



the work health and safety **monitor**

keeping all with an interest in OHS informed of developments in occupational health and safety nationally and internationally

Issue 2 Vol 18 May 2014



L-R OHSWA Executive and Committee: Peter Rohan, Allaine Coleman, Peter Nicholls, Dr John Suthers, Dr Janis Jansz, Dave Lampard, Joyce Blair, Dr Nic Ormonde, Anitha Arasu, Joe Maglizza

Occupational Health Society of Australia (WA Branch)

Annual General Meeting

The inaugural meeting of the rejuvenated Occupational Health Society of Australia (WA) was held in March with the Executive formally elected as follows:

President	Joyce Blair
Vice President	Joe Maglizza
Secretary	Patrick Gilroy
Treasurer	Dave Lampard

Full details of the Committee appointed can be found at the Society's website www.ohswa.marcsta.com.

The motion that an annual subscription should apply for members was passed with fees set for 2014 at \$50 per ordinary member and \$20 per student member. Invoices to existing members will be circulated shortly.

Application forms for membership are available from www.ohswa.marcsta.com.

Air pollution and health impact seminar

The Society's first seminar for 2014 will be conducted on Thursday, 24 July on the topic of **"Air pollution and the health consequences for the community and workplaces"**.

The Society has invited authoritative speakers on various aspects of this topic including the current concern with the health consequences of exposure to diesel particulate, a known carcinogen.

The draft program and Registration Form are on page 12 of this edition of the Monitor.

The registration fee to attend the seminar is \$70 per person.

Further information regarding the Society can be viewed at www.ohswa.marcsta.com



WELCOME

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Ross Graham

Peter Nicholls

Dr Nic Ormonde

Geoff Taylor

MONITOR EDITOR

Geoff Taylor

Archived editions of the Monitor are available online at www.marcsta.com

MARCSTA

183 Great Eastern Highway

Belmont WA 6104

PO Box 171

Belmont WA 6984

Tel: 6272 6120

email: safety@marcsta.com

www.marcsta.com



OHS legislative/regulatory matters

New OHS legislation scheduled for March 2015

The Western Australian Government plans to pass its own version of the national Model Work Health and Safety laws in November, according to a ministerial advisory panel.

The Advisory Panel on Safety Legislative Reform held its first meeting in March and in its report on the meeting the panel said the plan is for WorkSafe WA to administer the legislation for general industry, with workplaces involved in mining and petroleum covered by a separate act and regulations – the WHS (Resources) legislation.

This, of course, is the current situation.

However, the panel said that the plan was for major hazard facilities to move from WA's Dangerous Goods Act into the WHS (Resources) legislation "effectively combining mining, major hazard facilities and petroleum safety into one Act and Regulations".

Although it is aimed to have the legislation tabled in Parliament in the Spring session and passed through both houses in November, these outcomes were "dependent on the parliamentary drafting process".

The panel also confirmed the Government's decision to deviate from the model WHS laws in the four areas previously indicated, i.e. union right of entry, stop work powers of HSR's, and the reverse onus of proof and penalty levels - although the last item is "subject to some discussion".

Source: Safety in Action Perth, Safety Snippets Blog 23 April 2014

Amending OHS legislation now passed by Queensland Parliament

The Queensland Work Health and Safety and Other Legislation Act 2014 has been passed by the Queensland Parliament. Proclamation will occur at a date to be determined.

The thrust of the amendments was to reduce the entry rights to workplaces of health and safety permit holders, remove the power of HSR's to cease work considered unsafe and increase penalties for erring entry permit holders.

Other amendments include changes to:

- asbestos registers, removal-licencing requirements and clearance inspections after removal work
- rollover protective structures on earthmoving machinery
- audiometric testing

For more information visit www.worksafeqld.gov.au.

Source: Workplace Health and Safety Queensland, 8 April 2014

SAFETY

Fatalities from falls in construction industry causes national safety stand down

The Occupational Safety and Health Administration (OSHA) in the US recently announced a national safety stand-down from 2-6 June to raise awareness among employers and employees about the hazards of falls. Falls account for the highest number of deaths in the construction industry and account for more than a third of all workplace deaths.

During the stand-down, employers and workers are asked to pause during their workday to talk about fall prevention in construction as well as discuss topics such as ladder safety, scaffolding safety and roofing work safety.

A website will provide information to employers on how to conduct a successful stand-down.

Source: SprayFoam.com, Inc. 18 April, 2014

A promotional banner for the National Safety Stand-Down. On the left, a construction worker in a yellow shirt and hard hat is working on a structure. The banner features a red box with the text 'JUNE 2-6, 2014'. The main text reads 'National Safety Stand-Down TO PREVENT FALLS IN CONSTRUCTION'. Below this, it provides the website 'www.osha.gov/StopFallsStandDown', the hashtag '#StandDown4Safety', and the phone number '(800) 321-OSHA (6742)'. On the right, there is a triangular warning sign showing a person falling, with the slogan 'Safety Pays. Falls Cost.' and logos for OSHA, CDC, and other organizations.

US oil and gas industry opposes tighter safety rules

A proposal by OSHA that would require new and producing oil wells to satisfy process safety management standards that apply to other industrial operations has been opposed by more than a dozen oil companies and trade groups who claim that existing standards are adequate.

The possible new regulations are driven by concerns that reported deaths in the industry nationwide reached a 10 year high in 2012.

Number crunching by researchers at Texas A&M Engineering Experiment Station shows a fatality rate of 24.2 per 100,000 employees' for oil and gas extraction workers compared with 1.7 per 100,000 workers in the chemical manufacturing sector.

