower leg and feet.

Recent research showed that on average, foot and ankle injuries in the workplace resulted in 10.8 weeks off work.

The construction, mining and agriculture industries were where most foot and lower limb injuries occurred. Yet many foot injuries could be avoided and foot conditions could be attended to before they developed into costly problems for workers and their employers.

These statements follow research in a major hospital in Queensland that showed that individual risk factors such as age, weight and a predisposition for poor foot health were risk factors for workplace foot problems, alongside ill-fitting and inappropriate footwear.

This is especially the case for people who spend long hours on their feet at work.

The Association has great information on their website <http://www.podiatryvic.com.au>

Source: *Workers and employers urged to protect feet at work, Australian Podiatry Association (Victoria), October 2006*



## Californian workers continue to die from heat exposure

New heat regulations to protect outdoor workers from heat do not appear to be reducing worker deaths. So far this year, 10 fatalities in the agriculture, construction and other industries have been attributed to excessive heat exposure.

The regulations called for training, drinking water and shade for workers who are suffering from heat illness or believe a preventative recovery period is needed.

One of the concerns with the regulations is that the onus to ask for a preventative recovery period is on the worker who is unlikely to ask for help because they fear they will lose their job.

Inevitably, workers will risk their health and, as a result, suffer from heat related illnesses rather than jeopardise their employment.

A proposal has been put forward to commission an independent investigation of why the regulation is not working.

*Source: Why Do California Workers Continue to Die from Heat?, Confined Space, 13 August 2006.*

## Finnish study connects burnout with job strain and depression

Researchers at the Finnish Institute of Occupational Health have found that workers with a high level of job strain are at increased risk of burnout, which seems to explain the relationship between job strain and depression.

Although the study can't prove any cause and effect relationship, the results suggest that burnout is an intermediate step in the relationship between job strain and depression.

*Source: Journal of Occupational & Environmental Medicine. 48(10):1023-1030, October 2006*

## World's first cordless mining caplamp

**NEW TECHNOLOGY BY WAY OF A CORDLESS CAPLAMP IS COMING TO AUSTRALIA.**

The caplamp has been developed combining lithium cell, white light and micro electronic technologies. It is designed to withstand the severe mining environment by utilising integrated fully-sealed housing construction incorporating bullet-resisting glass. Owing to its automatic chip protection and cordless feature, any explosion possibility is completely eliminated.

In normal mode function it can operate for 12 hours however, in battery saving mode the operating time can extend to 120 hours.

The caplamp is currently under consideration by DOCEP Resources Safety Division.

## Being overweight can be fatal

A 10 year study of more than 500,000 US adults has found that those people who were just moderately overweight in their fifties were 20-40% more likely to die in the next decade.

Another study involving more than 1 million Korean adults produced similar results.

The researchers for the US National Cancer Institute found that those who were moderately overweight when they were 50 were at a significantly elevated risk of dying prematurely, and those who were obese were two to three times as likely. Just being overweight was not nearly as dangerous, but it still boosted the risk by 20-40%.

The findings are particularly relevant to the large number of baby boomers who are going through that critical period of middle age when people typically gain weight.

*Source: Washington Post, 23 August 2006*



## Improper entry into a confined space results in two deaths

Two workers engaged in maintenance work at a refinery in Delaware, USA, died when attempting to recover a roll of duct tape in an area where a reactor was undergoing a process which removed oxygen and hazardous gas from equipment by flowing nitrogen through it.

It appears that the workers attempted to recover the roll of tape from a tray 1.5 metres below their working platform using a long wire hook. When this failed one worker somehow entered the reactor and was overcome by the oxygen-depleted atmosphere. His co-worker inserted a ladder, climbed down into the reactor and also succumbed.

Entry to the reactor would have required a permit and a specially trained crew. A confined space warning sign had been posted alerting workers of the need for a permit.

The US Chemical Safety Board released a safety video on the incident. The video includes a computer animation depicting events leading to the accident, and features include commentary by the Lead Investigator and a field expert. Visit [www.csb.gov](http://www.csb.gov).



Issue 4/2006

# Notes for the Shift Worker

## Vale Meredith Wallace (1936 – 2006)

The noted researcher and consultant in shift work and rosters, Dr Meredith Wallace, died recently after a long battle with cancer.

