



Symposium July 2015

Some 60 registrants from a wide range of occupational health-related disciplines attended the Society's Symposium on 15 July 2015.

The main purpose of the Symposium was to ensure an awareness of the health-related initiatives contained in the proposed new legislation for both industry in general and the mining sector and speakers were invited who were considered appropriate for this purpose.

The need for a concerted approach by all occupational health disciplines to ensure that the regulations essential to put into effect the new initiatives was the main message to emerge from the day.

The overwhelming quantity of information on the wide range of health-related workplace concerns currently emerging requires relevant regulation for their recognition and management.

The proposed new legislative initiatives provide an opportunity for this to be done and should not be missed. **Every occupational health professional has a responsibility to become involved both personally and/or through the Society.**

Papers presented at the Symposium are available on the Society's website www.ohswa.marcsta.com

The Faculty of Occupational and Environmental Medicine have indicated that they are prepared to work with the Society on the development of regulations for the improvement of occupational health and welfare.

Invitation to Society members

Any member of the Society who is interested in participating in the development of input to the regulations is asked to advise the Secretary ASAP. Email safety@marcsta.com

In this issue . . .

Legislation/Regulation	3
Safety	5
Air pollution	8
Health - physical	11
Health - psychological	17
Sleep/Fatigue	18
Hazardous substances	20
Legal/illegal drugs	23
Cancers	25
Workers' compensation	26

Membership to the Society is open to all those interested in occupational health and safety.

\$50 ordinary membership

\$20 student membership.

Simply email safety@marcsta.com with your details.

Subscription invoices for 2015/16 will be emailed to existing members in October.

WELCOME

In this issue ...

Legislation/Regulation

WorkSafe employee cuts lack justification.....	3
WHS Green Bill 2014.....	3
Work Health and Safety (Resources) Draft Bill	2
Reducing the number of occupational victims requires an alternative prevention policy.....	4
Attack on OHS legislation intensifies in the UK.....	4
New Zealand axes safety representative training	4

Safety

Smart driver seat that responds to gestures	5
Change needed to tackle work fatalities	5
WorkSafe Victoria launches new media campaign	5
Quad bike fatalities - a national concern	5
Heavy fine for repeat offender	6
Truck company boss jailed.....	6
Workplace safety reaches Myanmar.....	6
Food firm to pay \$6m after horror death.....	6
Lightning	6
UV meters for workplaces now available.....	7

Air pollution

London air pollution deaths only a tip of the iceberg	8
Aircraft emissions responsible for 16,000 premature deaths annually	9
Children with asthma likely to have been born in areas with high air pollution.....	9
Air pollution in China contributes to the deaths of an estimated 1.6m people annually	10
European citizens to measure air pollution with smartphones	10

Health - physical

Decline in UK employer commitment to health and wellbeing alarming.....	11
Update on chronic diseases in Australia	11
Sugary drinks and mortality linked.....	11
Can what you eat affect your mental health?	12
Long standing has negative health effects similar to long term sitting.....	13
A case-control study of airways obstruction among construction workers.....	13
New Australian initiative to eradicate asbestos	14
Asbestos - no safe level.....	14
Pirelli managers convicted over asbestos deaths.....	14
Tougher laws need to enforce asbestos importation ban.....	14
Is your child colouring with asbestos?.....	14
A metabolic master switch underlying human obesity	15
Little chance of recovering from severe obesity.....	15
US workers continue to be exposed to workplace health risks.....	16
Is mobile phone use in hospitals a health risk?	16

Health - psychological

The body and the brain: impact of mental and physical exertion on fatigue development	17
Nearly 47 million people now have dementia.....	17
Japan moving to address workplace stress.....	17

Sleep/Fatigue

Long working hours linked to higher risk of stroke.....	18
Important finding that poor sleep may trigger Alzheimer's memory loss.....	18
Children of shift workers suffer academically and socially	18
One night of sleep loss can alter our genes.....	18
How important is body sleeping posture.....	19
Views sought on a new framework for fatigue research.....	19



Issue 4

Vol 19
September 2015

Hazardous substances

Defence staff exposed to toxic jet fuel	20
Jet fuel and noise.....	20
Industry funded study identifies fracking concerns.....	20
Endocrine disruptors.....	21

Legal/illegal drugs

Misuse of cognitive enhancing drugs in the workplace	23
Why smoking should be banned in all workplaces	23
Workplace drug screening becoming commonplace	23
Does tobacco use cause psychosis?	23
New drug and alcohol tool for industry.....	24

Cancers

Genetics linked to melanoma.....	25
Biodiesel emissions possibly carcinogenic too	25
Estimated prevalence of exposure to occupational carcinogens in Australia 2011-2-12.....	25
Occupational exposure to carcinogens in Australia, Workers' Compensation claims paid in Australia 200-2012.....	25

Workers' compensation

Long term claims for workers' compensation continue to increase in Western Australia	26
Lost time injury claims lower in unionised Canadian construction workplaces.....	26
Mesothelioma compensation award upheld by High Court.....	26
Major campaign to get employees back to work.....	26

MONITOR EDITOR

Geoff Taylor

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

MARCSTA, PO Box 171, Belmont WA 6984

E-mail: safety@marcsta.com

www.marcsta.com



Legislative/regulatory matters

WorkSafe employee cuts lack justification

WA unions have warned that proposed cuts to WorkSafe WA could put the safety of West Australian workers at risk.

WorkSafe staff have recently been told by the Department of Commerce that it planned to reduce the number of inspectors and back-office positions. Ten vacant inspector positions were due to be cut, along with seven positions in areas including training and the library.

In a statement, the Department of Commerce said advances in technology had made the support roles redundant while the inspector positions could not be filled.

The inaction of the Government with regard to the Work Health and Safety Green Bill 2014 has not been explained and there has been no feedback from WorkSafe on the public input to the Green Bill since the closing date for submissions of 31 January 2015.

This inaction is in stark contrast to the progress of the Work Health and Safety (Resources) legislation which is moving along at an acceptable speed.

Source: OHS Reps, SafetyNetJournal, 331, 22 July 2015

Update on the status of OHS in Western Australia

Work Health and Safety – Green Bill 2014

Public comment was invited following tabling of the Green Bill which was required by 31 January 2015. WorkSafe WA processed the input and provided it to the Minister responsible in early 2015. No further action has been taken by the Minister to date.

The Ministerial Advisory Panel on Safety Legislation Reform has continued to express concern at the lack of progress.

Work Health and Safety (Resources) Draft Bill

It is currently anticipated that the Bill will be introduced into the 2015 Spring Session of Parliament with the regulations being gazetted by the end of 2016.

The Act cannot be implemented until the regulations are in place.

The Department of Mines and Petroleum foresees some constraints on the proposed Western Australian specific changes due to the need to maintain alignment of outcomes between Western Australia and the Commonwealth for offshore petroleum legislation and between safety cases for major hazard facilities and petroleum.

Reducing the number of occupational victims requires an alternative prevention policy

A recent ETUI Policy Brief prepared by Wim Eshuis, a researcher at De Burcht Research Institute for Trade Unions in Amsterdam, argues that the **regulatory approach to occupational health and safety is effective only where employers care about the quality of working life**, pointing out that many employers – estimated at 22% in Belgium and the Netherlands – turn a blind eye to the health and safety problems facing their workforces or reject available options for improvement, resulting in a situation where the risks remain confined within the four walls of the workplace.

He proposes a set of measures that would compel the most refractory employers to take such problems seriously:

- Participation by victims in the enquiries conducted following negative impacts on workers' health.
- Introduction of arrangements for compensation.
- Public access to insurance companies' data on work-related sickness and accidents.
- Intervention by external experts within companies.
- Improved resources for labour inspectorates.

Source: ETUI Media Release, 4 August 2015

Attack on OHS legislation intensifies in the UK

The Trade Union Congress in the UK has warned that the Government's Trade Union Bill will not only damage productivity and civil liberties but put lives at risk at work.

The union body said the Bill could dramatically cut the time union safety representatives have to carry out their functions and get trained.

The Trade Union Bill does two things; firstly it imposes a pointless burden on public sector employers (who have at least one union HSR) to record and publish all the time taken to undertake their activities and any facilities provided.

Secondly, it proposes to allow ministers to restrict the rights to time off given to union HSRs by amending the Health and Safety Act. All they have to do is introduce new regulations.

Source: TUC Risks

Both the UK and New Zealand governments' action to reduce the role of health and safety representatives is in stark contrast to the legislation proposed for Western Australia where the involvement of HSRs will be augmented, particularly in the consultative aspects and in the health monitoring of workers.

The importance of this involvement of HSRs in achieving and maintaining the high standards of workplace health and safety throughout Australia has long been recognised by all parties concerned with occupational health and safety.

New Zealand axes safety representative training

The NZ Council of Trade Unions is being forced to end its HSR training program as a result of the government's decision to end funding to support high risk industry health and safety representatives.

The program, run for over 12 years with support from the Government's Accident Compensation Corporation (ACC), has seen over 33,000 HSRs upskilled. Costs were met from an injury prevention levy meaning that employers, while having to meet the costs of two days leave, did not need to pay for the course itself.