Source: SprayFoam.com, Inc. 16 April 2014

Noise exposure linked to workplace injuries

In a report published in the March edition of the journal *Injury Prevention*, researchers have found that workers regularly exposed to noise levels of 100 decibels – about the level standing next to a lawnmower – had more than double the risk of being hospitalised for a workplace injury.

Serge-André Girard, who led the study conducted by the National Public Health Institute of Quebec, said that the exposure to high noise levels increases fatigue, decreases the ability to concentrate and impairs the quality of communication between workers. Both noise and noise induced hearing loss could be involved in the occurrence of accidents.

The study looked at records for 46,550 male workers over nearly 20 years.

Source: COS Magazine, 4 April 2014

US National drug and alcohol testing clearing house for truck and bus drivers

The US Department of Transportation has announced a proposed rule to establish a drug and alcohol clearing house for all national commercial driver's licence holders.

The agency said the clearing house would help improve roadway safety by making it easier to determine whether a truck or bus driver is prohibited from operating a commercial motor vehicle for failing to comply with federal drug and alcohol regulations, including mandatory testing.

The proposal would also encourage the employment of the many safe drivers who follow drug and alcohol requirements.

The proposed rule would create a national repository and require employers to conduct pre-employment searches for all new drivers and annual searches on current drivers.

Source: ISHN, 20 February 2014

New collision management system guideline for mines

NSW Mine Safety has published a guideline for selecting and implementing collision management systems in mines.

The guideline was developed through a working group from underground coal and metalliferous mines, unions, equipment suppliers and regulators. Its purpose is to help mines to select and implement a suitable collision management system and to provide consistency across the mining industry.

Source: NSW Mine Safety News, 4 March 2014

New research centre has new OHS approach

A new Centre for Resources Health and Safety, aimed at saving lives in the resources sector, was established in March at the University of Newcastle's Institute for Energy and Resources.

The initiative creates a new research partnership with the global health care provider, Aspen Medical, who have funded the Centre with a grant of \$1 million over four years.

The Institute's Director, Dr Alan Broadfoot, said that the new centre will be unique in that it extends the traditional concept of resources health and safety from delivering benefits to people working in the industry to the communities and economies that rely on mining and resources.

Areas of research will include occupational health and safety, respiratory studies, psychology, psychiatry, environmental aspects and social impacts.

Source: SafetySolutions, 11 March 2014



HEALTH - DEPRESSION

Genes can increase depression risk

In a new study an international team of researchers looked at the genes of 2,400 white people from the United Kingdom and Hungary and found that those with genetic variations linked to a brain chemical called galanin were more likely to suffer from depression and anxiety after suffering high levels of stress.

Galanin is involved in the regulation of pain, sleeping, waking mood and blood pressure according to the US National Institutes of Health, and scientists suspect it plays a role in stress and anxiety disorders.

Source: *MedicineNet*, March 2014

ICU related depression often overlooked

A study of 800 patients, with an average age of 61, who were admitted to intensive care at the Vanderbilt University Medical Center, Nashville USA, found that one third of patients develop depression that causes physical symptoms rather than the typical psychological signs.

As a result their condition may go undiagnosed and they may not get needed help, the research suggested.

The physical signs of depression included weakness, changes in appetite and fatigue.

The physical symptoms are often resistant to standard treatment with anti-depressant drugs and we need to determine how best to enhance recovery with a new focus on physical and occupational rehabilitation, said the study leader James Jackson.

Source: *The Lancet Respiratory Medicine*, April 2014

Depression may be linked to heart failure

Researchers in Norway who looked at nearly 63,000 people who underwent physical and mental assessments have suggested that there is a link between depression and the risk of heart failure.

The study's lead author, Lise Tuset Gustad, said that depressive symptoms increase the risk of developing heart failure and the more severe the symptoms the greater the risk.

"Depressed people have less healthy lifestyles so our analysis adjusted for obesity and smoking that could cause both depression and heart failure and this means that we can be confident that these factors did not cause the association" she said.

The study doesn't prove depression causes the condition but only that the two are often linked.