Meredith was a pioneer in raising an awareness of the health and safety consequences of working long hours, particularly in the mining and resources sectors with her consulting activities commencing in the early 1980's.

She was an invited speaker to the workshop-seminar organised by the Chamber of Minerals and Energy WA in August 1994 which led to the initial Guidelines for Workers and Management – Shiftwork and Occupational Health and Safety in the WA Mining Industry, published in November 1994.

The paper presented by Meredith at the seminar-workshop is as valid today as it was 12 years ago.

## Viagra worsens sleep apnea symptoms

A new study by Brazilian and American researchers suggests that a single 50mg dose of viagra may actually worsen symptoms of obstructive sleep apnea (OSA).

The US National Sleep Foundation suggests that, based on the results of this study, people taking viagra should talk to their doctors about the warning signs of OSA, which include daytime sleepiness, morning headache and sexual dysfunction.

*Source: National Sleep Foundation, Alert, 4 October 2006*

## Constant light may disrupt development of premature babies' biological clocks



Human babies are usually able to distinguish between day and night soon after they are born. This is considered to be due, in part, to exposure to the natural light and dark patterns of a normal domestic setting.

Babies born premature, however, typically spend their first few weeks in Neonatal Intensive Care Units where they are exposed to bright artificial lights around the clock.

Researchers from Vanderbilt University found that constant light disrupts the development of the infants' biological clocks and that this disruption could contribute to an increased risk of mood disorders, such as depression.

*Source: Constant Light Disrupts the Developing Mouse Biological Clock, Pediatric Research Journal, 21 August 2006*

## Cardiovascular disease linked to sleep apnea

A new study published in the European Respiratory Journal shows that patients with untreated sleep apnea have a greater risk of developing cardiovascular disease, compared to patients without sleep apnea or those who effectively treat it.

For many years, sleep researchers have known about the strong relationship between heart disease and sleep apnea. The results of this study may awaken researchers in the cardio vascular field to this relationship, and encourage all physicians to screen for sleep apnea as part of routine health examinations.

*Source: Untreated sleep apnea raises heart disease risk, study finds, Alert 6 September 2006, National Sleep Foundation*

## Brain damaged patients wake following sleeping pill treatment

A group of severely brain-damaged patients given little chance of recovery by South African medical experts are awakening after receiving a radical new course of medication in the form of a sleeping pill.

Instead of deep sleep, coma patients being treated with a generic sleeping pill are reporting remarkable improvements in both speech and movement.

Medical trials are now expected to begin in South Africa aiming at understanding how the drug is waking brain cells once thought dead.

*Source: Reborn, The Guardian, 12 September 2006*





## Air traffic controller had only two hours sleep before fatal Comair crash

There was only one controller on duty during the crash of United States Comair flight 591 on 27 August, contrary to Federal Aviation Administration policy. The aircraft mistakenly turned onto a runway that was too short, struggled to get airborne and crashed. Forty-nine people died.

The lone controller was sleep deprived, having worked from 6:30 am – 2:30 pm the day before the crash, then returned to work an eight hour overnight shift.

The National Transportation Safety Board is trying to determine what the cumulative effect of the controller's work schedule might have been. Earlier reports suggested that sleep deprivation may also have contributed to a lack of alertness of the two pilots concerned.

*Source: Air traffic controller had only two hours of sleep before fatal Comair crash, Alert 6 September 2006, National Sleep Foundation*

## Medical intern work hours and fatigue related injuries

Two new studies by the Harvard Work Hours Health and Safety Group show that violations of the code that capped hours worked to between 80-88 hours are common among interns and that long hours and night work may increase the risk of percutaneous injury among interns.

In the first study, 83.6% of the interns who responded were in violation of the standards at some point after they were introduced.

In the second study, researchers found that work-related injuries such as needle sticks and lacerations occurred more often during long shifts and night shifts, suggesting that extended hours and night work may increase the risk of such injury.

*Source: Studies track medical intern work hours and fatigue related injuries, Alert 6 September 2006, National Sleep Foundation*



## Are doctors becoming aware of sleep deprivation?

New research published in the Medical Journal of Australia says that for the sake of their own health and the safety of their patients, medical professionals need power naps. The AMA President admits that coping with intense long hours is one of the biggest issues facing the country's medical professionals. He says that keeping people sharper by allowing a certain amount of time for a power nap or specifically, time to down tools, may well be a way of keeping working effectively. It may also help to keep more patients in hospitals alive.