Union secretary, Sam Huggard, says that the Government is not only removing the rights of workers to elect HSRs in small businesses but is also cutting the funding for the approved course required.

Source: OHS Reps, SafetyNetJournal, 335, 19 August 2015

SAFETY

Ease into the correct seat position: with the new seat model, a few hand gestures at the side panel are all you need.
© Isringhausen GmbH

Smart driver seat that responds to gestures

Researchers at the Fraunhofer Institute for Silicate Research (ISC), in collaboration with Isringhausen GmbH & Co. KG., have engineered a driver's seat that can be calibrated intuitively by simple hand gestures through sensors, which it is hoped will counter drawbacks such as back problems.

"With the aid of simple hand gestures, the driver can move the seat forward and back, as well as up and down. In addition, he or she can also custom-set the incline of the thigh support and backrest in the same manner," said Johannes Ehrlich from the Center for Smart Materials (CeSMa) at Fraunhofer ISC.

The scientists working on the project have integrated sensors including piezosensors, which respond to pressure, into the synthetic side cover so that the seat reacts to the driver's hand motions. To ensure the motion-controlled system is activated, the driver lightly presses a certain point on the side cover, which prevents the motion control from being accidentally triggered, said Ehrlich. Seat positions can also be stored, a feature designed for when multiple drivers need to use the same vehicle.

Source: *SafetySolutions*, 1 September 2015

Change needed to tackle work fatalities

In Britain the TUC head of safety, Hugh Robertson, has warned that the steady fall of workplace fatalities seen since 1974 has stopped and may even be beginning to reverse. He also warned against too much focus on fatal injuries as last year figures released by the HSE showed that **the number of people being injured or made ill through work was rising, reversing a long-term downward trend.**

He was critical of government policies over the past five years which he said "have done nothing to help prevent workers being killed or injured and need a big change with more emphasis on inspection and enforcement."

Source: *TUC Risks* #710, 11 July 2015

WorkSafe Victoria launches new media campaign

WorkSafe Victoria has launched a media campaign titled "*How safe is your workplace?*" which encourages a positive and supportive environment within workplaces, where safety is openly discussed, promoted and celebrated with the aim of reducing workplace injuries and compensation claims.

The state-wide campaign includes TV, press, radio and on-line advertising and signage in public transport and office lifts. All the promotional material directs people to a specific web page where they are able to complete a self-assessment survey on the safety of their workplace. They will then receive practical advice and guidance to support improvements.

To see the campaign go to <https://www.youtube.com/watch?v=G9eiP8uyceA>

Source: *OHS Repts, SafetyNetJournal*, 336, 26 August 2015

Quad bike fatalities - a national concern

The Queensland government is to develop a strategy to tackle Queensland's unacceptably high rate of quad bike fatalities.

Quad bike usage is becoming increasingly diversified in Queensland and is used in mustering, spraying and towing and for recreational activities such as adventure, tourism and competitive racing.

The working group developing the strategy will consider the use of helmets, riders under 16 years of age, the fitting of operator protective devices and the establishment of a consumer rating system.

What is generally not known is that since 2011 there have been 88 quad bike related fatalities in Australia, 28 of which have occurred in Queensland.

Source: *WorkCover Queensland*, 31 August 2015

Heavy fine for repeat offender

Total UK have been fined UK £1.4m after a major fire led to the death of a worker at an oil refinery in North Lincolnshire in 2010.

The court was told that operators of major accident hazard establishments must have in place a functioning system of risk assessment for all tasks where hazardous substances could be released.

Total UK Limited pleaded guilty to a criminal breach of major hazard regulations. The judge said its safety failings "created an inevitable risk of death". The death prompted unions to call for an independent safety probe into Total which, in July 2010, was also required to pay £6.2m fines and costs for criminal safety offences related to the Buncefield oil depot explosion in 2005.

Source: TUC Risks 713, 8 August 2015

Truck company boss jailed

An Adelaide trucking company boss has been found guilty and jailed for 12 and a half years over a driver's death caused by faulty brakes – after he took action to avoid heavy traffic just before he crashed into a pole. The defendant was also convicted of endangering the life of another driver two days before the fatal crash. The Supreme Court heard that the defendant was repeatedly warned about the truck's faulty brakes.

Source: OHS Reps, SafetyNetJournal, 336, 26 August 2015

Workplace safety reaches Myanmar

Mining unions in Myanmar have resolved to set up health and safety committees at every mining operation in the country. Thirty trade unionists, including eight women, took part in the first-ever workshop on occupational health and safety, a collaborative initiative involving the ILO, the Confederation of Trade Unions of Myanmar and industrial affiliate, the Mining Workers Federation of Myanmar.

The mining industry in Myanmar employs more than 100,000 workers. At present there is no minimum wage in the industry and workers' pay varies according to their job function and productivity level.

Source: OHS Reps, SafetyNetJournal, 331, 22 July 2015

Food firm to pay \$6m after horror death

A California food firm has been fined \$6m after a worker was cooked to death in an industrial pressure cooker when the machine door was closed by other employees while he was making a quick repair to the cooker.

The company will pay \$3m to replace its outdated ovens, \$1.5m to the worker's family, \$750,000 to an Environmental Enforcement Fund and \$750,000 in combined costs and penalties.

Source: TUC Risks, 716, 22 August 2015

TIME TO ADDR

Lightning

With the 2015-6 summer storm season almost upon us, readers are reminded to ensure that their Lightning Procedures and Risk Mitigation Controls are up to date and in place prior to the seasonal onset.

Lightning is well proven to be one of the most underrated catastrophic risks that resource operations will regularly be impacted by, (sometimes daily over the summer months), yet despite an abysmal record of regular incidents (including fatalities), lightning remains so misunderstood that it is often overlooked. Australia's mining and resource sector still continues to feature prominently in the annual statistics.

This is not hard to understand considering many resource operations are located in regions exhibiting higher annual thunder-days, whilst mining and resource activities typically involve larger numbers of persons conducting their activities predominantly outdoors and around significant plant and equipment that exhibit a greater disposition to risk factors.

No place outdoors is safe from lightning



LESS SUMMERTIME HAZARDS

The most important thing to remember is **"No Place Outdoors is Safe from Lightning"**, and readers are encouraged to ensure that their **Lightning Procedure:**

- informs employees about all lightning risk mechanisms
- outlines common industry accepted metrics
- describes what safe actions are required
- identifies safe/unsafe areas

The following metrics are recommended to assist with **Lightning threat determinations:**

Yellow alert

L<30kms Caution Threat is nearby

Orange alert

L<16kms Warning Becoming unsafe

Red alert

L<8kms Alarm Seek immediate safe shelter

AS1768 "Lightning Protection" recommends the use of Handheld Detectors, and Lightning Warning Systems, although great care must be exercised whenever selecting/using such equipment, as there can be significant shortcomings, and limitations associated with the use of this technology.

Lightning Risk Mitigation Specialists can be sought to help determine the most suitable technologies, assist with the development of procedures, and who can also undertake Site Audits to help identify areas of concern that might otherwise remain as unidentified risks.

Source: Grant Kirkby, Lightning and Surge Technologies

UV meters for workplaces now available

The Cancer Council of WA has announced the availability of a new sun protection tool, termed a UV meter, which it has designed and produced exclusively for business to provide a highly visible reminder about the risk of ultra violet radiation.

Given that sun protection has become a serious duty of care issue in workplaces, with the number and cost of workers' compensation claims for skin cancers increasing annually, the UV meter can increase employee awareness of their own safety responsibilities and is visibly more effective than a static warning sign.

The UV meter installation style will allow easy relocation to a new site when a project is finished and another commenced.

The single-sided meter is suitable for either wall or pole mounting or alternatively double-sided meters with both side displays are also available.

Single-sided meters can be purchased for \$3,738.90; double-sided meters for \$4,345.00.

The meters are solar powered and housed in a tough aluminium weather-proof case and are monitored remotely by the Cancer Council WA to ensure accuracy.

Source: Cancer Council WA, 22 July 2015





AIR POLLUTION

LONDON AIR POLLUTION DEATHS ONLY THE TIP OF THE ICEBERG

New research by scientists at Kings College, London and published by the Mayor of London on 15 July that estimates that London air pollution caused the early deaths of almost 9,500 people in 2010 is “only the tip of the iceberg” according to environmental NGO Client Earth.

The report marks the first time that the health and economic effects of nitrogen dioxide have been quantified, as all previous studies have focused on just particulate matter (PM2.5).

Alan Andrews, lawyer at Client Earth said **“as shocking as they are, these deaths are really on the tip of the iceberg. For every person who dies early from air pollution, many more are made seriously ill, have to visit hospitals or take time off work.”** He added, **“Nitrogen oxide is produced mainly by diesel vehicles. We need to get the worst polluting of these out of our towns and cities, away from schools and hospitals. That requires action from the government on a national scale.”**

Source: Airqualitynews, 15 July 2015



Aircraft emissions responsible for 16,000 premature deaths annually

Air pollution emissions from civil aircraft could be responsible for the premature deaths of 16,000 people around the world every year with an economic burden of up to US\$21b according to a study conducted at the Massachusetts Institute of Technology.