Source: *MedicineNet*, April 2014

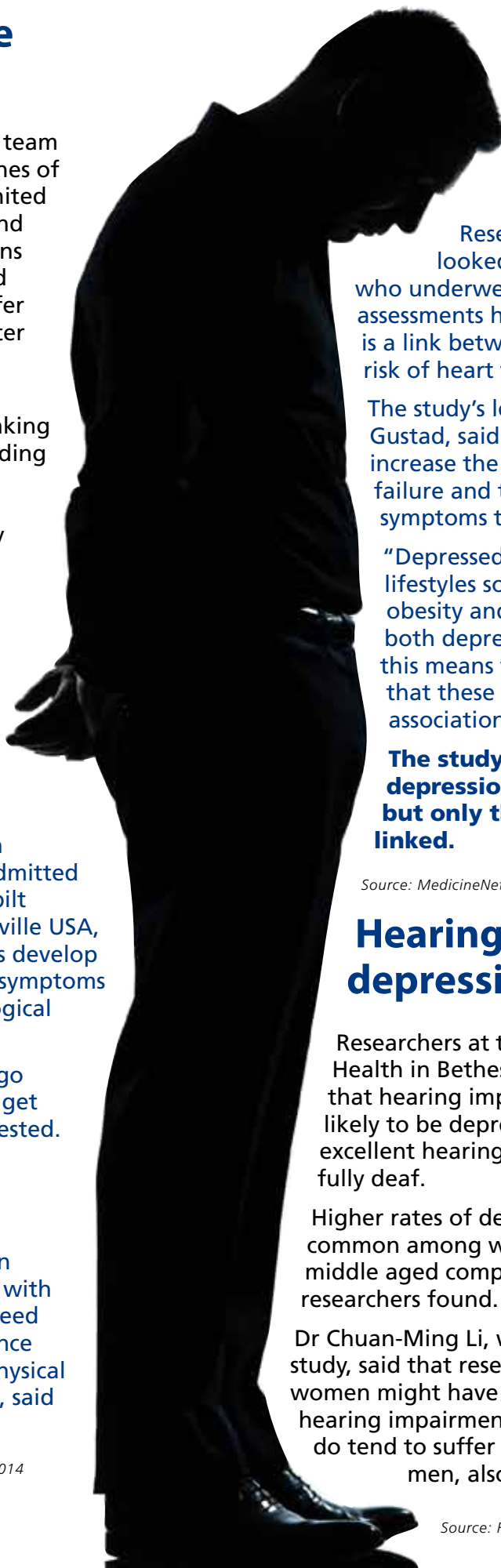
Hearing loss linked to depression

Researchers at the US National Institute of Health in Bethesda, Maryland, have found that hearing impaired adults are more likely to be depressed than those with excellent hearing and than those who are fully deaf.

Higher rates of depression were most common among women and among the middle aged compared to people over 70, researchers found.

Dr Chuan-Ming Li, who worked on the new study, said that researchers can't yet say why women might have stronger links between hearing impairment and depression: women do tend to suffer more depression than men, also for unknown reasons.

Source: *Reuters Health*, March 2014



HEALTH

Study finds doctors prescribing more sedatives

Doctors in the US are writing more prescriptions for sedatives than ever before and the frequent use of those powerful drugs in combination with narcotic painkillers may be causing medication-related deaths.

Sedatives are used to treat problems such as anxiety, mood disorders and insomnia and include Valium, Halcion, Xanax, Ativan and Librium.

For the study, researchers looked at 3.1 billion primary care visits made by Americans between 2002 and 2009 and found that 12.6 per cent of those visits involved prescriptions for sedatives (benzodiazepines) or narcotic (opioid) painkillers. They also found that the number of prescriptions for sedatives increased 12.5 per cent a year.

The study's principal investigator said that more research is needed to identify the reason behind the increase and a national effort is needed to highlight the danger of co-prescription of benzodiazepines and opioids

The study showed that the use of these drugs contribute to at least 30 per cent of narcotic painkiller related deaths.

Researchers said that doctors need to be better educated about the risk of combining the two medications and there needs to be better co-ordination between all parties e.g. primary care doctors, pain specialists and psychiatrists.

Source: *MedicineNet*, 7 March 2014



Parents and carers skin problems linked to the use of disposable baby wipes

Dermatologists are reporting increasing numbers of parents and carers presenting with skin problems linked to using disposable baby wipes.

Research published in the *Medical Journal of Australia* by dermatologist Rosemary Nixon from the Skin and Cancer Foundation reports that an ingredient used to prevent bacterial infection in moist wipes is now the most common cause of dermatitis in patient's samples.

Professor Nixon said the trend was also occurring in the US where, as in Australia, the preservative methylisothiazolinone has been used in a range of water-based products, including cosmetics and personal products such as deodorants, shampoos, conditioners, sunscreens and moisturisers since the early 2000's.

She said that the dermatitis was probably under-diagnosed in adults and that it was likely that only the tip of the iceberg is currently being seen in clinics.

Source: *Chemwatch Bulletin Board*, 28 March 2014

Industrial chemicals linked to brain disorders in children

According to a new study published in *Lancet Neurology* and conducted at the Harvard School of Public Health (HSPH) and Icahn School of Medicine at Mount Sinai, toxic chemicals may be triggering the recent increases in neurodevelopmental disabilities among children – such as autism, attention-deficit hyperactivity disorder and dyslexia.

The researchers say a new global prevention strategy to control the use of these substances is urgently needed.

The greatest concern is the large number of children who are affected who suffer reduced attention span, delayed development and poor school performance.

The adjunct professor of environmental health at HSPH says that industrial chemicals are now emerging as likely causes.

The report is a follow up on a similar review in 2006 which identified five industrial chemicals that cause brain deficits.

The study outlines possible links between a new range of neurotoxicants and negative health effects.

The authors say that very few chemicals have been regulated as a result of developmental neurotoxicity and that it is crucial to control the use of these chemicals to protect children's brain development worldwide.

They propose mandatory testing of industrial chemicals and the formation of a new international clearing house to evaluate industrial chemicals for potential developmental neurotoxicity.

Source: Chemwatch Bulletin Board, 14 March 2014

New wristband sun exposure monitor

A wristband that monitors exposure to UV rays will allow users to soak up the light needed to make Vitamin D without getting burnt and without the need for sunscreen with the development of the UVA+B Sun Friend.

Users input their skin sensitivity – estimated on a scale from 1 to 11 – and LED lights illuminate as their UV exposure increases. The lights begin to flash when it is time to get out of the sun. The device is waterproof.

The Sun Friend, which costs US\$50, went on sale in April at the Wearable Technology Show in London.

Sources: Chemwatch Bulletin Board, 18 April 2014



More evidence of the health risks of sedentary work

A UK study has found that workers who spend most of their day seated do not compensate adequately with physical activity outdoors.

The researchers found that workers who spent the most time seated at work also tended to spend more time sitting after work and on weekends than workers who spent less time seated at work. This puts such workers at increased risk of obesity, diabetes, cancer and cardiovascular disease.