*Source: Research finds shiftworkers need to nap, ABC Health, ABC Online, 2 October 2006*

## Sleep loss increases blood pressure

In a study that examined results from nearly 5,000 people who completed an original health survey and a follow up one about a decade later, researchers found that 24% of people aged 32-59, who slept for five or fewer hours per night, developed hypertension compared to only 12% of those who got seven or eight hours of sleep.

Short sleep duration could be a significant risk factor for hypertension and, ultimately, stroke.

*Source: Lose sleep, gain high blood pressure, Assoc. Prof. Gordon S. Lynch, Fitness2Live, www.fitness2live.com.au*

## Anesthesia risk higher in afternoon

In a study published in Quality and Safety in Health Care, researchers compared the risk of complications related to anesthesia in more than 90,000 surgeries performed at Duke University Human Simulation and Patient Safety Center (North Carolina, USA) from 2000-2004.

The results showed the likelihood of anesthesia related problems was lowest in surgeries that started early in the morning and highest among those beginning in the late afternoon. Some of the factors considered to contribute are that some patients may be more susceptible to either pain or nausea in the afternoon and work schedules that interfere with circadian rhythms.

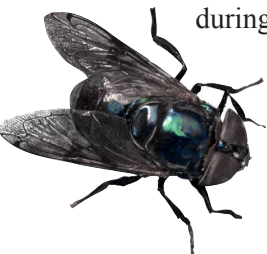
Health care is a 24 hour a day business and it is not unexpected that factors such as fatigue, circadian rhythms, personnel shift changes and scheduling may affect patient care over the course of the day. Types of problems included administration of wrong medications or wrong doses; harm (including prolonged sedation, wound infection) and nausea and vomiting after surgery; and pain management.

*Source: Anesthesia risk higher in afternoon, Fox News, 4 August 2006*



## Flies, like humans, need sleep to learn

Confirmation that the human body requires sleep in order that our brains can process what we have learned during the day is provided in a report in the journal *Science* in September.



The researcher used fruit flies for her experiments. Flies sleep as humans do and share important genes. Unlike humans, they make ideal and compliant experimental subjects and can be studied at genetic level.

Tests with adult flies showed they needed sleep for their brains to process what they learned during the day. When adult flies are trained to do a complex task, they sleep more. When sleep is disrupted, so is their memory of the task. This suggests that the brain may need sleep to make the beneficial changes related to social experience and learning.

Source: *Flies explain mystery of sleep, UK Telegraph, 22 September 2006*

## Rotating shift workers develop prostate cancer

Japanese scientists have found that staff working rotating shifts were three times as likely to develop prostate cancer as those working day or night shifts.

Night shift workers were at a slightly increased risk compared to those who only worked days.

The researchers, who studied more than 14,000 workers speculate that the key may be reduced secretion of the hormone melatonin which the body uses to induce sleep.

Source: *Cancer linked to rotating shifts, TUC Alert, 23 September 2006*

## Caffeine taken at night disturbs daytime naps

Shift workers or people with jet lag who drink coffee to keep themselves awake may not be able to nap the next day say Canadian researchers.

They report that caffeine has a stronger disruptive effect on daytime, catch-up sleep after a night of sleep deprivation than it does on a normal nights' sleep.

Source: *Caffeine at night disturbs daytime naps, News in Science, ABC Online, 16 October 2006*

## Snooze your way to high test scores

A good night's sleep is known to improve people's ability to learn actions and REM sleep, when most dreaming occurs, is thought to be particularly important.

Researchers at the City of New York University have now shown that even a nap with no REM sleep can help learning.

Volunteers were told to memorise pairs of words (a test of factual learning) and to practice tracing images in a mirror (action learning).

When they were tested straight afterwards and six hours later those who had been allowed to nap for up to one hour before the re-test scored 15% better in the factual test than non-nappers but no better in the action test.

Source: *Snooze your way to high test scores, New Scientist, 23 September 2006*

## 2005 Sleep in America poll

The 2005 Sleep in America poll shows that many of America's adults are sleeping poorly which is taking a serious toll on professional relationships, productivity, public safety and even the most intimate aspects of life.

- 75% of adults frequently have a symptom of a sleep problem such as waking a lot and snoring;
- 60% of licensed adults admit to drowsy driving in the past year;
- 40% have had an accident or near-miss because they were too tired or actually dozed off while driving;
- 30% say they have missed work or made errors at work because of sleep related issues; and
- one or both partners are often too sleepy for sex and many couples sleep apart because of a sleep problem.