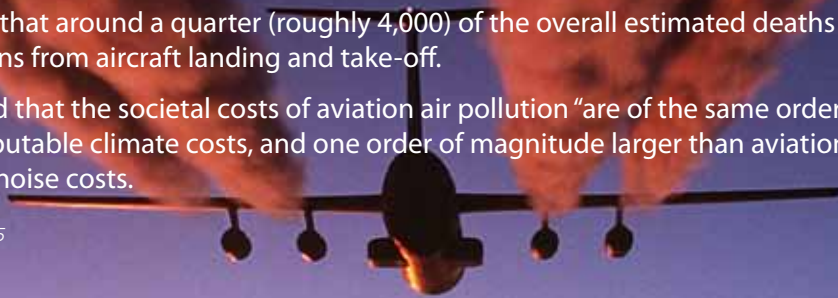
The study authors claim the work is the first to analyse air quality and human health impacts of aviation at three different scales – local level (less than 1km from the airport), near-airport level (less than 10km) and global (up to 10,000 km from source).

This is because aviation emissions impact surface air quality “at multiple scales – from near-airport pollution peaks associated with airport landing and take-off emissions, to intercontinental pollution attributable to aircraft cruise emissions.”

However, the study found that around a quarter (roughly 4,000) of the overall estimated deaths could be linked to emissions from aircraft landing and take-off.

The study authors also said that the societal costs of aviation air pollution “are of the same order of magnitude as global-attributable climate costs, and one order of magnitude larger than aviation-attributable accident and noise costs.

Source: *Airqualitynews*, 27 July 2015



Children with asthma likely to have been born in areas with high air pollution

Children who develop asthma in Toronto are more likely to have been born in a neighbourhood that has a high level of traffic-related air pollution, new research by the Centre for Research on Inner City Health at St Michael’s Hospital suggests.

They say that high clusters of atopic asthma (asthma related to allergies) were found in children who were born in parts of the south-west, south and north-east of Toronto areas, where busy highways connect. Seventy percent of the children involved in the study had moved from their birth neighbourhood, further suggesting the air pollution during pregnancy and shortly after birth was related to developing asthma later in childhood.

While exposure to traffic-related air pollution helped explain some of the clusters, researchers said that air pollution isn’t necessarily acting alone in causing childhood asthma, or else they would have found similar clusters along all the main thoroughfares in Toronto.

Source: *Science Daily*, 27 June 2015

Air pollution in China contributes to the deaths of an estimated 1.6m people annually

Recent research by Berkeley Earth, based in California, contends that an outdoor air pollution study that maps the geographic sources of China's toxic air shows that much of the smog often covering Beijing is the result of emissions from the distant industrial zones.

The research findings present data showing that outdoor air pollution contributes to 17 percent of all deaths in the nation each year.

Source: OHS Repts, SafetyNetJournal, 335, 19 August 2015



© 2012 Gary Braasch • WorldViewOfGlobalWarming.org

European citizens to measure air pollution with their smartphones

A successful Dutch iSPEX-project that enlisted the general public to contribute to the understanding of air pollution is being scaled up and running its first Europe-wide citizen campaign.

From 1 September to 15 October 2015, thousands of citizens in major European cities will take to their streets, squares and parks to measure air pollution with their smartphones.

Participating cities include Athens, Barcelona, Belgrade, Berlin, Copenhagen, London, Manchester, Milan and Rome.

Source: ScienceDaily, 4 September 2015



HEALTH - PHYSICAL

Decline in UK employer commitment to health and wellbeing alarming

Morgan Redwood, a UK based health consultancy organisation who conduct a Wellbeing and Business Performance Survey on a five yearly basis, have released their 2015 report which contains some startling information on how UK employers' attitudes to employee health and wellbeing have changed in the past five years.

The report is based on anonymous responses of the Head of Human Resources or Board Director level equivalents from 250 of the most dynamic UK businesses. Participants were asked to rank a range of current key HR challenges.

Among the challenges that impact on HR departments is employee health, a factor that can directly affect business performance. High absence through sickness is undoubtedly detrimental. Yet, according to the latest rankings, sickness has fallen down the list of priorities. Does this mean that bosses are less concerned about their employees' health today than they were five years ago?

Comparing the two reports, there is a startling difference. In both studies, respondents were asked to state as to whether or not they believed there was a responsibility for employers to look after the health of their employees. In 2009 respondents were overwhelmingly in favour, with 95% stating that, yes, there was a duty of care involved. In the current market, however, there appears to be a major shift, with only 46% now believing that to be the case. The remaining 54% did not believe that the employer had a level of responsibility, a massive shift from 5% previously.

A similar effect was observed regarding the importance of wellbeing on performance, with 58% of employers in 2009 believing it was closely connected, falling to 25.6% in 2015, a fall of more than one half.

The authors state the decline in both aspects suggest an alarming change in employer attitude to employee health and wellbeing.

Source: Morgan Redwood, Wellbeing and Business Performance 2015

Update on chronic diseases in Australia

The Australian Institute of Health and Welfare has released an update on chronic diseases – those that tend to be long lasting and have persistent effects.

The Institute comments that there may be some differences in the time periods of reporting and methods of measurement used in relation to specific chronic diseases.

Unfortunately, these disparities make it difficult to interpret the current total picture of the health and wellbeing of Australians.

Source: AIHW

Sugary drinks and mortality linked

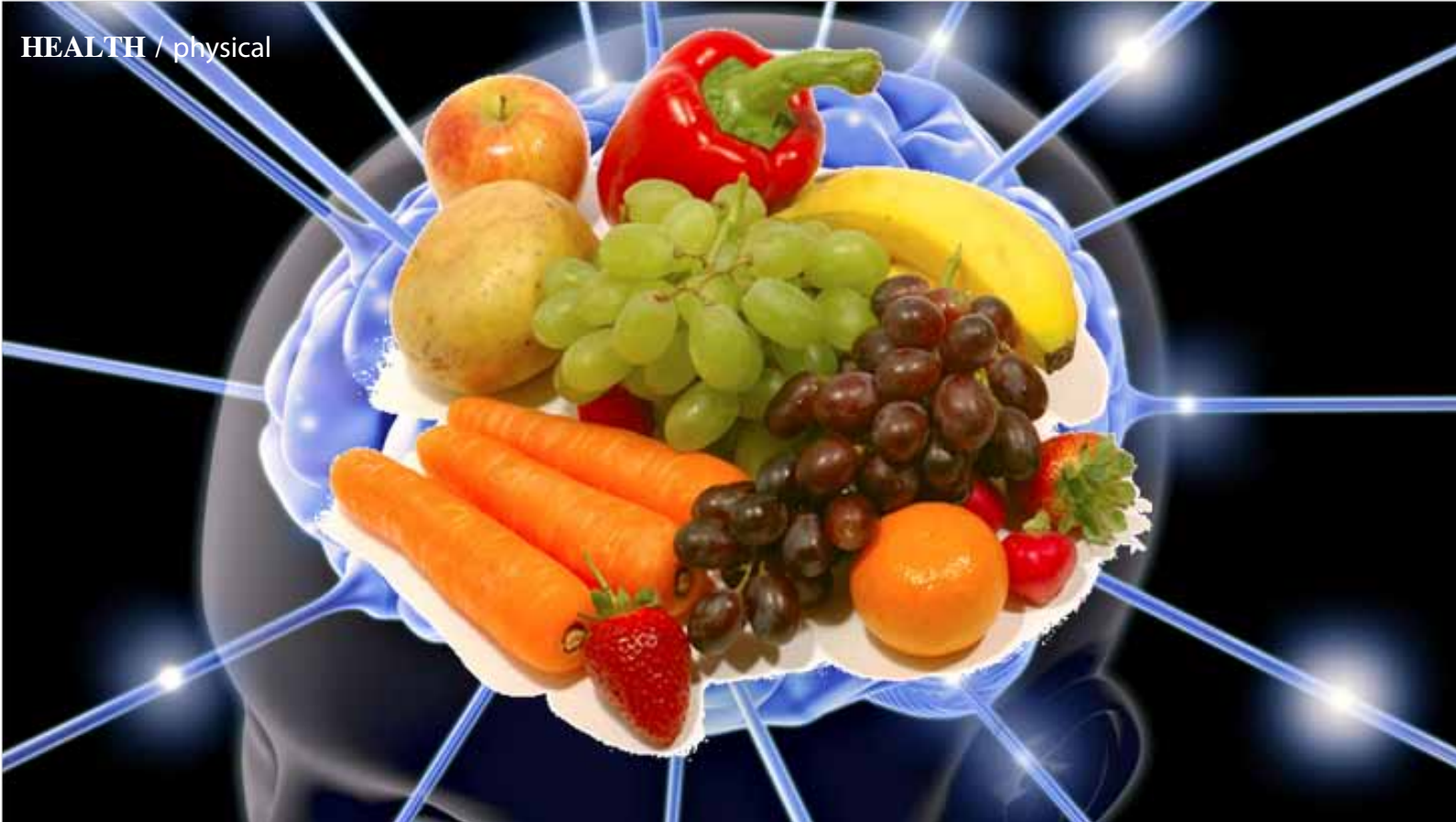
Research by Tufts University in Boston for the first time assessing global deaths attributable to sugar-sweetened beverages estimates that in 2010, 133,000 deaths were from diabetes, 45,000 from cardio-vascular disease and 6,450 from cancer.