They also suggested that these workers were at higher risk of musculoskeletal injuries and impaired work performance.

Source: OHS Repts SafetyNet Journal, 20 March 2014

Open plan offices linked to higher absence rates

A recent study of employees working in different types of offices has found a significant excess risk for sickness absence of short sick leave spells in the three types of open plan office; small, medium and large. The outcome was gender neutral.

Source: OHS Repts SafetyNet 278, 20 March 2014

US regulator's initiative to reduce occupational exposure of coal mine employees

The Mine Safety and Health Administration (MSHA) has issued a final rule (regulation), effective 1 August 2014, on the existing standard on miners' occupational exposure to respirable coal mine dust in order to:

- lower the existing exposure limits
- provide for full shift sampling
- redefine the term "normal production shift" and
- add re-examination and de-certification requirements for persons certified to sample for dust, and maintain and calibrate sampling devices.

Chronic exposure to respirable coal mine dust causes lung diseases that can lead to permanent disability and death.

MSHA says that the final rule will greatly improve health protections for coal miners by reducing their occupational exposure to respirable coal dust and lowering the risk that they will suffer material impairment of health or functional capacity over their working lives.

Source: United States Department of Labor, News Release 23 April 2014





HEALTH AIR QUALITY

LARGE AIRBORNE PARTICLES PUT HEARTS AT RISK

Inhaling large dust particles from farms, roads and construction sites may have the same effects on people's hearts as small particulates, according to a new study led by the University of Michigan.

Many previous studies have linked particulate matter – which comes largely from vehicles and industries that burn fossil fuels – to heart risks.

This study is the first to link coarse particulates to increased blood pressure adding to previous evidence that they may increase risks of heart attacks.

Experiments were conducted which measured the effects of breathing in local air containing particulates vis-à-vis local filtered air.

While the changes in average blood pressure and heart rates were small in magnitude, and unlikely to pose direct risks to healthy people, they could trigger heart attacks or other cardio vascular events in people with pre-existing heart conditions, said the researchers.

Source: Chemwatch, 11 April 2014

Harmful air pollutants build up near oil and gas fields

A new study, published in the journal *Environmental Science and Technology*, has found that dangerously high concentrations of air pollutants are threatening an unexpected location – rural Utah.

During wintertime periods when air in the atmosphere tends to stagnate, a research team has found that volatile organic compounds (VOC's) released from oil and gas wells in Utah reach levels exceeding those in US cities.

The pollutants include benzene (a carcinogen) and compounds that are precursors of ozone, (a component of smog) which can cause respiratory problems.

Researchers note that, despite the area's sparse population, these conditions raise health concerns for people working at the wells and living in the area.

Source: Chemwatch Bulletin, 18 April 2014

Major “third-hand” smoke compound potentially causes DNA damage and cancer

At the National Meeting and Exposition of the American Chemical Society in March, research was presented that suggested that third-hand smoke, like that which clings to walls and furniture, can threaten human health.

Researchers have found that many of the 4,000 compounds in second-hand smoke, which wafts through the air as a cigarette is smoked, can linger indoors long after a cigarette is stubbed out.

These substances can go on to react with indoor pollutants, such as ozone and nitrous acid, creating brand new compounds, some of which may be carcinogenic.

They say that just as it took years to establish the cancer causing effects of first-hand smoke that is inhaled as a person breathes indirectly from the cigarette, making the connection between third-hand smoke and cancer could take a long time.

The biggest potential risk is for babies and toddlers.

Source: Chemwatch Bulletin, 18 April 2014



Air pollution linked to high blood sugar in pregnant women

A new study of women in the Boston area has found that pregnant women who lived in neighbourhoods with more air pollution were twice as likely to have elevated blood sugar than women in less polluted areas.

High blood sugar can lead to serious complications in pregnancy, as well as obesity and insulin resistance in mother and child.

Source: Chemwatch Bulletin Board, 11 April 2014.

Second hand smoke exposure hazardous to the unborn

A study led by the Roswell Park Cancer Institute in Buffalo, New York, has found that the pregnancy risks associated with women’s second-hand smoke exposure were almost as high as the risks related to their own cigarette smoking. It is the first study to demonstrate these effects.

Source: Chemwatch Bulletin Board, 11 April 2014



AIR POLLUTION AND THE HEALTH CONSEQUENCES FOR THE COMMUNITY AND WORKPLACES



A seminar to address the topic of air quality and the lack of a comprehensive system of surveillance for occupational diseases associated with poor air quality is to be held on Thursday, 24 July 2014.

SEMINAR

Thursday, 24 July 2014, 8:00 am to 12:00 pm

Function Centre, 2 Brodie-Hall Drive, Technology Park, Bentley

PRELIMINARY PROGRAM

The impacts on health of air quality in Australia - the need to revise exposure standards

Workplace exposures and health consequences

Diesel particulate exposure in workplaces and its health effects

Regulating diesel particulate in mining workplaces

Opportunity for attendee input and participation will be provided.

AIR POLLUTION AND THE HEALTH CONSEQUENCES FOR THE COMMUNITY AND WORKPLACES SEMINAR

Thursday, 24 July 2014, 8:00 am to 12:00 pm
Function Centre, 2 Brodie-Hall Drive, Technology Park, Bentley

REGISTRATION

Please select your registration type:

Standard Registration \$70

Student Registration \$30

DELEGATE INFORMATION

Title (Dr, Mr, Mrs, Miss, Ms) _____

Preferred Firstname _____

SURNAME _____

Job Title _____

Organisation _____

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HEALTH - RESEARCH

New research to predict the implications of chemicals on human health and the environment

The US Environmental Protection Agency (EPA) has announced research grants (over US\$9m) to better understand the impacts of chemicals and nanomaterials throughout their life-cycle – from design and manufacture to use and disposal.