# news and views

INFORMATION ON GENERAL NEWS AND VIEWS  
WITHIN THE MINING INDUSTRY,  
BOTH NATIONAL AND INTERNATIONAL.

In *Mining Technology* for September 2006, P.J. Foster and A. Burton write about using virtual reality to design visibility **improvements for free-steered vehicles underground**.

*Mining Journal* for October 13, 2006, notes that the EU parliament has voted for the REACH laws which cover a wide range of **inorganic chemical substances**.

*Australian Journal of Mining* for September/October 2006 writes that BHPBilliton has located one of its three global technology centres in Perth. There is also a very disturbing article on a **skin cancer survey** of over 1000 miners done in WA, NSW and Queensland done by the Skin Patrol Early Detection Clinic in 2005-6. The percentages of suspected serious lesions are high, as are the figures for what would otherwise have been a lack of medical checks. 49% of those who were worried about a spot weren't going to get it checked. *AJM* also notes that Fortescue Metal Group has successfully trialed **Wirtgen surface miners** at Cloud Break in the Pilbara. These do away with the need for drill, blast and preliminary crushing, as well as reducing noise, vibration and dust loadings. Justin Rickard also writes on **six key strategies to access skilled mining personnel**. *AJM* also notes that the Queensland government's training department and the Mining Industry Skills Centre have established an **infrastructure program** to train mining employees, there is an article on Phelps Dodge's use of **Advanced Equipment Simulators**, and Paula Wallace interviews Coffey's **shotcrete and fibrecrete** specialist Ian Hulls on their use in ground control.

In *CIM Magazine* for September /October 2006, Heather Ednie addresses the issue of **tyre shortages** and extending tyre life, including watching payloads, avoiding spillages and keeping roads clean. John Wylie writes on this issue too in *CIM* for August 2006.

Paul Hebert of the Mining Industry Human Resources Council of Canada describes the **mining HR challenge** and the changing workforce. (Jaqueline Jimena in the August issue advises on attracting and keeping top talent). There are also Cornish and Russian **mining history** articles. Also in the August issue are articles by A. Miedema and C. Hall on **drug and alcohol testing** in the mining industry, the cost effective SIAMnet **underground communications** system by Cattron Group International, an alternative to fibre optic and "leaky feeder", and the Sigma Industrial Sales' Shockstop **Voltage Reduction Device** for welders.

In *AusIMM Bulletin* for September/October 2006 contains a discussion of **greenhouse gas emissions** by Professor Peter Lilly, and describes a 27% drop at Newmont's Pajingo mine. Monika Sarder has a ten page discussion of 26 AusIMM recommendations re an **OHS policy**, including rejuvenating the National Mining Safety Framework. D. Denham, Professor I. Plimer and D. Walker each write on **climate change**, Mary Stewart on **energy management**, and Ian Hore-Lacy on **nuclear power technologies**.

*Longwalls* for September 2006 notes that NLT Australia supplies **cap lamp messaging technology**, using underground wireless LAN. There are articles on solutions to **tyre risk**, including reusable rubber liners, and underground **dust suppression** with PetroTac. In Mackay the Mining Industry Skills Centre is using Fifth Dimension Technologies' **simulators** to train underground operators, including about roof bolting. Also included are Dodge's **controlled start units** to accelerate belts smoothly, Rock and Coal Equipments' **belt repair tool** which accurately identifies where breaks can be found, and Minova's Carbofill **phenolic resin for cavities** allowing safe and rapid recovery from roof falls.



## Who's who?

### Chief Executive Officer

Patrick Gilroy AM

### Chairperson

Joe Maglizza

Rinker Australia Pty Ltd

### Vice Chairperson

Ross Graham

Komatsu

### Committee of Management

Allaine Coleman

Terry Condipodero

Peter Nicholls

Peter Luobikis

Arlene Roe

Kim Stewart

### MARCSTA Monitor Editor

Geoff Taylor

## The importance of ergonomics to US workers

A survey of nearly 700 office workers in the USA has revealed that 64% believed they knew the definition of the word 'ergonomics', however only 20% actually did. Interestingly, only 36% of those between 18-24 years believed they knew what the term meant versus 74% of those between 45-54.