Senior author, Dr Dariush Mozaffarian, said "it should be a global priority to substantially reduce or eliminate sugar-sweetened beverages from the diet."

These were defined as any sugar-sweetened fizzy drinks, fruit drinks, sports-energy drinks, sweetened ice teas or home-made sugary drinks. Pure fruit drinks were excluded.

Source: Chemwatch, 3 August 2015





CAN WHAT YOU EAT AFFECT YOUR MENTAL HEALTH?

Research is finding that a nutritious diet isn't just good for the body; it's great for the brain too. This knowledge is giving rise to a concept termed "nutritional psychiatry".

Just five years ago, the idea of nutritional psychiatry barely registered a blip on the health care radar. But experts say many well-conducted studies have since been published world-wide regarding a link between diet quality and common mental disorders – depression and anxiety – in both children and adults.

Psychiatrist Drew Ramsey, MD, an assistant professor at Columbia University, says that "diet is potentially the most powerful intervention we have. By helping people shape their diets, we can improve their mental health and decrease their risk of psychiatric disorder."

Felice Jacka, president of the International Society for Nutritional Psychiatry Research, says that "a large body of evidence now exists that suggests diet is as important to mental health as it is to physical health. A healthy diet is protective and an unhealthy diet is a risk factor for depression and anxiety." She adds that there is also interest in the possible role food may play in schizophrenic and bipolar disorders.

Source: MedicineNet, 20 August 2015

New warning on deadly work stress

Job insecurity, long working hours and other common workplace stressors can all damage a person's health, raise the odds of them having an illness diagnosed by a doctor and may even lead to an early death.

This is the conclusion of researchers from a study by the Harvard Business School and Stanford University.

The research team analysed evidence from 228 studies investigating stress in the workplace. They found that high job demands increased the odds of having an illness diagnosed by a doctor by 35 percent. Long working hours increased the chances of early death by almost 20 percent. Worry about loss of a job increased the odds of having poor health by about 50 percent.

Researchers said that the effect of workplace stress is about as large as that of second-hand smoke, an exposure that has generated much policy attention and efforts to prevent or remediate its effects.

Source: Risks, #719, 12 September 2015

Long standing has negative health effects similar to long term sitting

A new study published in *Human Factors* suggests that, over time, prolonged standing is associated with short-term adverse health issues, including reports of fatigue, leg cramps and back aches, which can affect performance and cause significant discomfort.

The study suggests that over time, this type of sustained muscle fatigue can result in serious health consequences including musculoskeletal disorders and prolonged back pain.

Source: *Chemwatch*, August 2015



A case-control study of airways obstruction among construction workers

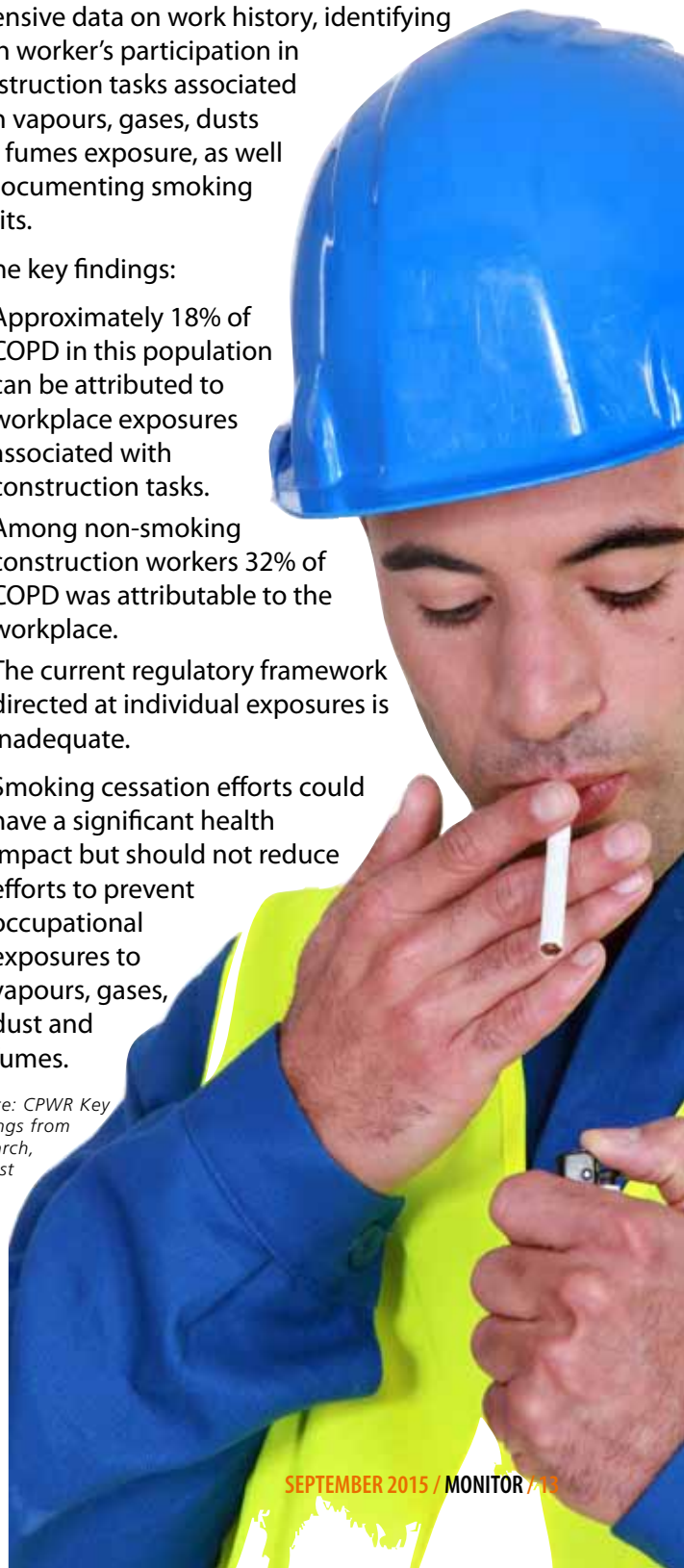
Research by the Center for Construction Research and Training in the USA confirms that while smoking is the major cause of chronic obstructive pulmonary disease (COPD), occupational exposures to vapours, gases, dusts and fumes increase COPD risk.

Researchers examined older construction workers participating in a national medical screening program between 1997 and 2013, comparing 834 workers with COPD and 1,243 controls. Investigators collected extensive data on work history, identifying each worker's participation in construction tasks associated with vapours, gases, dusts and fumes exposure, as well as documenting smoking habits.

Some key findings:

- Approximately 18% of COPD in this population can be attributed to workplace exposures associated with construction tasks.
- Among non-smoking construction workers 32% of COPD was attributable to the workplace.
- The current regulatory framework directed at individual exposures is inadequate.
- Smoking cessation efforts could have a significant health impact but should not reduce efforts to prevent occupational exposures to vapours, gases, dust and fumes.

Source: *CPWR Key Findings from Research*, August 2015





National Strategic Plan
for Asbestos Management
and Awareness 2014-18
December 2014

New Australian initiative to eradicate asbestos

The first endorsed National Plan on Asbestos Safety and Eradication has been launched following a meeting of State and Territory Ministers.

This is the first time such a plan has been endorsed by state, territory and Commonwealth governments.

Senator Eric Abetz said "This plan will result in a co-ordinated effort across the country to reduce the deadly effects of asbestos on Australians, as well as help put Australia at the forefront of global efforts to deal with the deadly substance.

Source: OHS Repts, SafetyNet, 337, 2 September

Asbestos - no safe level

While the Canadian Federal government's admission on Health Canada's website that there is no safe level of exposure to asbestos has been welcomed by campaigners and unions, the government has stopped short of an outright ban on the use of asbestos in Canada.

The public sector union CUPE, while welcoming the admission, says that the attitudinal change is not a solution that protects workers. It says that the real issue lies in both federal and provincial regulations which are often weak or go unenforced, leaving workers at risk.

Source: TUC Risks #710, 11 July 2015

Pirelli managers convicted over asbestos deaths

In Italy a Milan court has convicted former Pirelli managers of culpable homicide over the deaths of some 20 workers from asbestos-related cancers. The court gave the managers jail terms of up to seven years and eight months.

Most families have already settled compensation claims out of court, although the court awarded more than \$350,000 in damages to one family and other injured parties. The victims were employed in the 1970's and 1980's.

Tougher laws needed to enforce asbestos importation ban

Although asbestos is banned in any form in Australia it has recently been found in car parts, boilers, construction materials, trains, tugboats and children's toys imported into Australia.