The research will “advance the science of chemical life-cycle assessments and provide tools to design safer chemicals, while enabling a healthy economy and safer society” said the EPA’s Office of Research and Development.

Arizona State University’s research will evaluate the trade-offs between using nanomaterials to improve the functionality of consumer products and the potential risk to humans and the environment.

The University of California’s Santa Barbara’s research will develop an online tool to evaluate lifestyle impacts of chemicals which industry, academia and other decision makers can use to make more informed decisions about chemical and product design.

As more is understood about the impacts of chemicals throughout their life-cycle, the research will influence future scientists and decision makers to consider the associated benefits and consequences of chemicals, which will help create a healthier economy and a safer society.

The results of these studies will be eagerly awaited by health professionals.

Source: Chemwatch Bulletin Board, April 2014

Worker illness following nano-material exposure

A US worker suffered adverse health effects after handling nickel nanoparticles, according to a published case study that appears to be the first of its kind.

A chemist developed throat irritation, nasal congestion, flushing of the face and skin sensitivity to metals within a week of exposure to nickel nanoparticles.

The chemist was eventually moved to another laboratory that had no metal chemical exposure and her symptoms improved.

Despite animal and cell research that indicates adverse health effects there has been few exposed worker reports.

Available research supports the NIOSH recommendation for limiting exposure to carbon nanotubes and nanofibres and the IARC designation of nano-sized titanium dioxide as a possible human carcinogen.

Source: Environmental Expert, 15 May 2014

Are environmental factors relevant to rates of autism?

A major study by researchers at the University of Chicago of US health insurance claims covering one third of the population over the years 2003-2010 – county by county – has been interpreted by the researchers to indicate that increased rates of autism are linked to environmental toxins.

Roughly 1 per cent of children in the US population are affected by autism spectrum disorder (ASD) and the rates in many countries have risen sharply in recent years. It is still not clear whether this is prompted by something in the environment, increased awareness of the condition and changes in diagnosis, or a result of children being born later.

The results of the study have been questioned.

The study leader, Andrey Rzhetsky, commented that “if toxins are driving the geographic variation observed in autism incidence there are practical implications.”

Parents should pay attention to their kid’s environment, policy makers should clean our environment, and scientists should incorporate data about children’s environments in future genetic studies.”

Source: Chemwatch Bulletin Board, April 2014



PSYCHOLOGICAL HEALTH

Stigma of mental illness remains barrier to treatment

A study published in February in *Psychological Medicine* reports that the stigma often associated with mental illness prevents many people from getting the care they need.

Researchers found that, in Europe and the US, up to 75 per cent of those affected do not receive the treatment that they need.

If left untreated certain mental problems such as psychosis, depression, bipolar disorder and anxiety disorder, could get worse, researchers said.

Dr Graham Thornicroft of the Institute of Psychiatry of Kings' College, London said that "The profound reluctance to be a "mental health patient" means people will put off seeing a doctor for months, years or even at all, which in turn delays their recovery".

Dr Sarah Clement, lead study author, said that "we found that the fear of disclosing a mental health problem was a particularly common barrier. Supporting people to talk about their mental health problems, for example, through anti-stigma campaigns may mean they are more likely to seek help."

Source: *MedicineNet*, February 2014

Doctors missing suicides' warning signs

A study by the Center for Health Policy and Health Services Research in Detroit has found that physicians often fail to spot mental health problems in people who later commit suicide even though most of these people consult with doctors or other health providers in the months before they kill themselves.

The study looked at medical records of almost 6,000 health plan members living in eight states who committed suicide between 2000 and 2010.

Eighty three per cent had received medical care within the year prior to their deaths and 20 per cent had seen a health care worker the week before they died. But they were diagnosed with a mental health problem less than half the time.

Source: *MedicineNet*, February 2014

NSW new blueprint for mental health and well-being

The NSW Minerals Council has developed a new Blueprint for Mental Health and Well-being to train supervisors and managers to identify mental ill health and resist "macho cultures".

The blueprint recommends minerals employers introduce programs that increase workers' understanding of mental health and well-being and educate them on the importance of good physical health in maintaining well-being.

The Blueprint is available from http://www.himh.org.au/_data/assets/pdf_file/0020/9902/Blueprint-for-mental-health-and-wellbeing.pdf

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Source: *NSW Minerals Council*

INCREASING NUMBERS OF CHILDREN SUFFERING FROM MENTAL DISORDERS

Nearly 10 per cent of children hospitalised in America are there because of a mental health problem, a new study has found.

Most of them suffer from depression, bipolar disorder or psychosis.

Dr Naomi Bardach, an assistant professor of paediatrics at the University of California, San Francisco, explained that the problem has grown between 1997 and 2010 with hospitalisations of children with mental problems jumping by 80 per cent.

The next step, she says, is to figure out the best treatment and then try and make all hospitals deliver the best care available.

Rose Alvarez-Salvat, a paediatric psychologist at Miami Children's Hospital says that the study doesn't take into account the number of children in outpatient care or those seen in schools or community mental health centres.

Both doctors noted the shortage of trained paediatric mental health specialists and psychologists for the type of children being admitted to hospitals.