While there was confusion about the exact meaning of the word ergonomics, it was eminently clear that workers were aware of its importance.

- 77% thought ergonomics was important
- 81% thought it affected productivity
- 35-44 year olds are most likely to think that incorporating ergonomics in the workplace is important

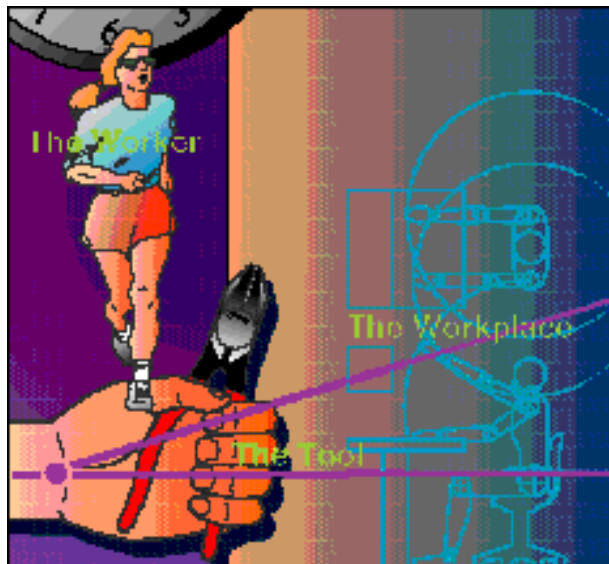
It is unclear if employers feel the same.

Over 40% of workers felt that their office does not provide sufficient ergonomics in the workplace.

ERGONOMICS IS ESSENTIALLY ABOUT "FITTING WORK TO PEOPLE". IT'S THE PROCESS OF DESIGNING OR ARRANGING WORKPLACES, PRODUCTS AND SYSTEMS SO THAT THEY FIT THE PEOPLE WHO USE THEM.

For an in-depth analysis of ergonomics visit Ergonomics in Australia, [http://www.ergonomics.com.au/pages/400\\_useful\\_info/410\\_what\\_is\\_ergonomics.htm](http://www.ergonomics.com.au/pages/400_useful_info/410_what_is_ergonomics.htm)

Source: *Occupational Hazards, Survey reveals importance of ergonomics to US workers, 4 October 2006*



## MARCSTA licensed training providers

Mark Adam  
Graham Bailey  
Ron Baker  
Tom Bateman  
Carl Berglin  
Danny Bognar  
Clive Brindley  
Scott Clarke

Dale Cocker (U) (S)  
Jim Dandie  
Geoff Day  
Peter Dowding  
Joe Duyvestyn  
Linda Elezovich  
Ashley Gilbert  
Ross Graham

Gary Green  
Ray Hargreaves  
Jeffrey Hickin  
Ralph Keegan (S)  
Rob Lewis  
Joe Maglizza  
Neil McMeekin  
Guy Mead

Katherine Montague  
John Preston  
Merryn Richards  
Jason Roberts  
Victor Roberts  
Grant Shearwin  
Brian Smith  
Peter Stoneman

Marcus Taylor  
James Titmus  
Peter Tynan  
Graham Williams  
Paul Willoughby

All training providers listed above provide general inductions.  
U denotes the underground program.  
S denotes the extended working hours program.

## Conferences and courses

Austmine 2007. Burswood, Perth. 12-13 February 2007. Website: [informa.com.au/austmine2007](http://informa.com.au/austmine2007). Fax: 02 9290 3844

Ninth Mill Operators Conference. Fremantle. 19-21 March 2007. Email: [conference@ausimm.com.au](mailto:conference@ausimm.com.au) Fax: 03 9662 3662

New Caledonia Nickel Conference. Le Meridien, Noumea. 25-30 March 2007. Website: [informa.com.au/ni07](http://informa.com.au/ni07)

CIM Conference and Exhibition (Mining and Energy), Montreal. 29 April - 2 May 2007. See [www.cim.org](http://www.cim.org)

Iron Ore 2007. Sheraton, Perth. 20-22 August 2007. Email: [conference@ausimm.com.au](mailto:conference@ausimm.com.au) Fax: 03 9662 3662

Explo 2007. Rydges, Sydney. 3-4 September 2007. Email: [kpocock@ausimm.com.au](mailto:kpocock@ausimm.com.au) Fax: 03 9662 3662