In a recent case, a boiler made in South Korea was identified as containing chrysotile asbestos six years after it was imported.

Many products containing asbestos are making their way to Australia, via internet sites such as eBay, from Russia and China where there is no ban on asbestos.

Unions and asbestos support groups are calling for tougher enforcement of Australia's ban on asbestos including:

- an investigation into incidences of asbestos importation into Australia;
- tougher laws to ensure people and businesses breaching the importation ban are prosecuted;
- more money and staff for the Australian Customs and Border Protection Service to crackdown on illegal asbestos imports;
- the Minister for Immigration and Border Protection, Peter Dutton, to make stopping the importation of products containing asbestos a priority for Australian Customs and Border Protection Service.

Source: ACTU Media Release, 23 June 2015

Is your child colouring with asbestos?

In the USA, a report commissioned by the non-profit Environmental Working Group Action Fund, has found that four brands of children's crayons out of 28 boxes tested and two of 21 children's fingerprint kits contained asbestos. All of the products that tested positive for asbestos were made in China and imported into the United States.

Asbestos in toys poses an unacceptable risk to children, today as it did in 2000 and 2007.

Report co-author Sonya Lunder said it was likely that a contaminant of talc which is used as a binding agent in the crayons and in powder in the crime scene fingerprint kits adding that asbestos is often found near talc deposits. She added that this report should spur the Safety Commission to ban talc in children's products.

The US Product Safety Commission did not put in place any regulations or bans following previous reports on asbestos in crayons and fingerprint kits in 2000 and 2007.

The authors point out that asbestos in such products was discovered only recently and diseases can take years to develop.

Dr Philip Landrigan, professor of paediatrics at Mount Sinai Hospital, New York, said it was high time the federal government banned asbestos in all consumer products.

Source: Chemwatch, 25 August 2015

A metabolic master switch underlying human obesity

Researchers, by analysing the cellular activity underlying the strongest genetic association with obesity, have unveiled a new pathway that controls human metabolism by prompting our adipocytes, or fat cells, to store fat or burn it away.

The researchers showed that they could indeed manipulate this new pathway to reverse the signatures of obesity in both human cells and mice.

By manipulating this new pathway we could switch between energy storage and energy dissipation programs at both the cellular and organismal level providing new hope for a cure against obesity, said researcher, Manolis Kellis.

The researchers are currently establishing collaborations in academia and industry to translate their findings into obesity therapeutics.

They are also using their approach as a model to understand the circuitry of other disease-associated regions in the human genome.

Source: Drug Discovery and Development, 20 August 2015



Little chance of recovering from severe obesity

According to a study of UK health records led by Kings College, London, the chances of obese persons attaining normal body weight is remote suggesting that weight management programmes focused on dieting and exercise are not effective in tackling obesity at population level.

The probability of a severely obese woman regaining a normal body weight is one in 677. It is one in 1,290 for severely obese men.

Senior author Professor Martin Gulliford said that the greatest opportunity for stemming the current obesity epidemic is in wider-reaching public health policies to prevent obesity in the population.

Source: ScienceDaily, 16 July 2015



US workers continue to be exposed to workplace health risks

In an article published by the US Center for Public Integrity the authors have found that, after 44 years, the Occupational Safety and Health Administration is **still searching for ways to protect workers against fumes, vapours, dust, fibres and liquids that can kill or incapacitate them.**

OSHA's most productive period for regulating toxins came during the Carter administration with the introduction of standards for benzene, arsenic, lead and other substances known to cause cancer, neurological problems and other ailments. Forty-four years and some 9 million violations later, health hazards such as mercury continue to plague America's workers. OSHA has issued only 36 health standards and relies on mostly outdated exposure limits for the 470 substances it regulates; many more substances go unregulated. It rarely uses the general duty of care to cite alleged health violations, having concluded that the burden of proof is too steep. Hindered by court decisions, the White House, an often hostile Congress, a weak underlying statute and – some say – its own timidity, **the agency is still searching for ways to protect workers from fumes, vapours, dusts, fibres and liquids that can kill or incapacitate them.**

The opportunity to ensure that workers in Western Australia are protected by occupational health and safety legislation from a similar cocktail of health hazards exists today.

Securing the passage of the draft Work Health and Safety Act and the Work Health and Safety (Resources) Act and their regulations currently awaiting Government action will go a long way towards this objective.

Every occupational health and safety professional has an obligation to actively support the Occupational Health Society of Australia (WA) in this endeavour.

Is mobile phone use in hospitals a health risk?

A further study into the potential risk of mobile phones as a reservoir for bacterial colonisation has confirmed that they constitute a potential vehicle of infection in a hospital setting.

Research conducted at a regional Australian hospital (146 doctors and 80 medical students) found a high level of bacterial contamination on the mobile phones of staff members with similar organisms isolated from both the staff member's dominant hand and mobile phones.

While most of the isolated organisms were normal skin flora, **a small percentage were potentially pathogenic.**

Only 31 percent of participants reported cleaning their phones routinely and only 21 percent reported using alcohol containing wipes on their phones.

The researchers recommended that disinfection guidelines using alcohol wipes should be developed and implemented.

The Australian Commission for Safety and Quality in Health Care, which oversees the National Safety and Quality Health Service (NSQHS) Standards, issued this statement:

"Mobile phones are just one of many items in the healthcare environment that can carry bacteria. Other examples include computer keyboards and staff lanyards. **Hand hygiene is the single most effective way of preventing the spread of any bacteria in any healthcare setting.**"

"Under the National Safety and Quality Health Service Standards, hospitals and health service organisations are required to implement systems and processes to meet the requirements of the National Hand Hygiene Initiative."

Source: Chemwatch, 10 August 2015; Australian Hospital and Healthcare, August 2015



HEALTH - PSYCHOLOGICAL



Nearly 47 million people now have dementia

Health researchers say there are now nearly 47 million people living with dementia globally, up from 35 million in 2009. They warned that without a medical breakthrough, numbers will likely double every 20 years.

In a report issued on Tuesday, researchers from Alzheimer's Disease International say about 58 percent of all people with dementia live in developing countries and that by 2050, nearly half of all those with the disease will live in Asia. Numbers are expected to rise with aging populations and as more cases are identified.

Experts estimate the cost of treating dementia could jump to \$1 trillion in just three years and called for governments to adopt legislation to ensure better treatment for people with the disease. There is no known cure for dementia.

Source: Bioscience Technology, 25 August 2015

Japan moving to address workplace stress

Japan's government plans to introduce stress checks for its workers as the number of staff on leave due to mental illness remains high.

A change to the Safety and Health Act in 2014 will oblige private companies with 50 or more employees to introduce stress checks from December this year. Employee stress checks will also be phased in at Government agencies.

Japan recognises over-work related suicide and sudden deaths as state compensated occupational diseases.

Source: TUC Risks, 713, 8 August 2015

The body and the brain: impact of mental and physical exertion on fatigue development

A study by Ranjana Mehta, assistant professor at Texas A&M, has shown that when we attempt mental tasks and physical tasks at the same time, we activate a specific area, called the prefrontal cortex (PFC), in our brain which can cause our bodies to become fatigued much sooner than if we were solely participating in a physical task.

According to Mehta the findings show that there were lower blood oxygen levels in the PFC following combined physical and mental fatigue compared to that of just physical fatigue conditions.

It is critical that researchers consider the brain as well as the body when examining fatigue development and its impact on the body. Interdisciplinary work that combines neurocognitive principles with physiological and biomechanical outcomes can provide us with a comprehensive understanding of what is happening to the body when we perform daily activities.

Source: ScienceDaily, 30 July 2015

SLEEP/FATIGUE

Long working hours linked to higher risk of stroke

In a study published in the *Lancet*, researchers from University College, London found that people working 55 hours per week had a 33 percent greater risk of having a stroke than people who work a standard 35-40 hours per week. In addition, the more hours people worked beyond standard hours, the higher their chance of having a stroke – even after accounting for other factors such as smoking, alcohol consumption, physical activity, blood pressure and cholesterol. Long working hours were also linked to a 13 percent increased risk of developing coronary heart disease.

Researchers say that a number of factors such as stress, physical activity, and high alcohol consumption may contribute to the higher risk of stroke seen in people who work longer hours.

Source: OHS Repts, *SafetyNetJournal*, 336, 26 August 2015

Important finding that poor sleep may trigger Alzheimer's memory loss

New research suggests that poor sleep may be a crucial missing piece in the Alzheimer's puzzle and could lead to new treatments for the debilitating memory loss associated with the disease.

Scientists from the University of California have found evidence that the protein believed to trigger Alzheimer's disease - known as beta-amyloid – may also be involved in blocking deep, restorative sleep – the kind that we need each night in order to move our short-term memories over to a more permanent region of our brains.

In a press release, neuroscientist, William Jagust, said: "Our study shows that this beta-amyloid deposition may lead to a vicious cycle in which sleep is further disturbed and memory impaired." The study is the first to find a link between these two phenomena in human participants.