Source: MedicineNet, March 2014



HEALTH - SUBSTANCE ABUSE

Prescription drug abuse is a workplace concern

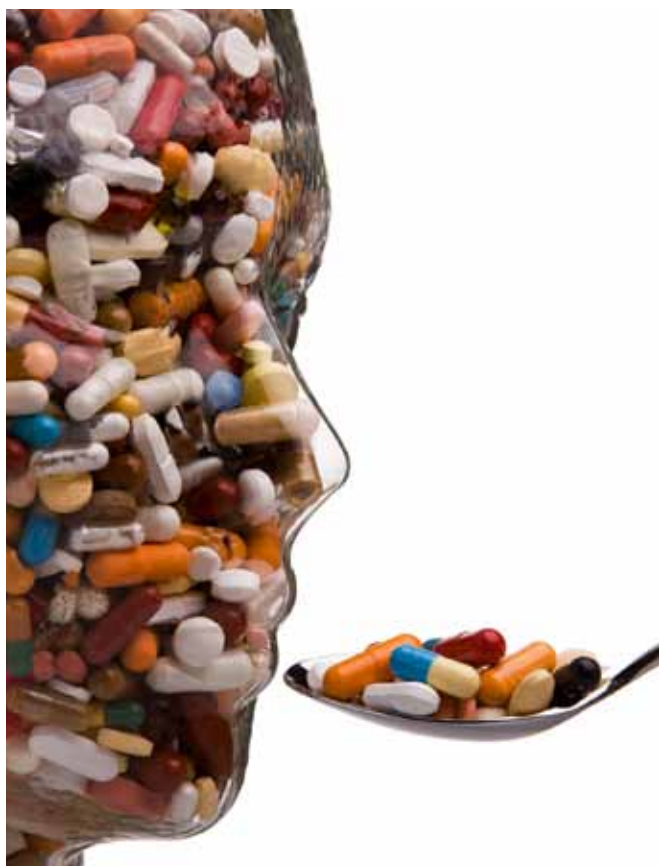
Prescription drug abuse is a significant problem in the Canadian workplace, according to workplace drug and alcohol consultant, Nadine Weatzell, speaking at Nova Scotia's Annual Workplace Safety Conference held on 27 March 2014.

Both health concerns and deaths related to prescription drug abuse are on the rise across the country, and this trend is expected to continue with Canadians aged 18-24 years being the highest abusers of prescription drugs she said.

Canadian organisations are seeing the effects of opioid abuse in the form of turnover, absenteeism, lost productivity and more accidents.

The Monitor previously reported on the soaring number of students abusing prescription drugs in Britain in its August 2013 edition.

Source: CosMag, March 2014



Casual use of marijuana by young people causes brain abnormalities

In a study appearing in the *Journal of Neuroscience* in April, researchers from a number of US medical schools showed a direct correlation between the number of times users smoked marijuana and abnormalities in the brain.

The study identified changes to core regions of the brain that are key to regulating emotion and motivation in users who smoke between one and seven joints a week.

Researchers found changes to the volume, shape and density of those brain regions (nucleus accumbens and the nucleus amygdala). They said that more research is needed to determine how these changes may have long term consequences and whether they can be fixed by abstinence.

Senior study author Dr Hans Belter said that "our hypothesis from this early work is that these changes may be an early sign of what later becomes amotivation, where people aren't focused on their goals."

This latest study fits with other research showing marijuana use has significant effects on young people because their brains are still developing and Belter said he has become convinced that marijuana should only be used by people under 30 if they need to manage pain from a terminal illness.

Source: Reuters, April 2014

Drug taking behaviour in the USA 2000-2010

Americans' use of cocaine fell by one half from 2006-2010 while marijuana use increased by more than 30% according to a new report prepared for the White House Office of National Drug Control Policy.

Heroin use remained fairly stable during the decade 2000-2010 while methamphetamine use rose sharply during the first half of the decade and then fell.

The report didn't look at the reasons behind changes in drug use and did not assess the effectiveness of drug-control strategies.

Source: MedicineNet March 2014

FATIGUE



DAY TIME SLEEP DISRUPTS GENES

A new study published in the *Proceedings of the National Academy of Scientists* conducted by British researchers indicates that sleeping during the day disrupts the rhythms of about one-third of human genes. It also suggests that it appears to be more disruptive than not getting enough sleep.

Professor Derk-Jan Dyk of the University of Surrey said that quite fundamental processes are being affected and may be related to the negative health outcomes associated with long-term shift work i.e. obesity, diabetes, high blood pressure, heart disease, disrupted menstrual cycles and cancer.

The study didn't directly connect health problems and night shift work but experts say it does start to help them understand why sleep might have such a powerful influence on a person's health.

Source: MedicineNet, January 2014

Poor sleep linked to widespread pain

Regularly feeling tired and worn out after a night's sleep was the strongest prediction of also developing widespread pain in a new study of UK adults over the age of 50.

Senior author, Ross Wilkie, from Keele University in Staffordshire reports that musculoskeletal pain was common with just under half of participants reporting some pain and one quarter reporting widespread pain.

Non-restorative sleep was the strongest predictor of new onset widespread pain, he said and sleep is a modifiable target, so improving it might improve the outcomes of these people.

Source: Reuters, February 2014

Diet helps explain shift work related chronic disease risks

When we eat foods, such as saturated fats (found in butter, coconut milk, whole milk) and trans fats (found in many frying fats and in some commercial baked goods), that 'assault' the body, they trigger an inflammatory response.

A study by the American College of Occupational and Environmental Medicine has found that people who do shift work are more likely to have a diet that promotes chronic inflammation. The researchers, using data from a nationwide sample of employed adults, calculated a "dietary inflammatory index" for each individual. The greater the DII score, the more pro-inflammatory the diet.