Lead researcher Matthew Walker said that the discovery offers hope that sleep could be a novel therapeutic target for fighting back against memory impairment in older adults and even those with dementia.

Source: *Chemwatch*, 6 July 2015

18 / MONITOR / SEPTEMBER 2015

Children of shift workers suffer academically and socially

A new study by researchers from the University of NSW and the US Economic Policy Institute has found that the children of shift workers have poorer academic results, worse behaviour and take more risks as teenagers.

The biggest impact was on children of shift workers in low income jobs (such as service industries) who have little control over their hours. Higher status, such as health care workers, were able to mitigate the effect of their irregular hours on their children.

An earlier study published in 2005 found that children of mothers who worked non-standard schedules performed lower on problem-solving, verbal comprehension and spoken language tests than children of mothers who worked traditional schedules. Part of the explanation was increased stress on the part of the parents.

Source: OHS Repts, *SafetyNetJournal*, 335, 19 August 2015

One night of sleep loss can alter our genes

A new study has found that going without sleep may have deeper implications for our bodies than scientists previously thought. Researchers at Uppsala University in Sweden have discovered that losing just a single night's sleep can alter the genes that control our body's cellular biological clocks.

Lead author, Jonathan Cedernaes, said it was interesting that the methylation of these genes could be altered so quickly and that it could occur for these metabolically important clock genes.

The findings to be published in the *Journal of Clinical Endocrinology and Metabolism* are important because of the links scientists have already found between how much sleep we get and how disposed we are to risks of various metabolic diseases.

At this point the researchers don't know how long the gene alteration takes effect for.

While there's a hope that any adverse effects might not be long lasting, the potential for greater risks in the longer term means it is worth trying to stick to as regular a sleep schedule as possible until further research can provide the answers.

Source: *Chemwatch*, 17 August 2015



How important is body sleeping posture?

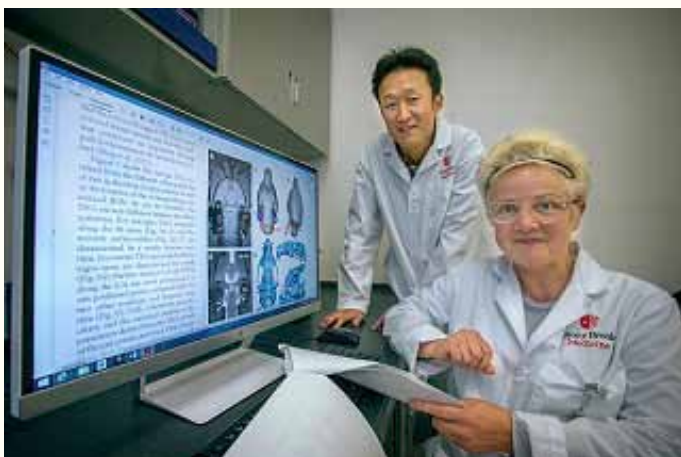
By using contrast magnetic resonance imaging (MRI) of rodents' brains, researchers from Stony Brook University, USA, have found that sleeping in the side, or lateral, position as compared to one's back or stomach, may more effectively remove brain waste and prove to be an important practice to help reduce the chances of developing Alzheimer's and other neurological disease.

Researchers say that the study adds further support to the concept that sleep includes a newly recognised biological function, and that is to 'clean up' the mess that accumulates while we are awake. Many types of dementia are linked to sleep disturbances, including difficulties in falling asleep. It is increasingly acknowledged that these sleep disturbances may accelerate memory loss in Alzheimer's disease. The findings bring new insight into this topic by showing it is also important what position you sleep in.

Researchers emphasise that testing with MRI or other imaging methods in humans is a necessary first step.

N.B. The research report is well worth reading: ***The Effect of body posture on brain glymphatic transport***, *Neurobiology of Disease, Journal of Neuroscience*, 5 August, 2015

Pic: Helene Benveniste, MD, PhD, and Hedok Lee, PhD, analysed the glymphatic pathways of rodent models to assess how body posture affects the clearance of brain waste. - See more at: <http://sb.cc.stonybrook.edu/news/general/150804sleeping.php#sthash.rF5Oqgta.dpuf>



Views sought on a new framework for fatigue research

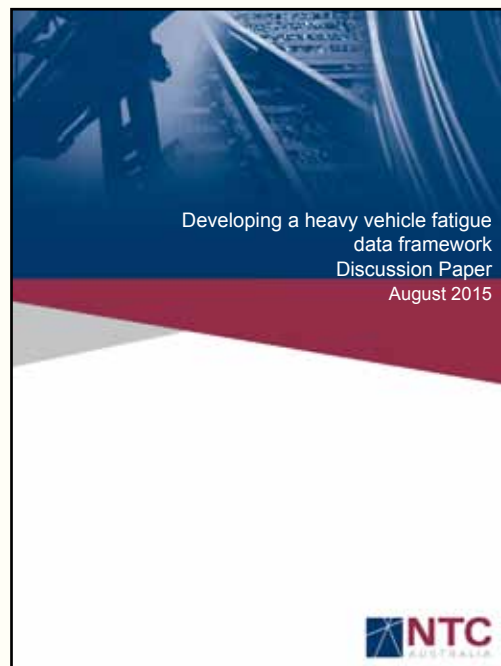
The National Transport Commission have invited submissions on a Discussion Paper "Developing a Heavy Vehicle Fatigue Data Framework" which proposes an agreed terminology, systems and processes that will enable a new framework to support comparable and accessible data across industry, governments and enforcement agencies.

The Chief Executive of the NTC, Paul Retter, said that all Australians are asked for their views on how to collect better information to inform improvements to heavy vehicle driver fatigue laws. Only when all the evidence was on the table would it be possible to determine whether the current regulations were appropriate.

He added that the project won't be proposing changes to Australia's fatigue laws, but it will ensure that we have consistent and more accurate data about how fatigue affects drivers and the safety of our nation's roads.

The Discussion Paper is available at www.ntc.gov.au

Source: NTC Media Release, 21 August 2015



HAZARDOUS SUBSTANCES

Defence staff exposed to toxic jet fuel

Current and former Defence Force personnel have called for an inquiry into whether thousands of servicemen and women have suffered serious illnesses due to exposure to toxic jet fuel. They claim that Defence has been aware for many years of the dangers of toxic fuel exposure, but did not enforce the workplace precautions necessary to protect personnel.

Defence has made ex-gratia compensation payments to people who worked on the infamous F-111 deseal/reseal project, and suffered from depression, skin complaints, gastro-intestinal problems, erectile dysfunction and an increased risk of cancer.

The project involved climbing into fuel tanks, dissolving the sealant within the tanks, and then re-sealing them with another substance.

Defence and the Government said people who worked on the project were exposed to a unique mixture of chemicals, including the solvent and a sealant.

Those calling for an inquiry want a study to be expanded to include service personnel who worked with fuel, as a Defence study has revealed that this is more toxic than solvent and sealant.

The fuel contains benzene, a carcinogen, and other toxic substances. Personnel would use the fuel for a number of purposes, including to clean parts and tools.

Source: OHS Repts, SafetyNetJournal, 328, 2 July 2015

Jet fuel and noise

Jet fuel, when combined with sustained noise, may cause brain-related injury and lead to multiple conditions. Clinical conditions such as anxiety, depression, sleep disorders and post-traumatic stress could be attributed, in part, to hydrocarbon-related disruptions in brain function, a factor previously overlooked during diagnoses, say authors of a new report.

O'neil Guthrie, a research scientist and clinical audiologist with Northern Arizona University, studied the risk of auditory problems among test subjects exposed to sustained noise and jet fuel. The research was designed to inform Air Force officials who were interested in hearing loss among airmen.

"What we found is that at low levels, it is not toxic to the ears but toxic to the brain," Guthrie said. "Over time, these small exposures could accumulate and affect the brain's function."

Source: ScienceDaily, 18 August 2015

Pic: O'neil Guthrie conducts several types of research, including the effects of jet fuel and noise on military personnel.

Credit: Image courtesy of Northern Arizona University

Industry funded study identifies fracking concerns

A report by the UK Task Force on Shale Gas has called for greater safety and transparency measures to be implemented before widespread fracking occurs across the country. The Task Force, **which is funded by the shale gas industry**, has called for "full disclosure" of all chemicals to be used as well as independent monitoring of the fracking process.

Fracking in the US has been linked to high exposures to potentially deadly silica in fracking workers, and a number of deaths have been attributed by regulators to occupational exposure to chemicals during fracking operations.

Other studies have identified elevated exposures to cancer-causing chemicals in the vicinity of fracking sites.

However, the Task Force said it believed that the risk level associated with the public health hazards from fracking is "acceptable provided that the well is properly drilled, protected, monitored and regulated."

Source: OHS Repts, SafetyNetJournal #332, 29 July 2015





ENDOCRINE DISRUPTORS

How much do we know about them?

The term “Endocrine Disrupting Chemicals” was first coined in 1991 at a conference in Wisconsin and following work sessions which generated consensus statements from scientists regarding the hazard from endocrine-disruptors, particularly in wildlife and also in humans.

Endocrine-disruptors are chemicals that, at certain doses, can interfere with the endocrine (hormonal) system in mammals. These disruptions cause cancerous tumours, birth defects and other development disorders.

Any system in the body controlled by hormones can be derailed by hormone disruptors.

Specifically, endocrine disruptors may be associated with the development of learning disabilities, severe attention disorder, cognitive and brain development problems, deformation of the body (including limbs), breast cancer, prostate cancer, thyroid and other cancers, sexual development problems such as feminising of males or masculinising effects on females etc.

Found in many household and industrial products, EDCs are substances that “interfere with the synthesis, secretion, transport, binding, action or elimination of natural hormones in the body that are responsible for development, behaviour, fertility and maintenance of homeostasis.

Endocrine-disrupting chemicals - 2009 Scientific statement

There is a growing interest in the possible health threat posed by endocrine-disrupting chemicals (EDCs) which are substances in our environment, food and consumer products that interfere with hormone biosynthesis, metabolism or action resulting in a deviation from normal homeostatic control or reproduction.

Evidence is presented that endocrine disruptors affect:

- male and female reproduction
- breast development and cancer
- prostate cancer
- neuro endocrinology
- thyroid
- metabolism and obesity
- cardiovascular endocrinology

Results from animal models, human clinical observations and epidemiological studies converge to implicate EDCs as a significant concern to public health.

2012 Canadian study

This confirmed epidemiological findings of a five-fold elevated breast cancer risk for premenopausal women working in the plastics industry.

Extensive literature and research showed that workers were exposed to chemicals identified as mammary carcinogens and endocrine disrupting chemicals and their working environment was heavily contaminated with dust and fumes.

2015 Endocrinology Society AGM

Common industrial chemicals that disrupt human hormones and damage health could be costing Europe more than 100b euros per year.

An international team said that their estimates on the high economic impact of chemicals in products including pesticides, plastics and flame retardants were conservative.

Experts concluded that infertility, male reproductive dysfunctions, birth defects, obesity, cardiovascular disease, neurobehavioural and learning disorders were among the conditions that could be attributed in part to endocrine disrupting chemicals.

Limiting exposure would have significant effects.

Costs of exposure to endocrine-disrupting chemicals in the European Union

The central nervous system is uniquely sensitive to adverse effects of chemical exposures during early development (especially fetal but through puberty also). Endocrine disruption has emerged as an important mechanism by which chemicals may have adverse effects on the developing brain, whether by interfering with thyroid hormone or sex steroid actions, or via other hormonal modes of action.

Thyroid hormone is particularly important for normal brain development, and both clinical and animal research provide confidence in the assertion that thyroid disruption will affect brain development.

Predictable outcomes of thyroid disruption include global IQ deficits and neuro-development disabilities such as autism spectrum disorder (ASD) and attention-deficit hyperactivity disorder (ADHD).

Classes of chemicals such as polychlorinated biphenyls (PCB's), polybrominated diphenyl ethers (PBDE's) and organophosphate (OP) pesticides have been shown to interfere with thyroid hormone action in human and animal studies.

The human population is ubiquitously exposed to these chemicals and several high quality studies have documented adverse outcomes.

An international study to estimate neuro-developmental disability and associated costs that may be reasonably attributed to EDC exposure in the European Union has concluded that EDC exposures in Europe contribute substantially to neuro-behavioural deficits and disease with a high probability of 150 billion Euros in costs per year.

Researchers say that the results of the study emphasize the advantages of controlling EDC exposures.

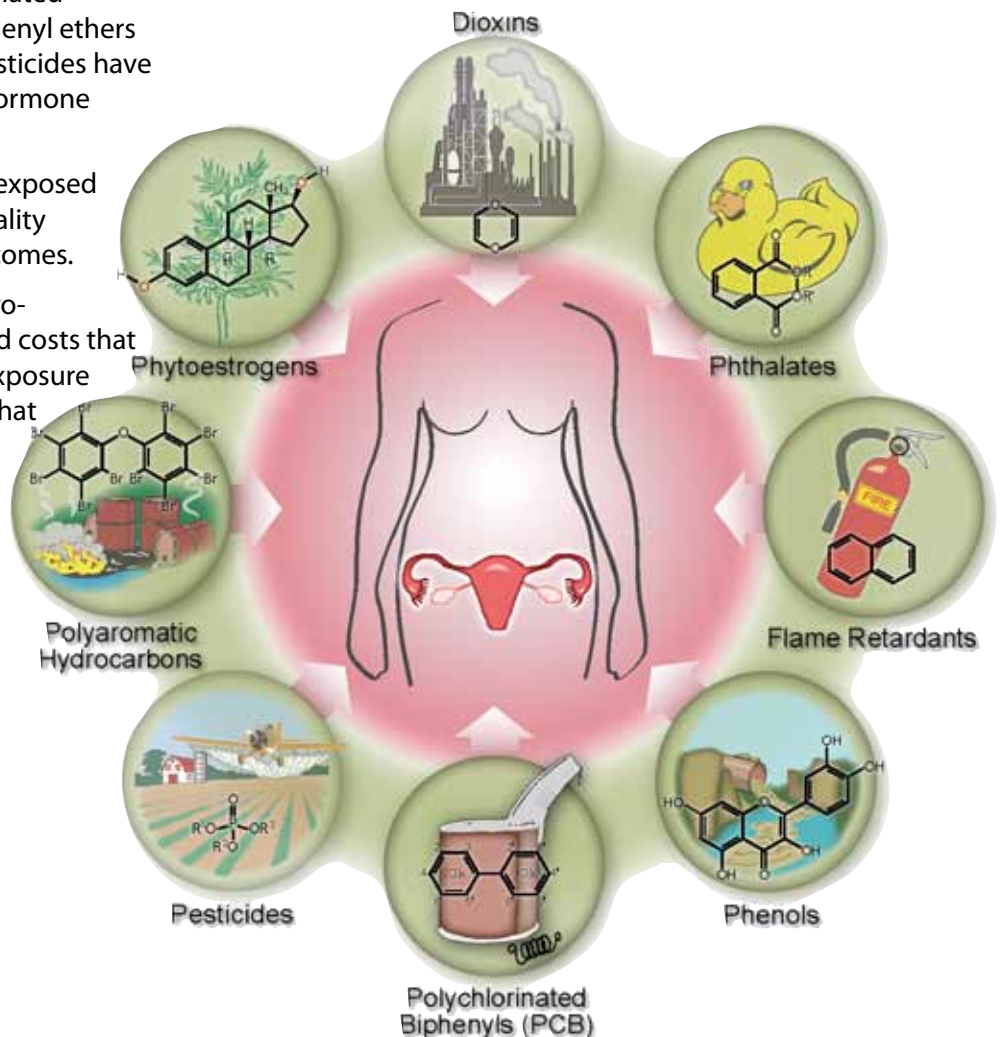
Source: ETUI, HesaMag #11

Indecent exposures: EDCs and women's health

The evidence is stacking up against endocrine-disrupting chemicals and their link to a variety of female reproductive problems. Reducing these problems is going to take more than simply washing fresh produce and avoiding certain pre-packed foods.

Andrea C Gore, professor at the University of Texas says that "Studies on human populations show associations between the presence of certain chemicals and higher risks of certain endocrine disorders such as impaired fertility, diabetes and obesity, and cardiovascular disorders. Chemicals that interfere with hormone actions — even at low doses — are particularly detrimental when exposures happen during development. This 'developmental origin of health and disease' hypothesis is absolutely critical to consider."

Source: *endocrinenews*, July 2015



LEGAL/ILLEGAL DRUGS

Misuse of cognition enhancing drugs in the workplace

The British Medical Association has issued a warning about the use of drugs to improve memory or other cognitive functions within the workplace. They say that there is growing evidence that healthy individuals are using a number of medicines available and licensed to improve cognitive functioning for those suffering from specific medical disorders such as ADHD and narcolepsy without a prescription for non-medical purposes e.g. students to aid memory and concentration.

The Association has issued guidance that recommends “that healthy individuals who wish to protect or enhance their cognitive powers are advised to avoid pharmacological cognitive enhancers and instead focus on leading a healthy lifestyle.” The BMA specifically recommends that doctors be able to advise on designing shift work schedules to minimise circadian disruption, sleepiness and fatigue.

Source: TUC Risks 714, 8 August 2015

Why smoking should be banned in all workplaces

Stroke is a major public health concern worldwide, given the associated morbidity and mortality. Smoking is a risk factor for stroke, but the relationship between second-hand smoke (SHS) exposure and stroke has been inconsistent to date.

In a study reported in the American Journal of Preventive Medicine of 21,743 participants, SHS exposure in the past year was reported by 23 percent. Compared with those without SHS exposure, exposed participants were more likely to be female, white, younger and reside with a smoker.

A total of 428 incident strokes were observed from April 2003 to March 2012 during a mean follow-up of 5.6 years. The overall risk of stroke was increased 30% among those with SHS exposure after adjustment for other stroke risk factors. This relationship appeared to be driven by ischemic strokes.