With adjustment for other factors, shift workers had an elevated DII compared to day workers.

It is still unclear how much an impact the elevated DII would have on health, but a pro-inflammatory diet might be one factor contributing to shift work related health risks said the researchers.

Source: CosMag, February 2014

Fighting truck driver fatigue with technology

The head of Trimble's Transport and Logistics Division, Tom Debeule, says that driver-fatigue-caused accidents can be avoided using the right technology.

He says that in Europe there has been a shift from the use of log books to tachographs and in Australia a number of new ideas are being discussed regarding recording of fatigue management hours electronically.

Some of the issues associated with fatigue management can be solved by providing drivers and the back office with data recorded in the truck by the driver or by the truck.

This gives the driver screen views on fatigue hours and driver safety.

The driver is provided with a "fatigue management screen", which includes all the rules put forward by the National Heavy Vehicle regulator including standard hours, the basic fatigue management scheme and the advanced fatigue management scheme.

The screens basically give the driver the view of how many hours they have left to work on the current scheme they are working in. When they have to rest they are warned with audio-visual messages on the screen and also by the speaker installed in the truck. This lets the driver know they are getting close to their mandatory rest time. It creates awareness for the driver but also provides information for the back office, which is also a very important part as it lets them know what the driver is still capable of within the limitation of the law.

Source: SafetySolutions, 2 April 2014 / Trimble Transport and Logistics



TROUBLED SLEEP MAY BE TIED TO LOWER BRAIN VOLUME

In a study of Persian Gulf War veterans reported in the March 2014 edition of the journal, *Sleep*, researchers found that participants who reported poor quality sleep overall had less frontal lobe grey matter than veterans who reported sleeping well.

In addition to sleep troubles, a host of psychological problems plagued the veterans. Half had abused alcohol, 40 per cent had had a major depressive disorder at some point and 18 per cent had PTSD.

Even after allowing for psychotropic medicine use, the link between sleep troubles and brain volume remained.

Lead author Linda L Chao believes the findings could apply to anyone, not just war veterans.

Source: Reuters, March 2014



Post-traumatic stress disorder explained

Dr Jocelyn Lowinger has written a comprehensive article explaining post-traumatic stress disorder which is an excellent resource for OHS professionals.

The article is available at ABC Health and Wellbeing Fact File. <http://www.abc.net.au/health/library/stories/2014/04/17/3984798.htm>

Source: ABC Health and Wellbeing Fact File May 2014



AROUND THE GLOBE

Canada

OHS training to be mandatory

A mandatory training requirement for all Ontario workplaces will take effect from 1 July.

The health and safety training module will be non-negotiable and will force a dialogue between businesses and workers as to what kind of hazards may exist at a particular workplace and it really speaks to a culture of preventeeism, where businesses and workers are pro-actively working towards building a safe working environment, said the Ontario Minister for Labour.

Source: *CosMag*, March 2014

Heart disease “re-instated” as job related disease in firefighters

The British Columbia government has moved to amend workers’ compensation legislation to restore heart disease, removed 15 years ago, as a presumed job-related disease in firefighters to be recognised by WorkSafe BC.

This means that firefighters who suffer heart disease, including heart attacks, can file workers’ compensation claims without having to individually prove their condition is job related.

Source: *OHS Reps, SafetyNet*, 20 March 2014

China

Air pollution

Chinese scientists have warned that the country’s toxic air pollution is now so bad that it resembles a nuclear winter, slowing photosynthesis in plants – and potentially wreaking havoc on the country’s food supply.

The worsening air pollution has already exacted a significant economic toll, grounding flights, closing highways and keeping tourists at home.

Beijing’s concentration of particle matter – small enough to penetrate deep into the lungs and enter the bloodstream – hit 505 micrograms per cubic metre recently. The WHO recommends a safe level of 25.

Source: *Chemwatch Bulletin Board*
29 March 2014

Workers killed

At least 21 miners have died in China’s Yunnan Province as a consequence of a coal mine flooding with another still missing.

It is estimated that 3,000 workers in China coal mines are killed annually, mostly at coal operations.

Source: *Mining.com*, 20 April 2014

Europe

Chemicals industry delaying regulation in Europe

The Centre for International Law (CIEL) and Client Earth have criticised a joint recommendation by the Chemical Industry Councils of Europe and the USA to set up a joint scientific committee and increase the use of cost-benefit analysis before any regulation of the chemical industry is introduced.

They claim that the chemical industry’s proposals are a strategy aimed at slowing down the adoption of legislation concerning chemicals that interfere with hormonal systems, such as endocrine disrupting chemicals.

Source: *ETUI Health and Safety News*,
18 March 2014

Endocrine disruptors – failure by European Commission to act

Sweden is threatening to sue the European Commission if it does not take action within two months to adopt criteria for identifying endocrine disruptors.

Endocrine disruptors are chemicals that disrupt the hormonal system and are raising concerns of a possible link with a range of chronic diseases (some cancers, diabetes, obesity etc).

The European Commission was supposed to publish an EU strategy on endocrine disruptors and the scientific criteria for identifying them in December 2013.

Source: *ETUI Health and Safety News*,
6 March 2014

European initiative to manage workplace stress

The European Agency for Safety and Health at Work has launched a two year Europe-wide campaign; **Healthy Workplaces Manage Stress**.

The prevalence of work-related stress in Europe is startling with 51% of workers finding work-related stress to be common in their workplace and four in 10 workers thinking that stress is not handled well in their organisation.

The Healthy Workplaces Campaign aims to help companies to successfully manage and prevent work-related stress and psychosocial risks through a co-operative effort by employers and workers.

Source: European Agency for Safety and Health at Work (EU-OSHA) OSHmail newsletter 142, April 2014

Nano-materials in food proposal rejected

A European Commission's definition of nanomaterials, which would have exempted foods containing nanomaterials that are already on the market from being labelled as such, has been rejected by the European Parliament.

The rejection by the Parliament means that the Commission will now have to present a new proposal.

Source: Chemwatch Bulletin Board, 21 March 2014

OHS research priorities for Europe

The European Agency for Safety and Health at Work has identified key priority areas to enable Europe to reach its occupational safety and health 2020 goals.

Priorities have been set around four major themes:

- demographic change
- globalisation and the changing world
- safe new technologies
- new and increasing occupational exposure to chemical and biological agents

Source: European Agency for Safety and Health at Work (EU-OSHA) OSHmail newsletter 142, April 2014

USA

Sitting for long periods results in disability for other Americans

Researchers in the USA have found that every hour people 60 years old and older spend sitting daily is tied to a 46 per cent increased risk of being disabled – even if they exercise regularly.

If future studies can confirm that sedentary behaviour causes disability, which this study does not, then older people may avoid becoming disabled by being more active throughout the day.

Source: Reuters, 19 February 2014

Sweden

Hazardous chemicals tax proposed in Sweden

Sweden is proposing a hazardous chemical tax on consumer goods in a bid to achieve a toxic-free everyday environment.

Consumer goods subjected to tax would be those containing hazardous substances on a list that would be drafted for each product group.

Clothes and shoes have been listed as an example of the increasing number of products containing chemicals that are hazardous for both the environment and health.

A list of substances has been suggested.

Source: PR Log, Release 12 February 2014



Occupational Health Society of Australia (WA)

Incorporated in 1978, the Occupational Health Society of Australia (WA Branch) is a non-profit association which provides a forum for the wide range of disciplines engaged in the occupational health profession in Western Australia.

The aims of the Society are:

- to develop effective occupational health practice within WA;
- to encourage awareness by individuals, organisations and other bodies, of the role of occupational health;
- to provide a forum for professional contact between persons interested in, and working in, occupational health;
- to express an independent, professional viewpoint on all aspects of occupational health considered desirable in the public interest;
- to seek the improvement or an extension of the existing legislation for the promotion of safety and health at work in order to ensure uniform principles are applied in all occupational activities.

Visit www.ohswa.marcsta.com for more information.

Members

Russell ALLIEX Orrcon Steel
Anitha ARASU
Jerry BARRETT Active Foundation
Joyce BLAIR Next Health
Linda BRACKEN Workwise Occupational Health
Fiona BROWN Westrac Pty Ltd
Phillip BRYANT
Hugh BUTLER OH&S Consulting
Dr Bianca CHEONG RediMed
Alan CLARKSON Snr SHEQ Australia
Alan CLARKSON CGC_Alán Clarkson Group
Nichola COKER AWH Pty Ltd
Allaine COLEMAN CGU Workers' Compensation
Terry CONDIPODERO GR Engineering Services
Jeremy COX Skilled Group
Maria DANIEL Disability Services Commission
Kellie EASTER Enhancing Safety
Neil FLETCHER
Donelle FRASER CTR Management
Debbie GASKIN DFES
Diana GEMMELL
Patrick GILROY AM MARCSTA
David GOUGH
Jeanie HAMMOND JEH Consultancy Pty Ltd
Janis JANSZ Curtin University
Ralph KEEGAN Frontline Safety and Training Services
Cheryl KELLY Viento Group Limited
Sheryl KELLY GR Engineering
Ian KISON Mrs Mac's Pty Ltd
Dave LAMPARD WA Police Union
Thomas LEE RediMed
William LUHRS Drillspec Training Services
Joe MAGLIZZA Holcim Australia Pty Ltd
Alison MARTINS OH&S Consulting
Peter McMAHON Main Roads WA
Rosalee MORRIS Disability Services Commission

Raff MOSHFIQ Chevron
Peter NICHOLLS FMR Investments
Dr Nic ORMONDE Ormonde Health Consulting
Craig POWER OH&S Consulting
Georgina ROGERS Challenger Institute of Technology
Peter ROHAN Department of Mines and Petroleum
Dr Farhan SHAHZAD
Dr Dilip SHARMA
Sherrilyn SHAW Return to Work Solutions
Val SLOCOMBE Westrac Pty Ltd
Rod SUMNER Carve Business Solutions
Dr John SUTHERS Occupational Physician
Geoffrey TAYLOR
Christine TEAGUE Edith Cowan University
Lance VAN NIEKERK Ramsay Health Care
Les VOGIATZAKIS Matrix Composites and Engineering
Dr Kar Chan WAN RediMed
Meechan WONG North Metropolitan Area Health Service

Kylie ALLAN Student, Curtin University
Mamadou BAH Student, Curtin University
Selina BARKER Student, Curtin University
Emma BARRETT Student, Curtin University
Madeleine HOLLOWAY Student, Curtin University
Arumugam KANDASAMY Student, Curtin University
Matt LINDSAY Student, Curtin University
Muthukaruppan PANDIAN Student, Curtin University
Merima SULEJMANI Student, Curtin University

the work health and safety monitor



Contact

MARCSTA
183 Great Eastern Highway
Belmont WA 6104
PO Box 171
Belmont WA 6984
Tel: 6272 6120
email: safety@marcsta.com
www.marcsta.com