Researchers concluded that SHS exposure is independently associated with an increased risk of stroke. Future studies are needed to confirm these findings and examine the role of long-term effects of SHS exposure on stroke outcomes.

Source: Chemwatch, 10 August 2015; NCBI, 16 June 2015

Workplace drug screening becoming commonplace

The national marketing director of a Welshpool, Western Australia-based drug-testing organisation reports that sections of the hospitality, aviation and electricity sectors are introducing drug testing programs as part of a pre-employment process; testing for misuse of prescription medications is included.

Ken Pidd of the National Centre for Education and Training on Addiction has commented that there is a definite rise in the prevalence of workplace drug testing both before and after people were hired.

The tests are designed to not only identify types of substances such as methyl amphetamine and cannabis but also abnormal levels of benzodiazepines (found in sleeping tablets) and opiates like codeine.

According to Michael White, the Managing Director of Frontline Diagnostics – the largest privately owned drug testing firm in Australia – when his organisation undertook workplace drug testing programs, it generally found that between 12 and 15 percent of employees tested positive for a variety of drugs.

In the US, financial services and stockbroking firms conduct “pre-promotion” tests, while Walmart is reported to conduct drug-screening for all employees.

Source: WA Newspapers, 1 August 2015; Homenews, 22 July 2015

Does tobacco use cause psychosis?

A study by researchers at Kings College, London has found that cigarettes may be a causal factor in the development of psychosis. An analysis of 15,000 tobacco users and 273,000 non-users and their relative rates of psychosis – where patients can experience delusions, paranoia and hear voices in their heads – found that cigarette smoking appears to increase risk.

The researchers said “**while it’s always hard to determine the direction of causality, our findings indicate that smoking should be taken seriously as a possible risk factor for developing psychosis.**”

The possibility of a causal link merits further examination.

Source: Chemwatch, 10 August 2015; The Lancet, Psychiatry, Vol 2, August 2015

NEW DRUG AND ALCOHOL TOOL FOR INDUSTRY

Construction workers and their employers have a new tool to tackle alcohol and drug use and help create a safer workplace. Launched in May, safeconstruction.org.au is designed to guide and educate industry about how alcohol and other drug consumption can drastically affect performance and safety on the construction site.

The website is the direct result of a two-year project Safety Impacts of Alcohol and Other Drugs in Construction run by the Sustainable Built Environment National Research Centre (SBEnc), with project partners from the National Drug Research Institute (Curtin University), the Centre for Accident Research and Road Safety - Queensland (Queensland University of Technology), the National e-Therapy Centre (Swinburne) and lead industry partner John Holland.

A national survey undertaken during the research phase identified a need for the construction sector to be able to access information and tools when dealing with employees who consume alcohol or take drugs. The website provides information as to how organisations and workplaces can develop alcohol and other drug consumption awareness, policies, and practices of overall health, safety and welfare benefit to individual employees. Website participants can complete online modules which identify risks and offer prevention strategies. Although primarily designed for the construction sector, the website is also applicable to other industries.

NDRI's Professor Steve Allsop was involved in the research and consultation phases of the project and led the content development of the new website. Professor Allsop also presents the opening video on the website.

The research report Safety Impacts of Alcohol and Other Drugs in Construction is available on the SBEnc website. <http://www.sbenrc.com.au/research-programs/2-1-safety-impacts-of-alcohol-and-other-drugs-in-construction/>

Researchers identify genetic clues associated with cigarette addiction

Researchers at the Virginia Commonwealth University School of Pharmacy have identified specific sets of genetic variants that are significantly associated with cigarette addiction.

They say that pinpointing these genetic variants could eventually assist in identifying the biological mechanisms behind nicotine addiction and in generating novel drug therapy targets to help people break their addiction to nicotine.

Shaunna Clark, research assistant professor said "We dug deeper into genes known to be associated with smoking."

The researchers sequenced the three genes and their adjacent regions to get a complete catalogue of all the genetic variations that could be contributing to addiction. This allowed them to examine variants that other studies had not addressed, such as rare variants not commonly found in the population and regulatory variants that can increase or decrease gene expression.

"We found that the tendency towards nicotine addiction is likely caused by many variants, each with a small effect." Clark said. "Thus, multiple variants within the same gene are related to smoking."

Source: *Drug Discovery and Development*, 1 September 2015

CANCERS

Genetics linked to melanoma

A Queensland melanoma study has uncovered five new gene regions that increase the risk of developing the deadliest form of cancer. The study examined 12,000 melanoma samples and was conducted by a team from QMIR Berghofer Medical Research Institute.

Dr Mathew Law, who led the study, said the discovery moved scientists closer to “unravelling the melanoma puzzle” and could lead to better treatments and improved outcomes for patients.”

Source: *OHS Repts SafetyNetJournal*, 333, 5 August 2015

Biodiesel emissions possibly carcinogenic too

The IARC designated diesel fumes as carcinogenic in 2012, leading to the increased use of alternatives.

However, a recent US study on occupational exposure to diesel fumes has found that, although biodiesel emissions contain fewer particulates than traditional fuel, they can cause the same degree of respiratory inflammation associated with lung cancer.

Researchers from the University of Arizona analysed multiple health end points in 48 healthy adults before and after exposures to diesel and B75 (fuel with only 25% diesel) emissions in an underground mine setting. Lung function, lung and systemic inflammation, novel biomarkers of exposure and oxidative stress were assessed.

They concluded that use of B75 lowered respirable diesel particulate matter exposure and some associated acute health effects, but lung and systemic inflammation were not reduced compared with diesel use.

The researchers said the findings challenge the assumption that reduction in DPM concentrations from the use of alternative fuels will lead to decreased chronic toxicity.

Source: *OHS Repts, SafetyNetJournal* #332, 29 July 2015

Estimated prevalence of exposure to occupational carcinogens in Australia 2011-2012

A major study by the WA Institute for Medical Research (University of Western Australia), the School of Public Health (University of Sydney) and the Department of Epidemiology and Preventive Medicine (Monash University) demonstrates a practical, web-based approach to collecting population information on occupational exposure to carcinogens and documents the **high level of current exposure to occupational carcinogens in the general population.**

Responses to a random sample of men and women aged between 18 and 65 currently in paid employment conducted using a web-based application were obtained from 5,023 eligible Australian citizens, resulting in an overall response rate of 53%.

1,879 respondents were assessed as being exposed to at least one occupational carcinogen in their current job.

Extrapolation of these figures to the Australian working population suggested 3.6m current workers (40.3%) could be exposed to carcinogens in their workplace.

Exposure prevalence was highest among farmers, drivers, miners and transport workers, as well as men and those residing in regional areas.

Source: *Occupational Environmental Medicine*, 2014; 71:55-62

Occupational exposure to carcinogens in Australia - Workers' Compensation claims paid in Australia 2000-2012

The Cancer Council of Western Australia estimates that the number of occupationally caused cancers compensated each year equates to less than 8% of the expected number and says that priority cancers applicable to the Australian industrial profile should be the focus of scientists and regulators.

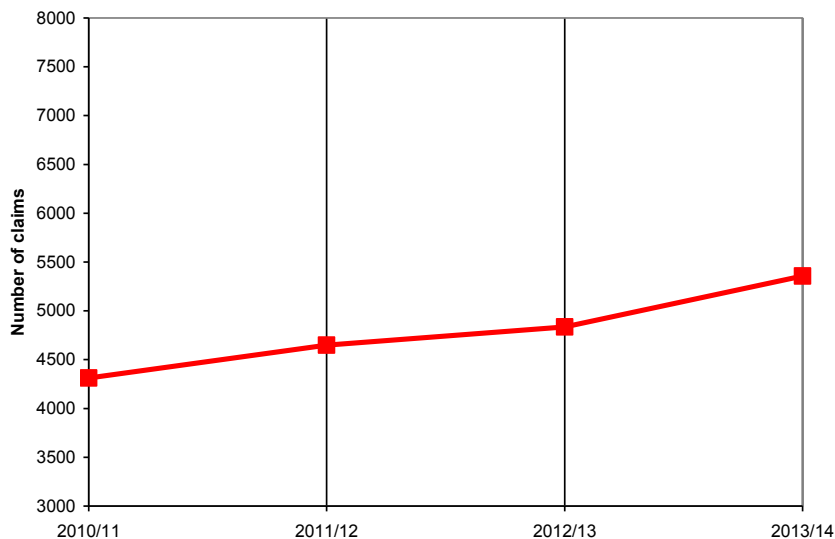
Source: *Occupational exposure to carcinogens in Australia Workers' Compensation claims paid in Australia 2000-2012*

WORKERS' COMPENSATION

Long term claims for workers' compensation continue to increase in Western Australia

While the total number of claims for workers' compensation have declined over the period 2010/11-2013/14 (from 37,710 to 35,562) and this is commendable, the consistent increase in long term claims (60-180 days lost) continues to be worrisome.

The Occupational Health Society of Australia (WA) conducted a seminar on this topic in October 2013 and a number of propositions were suggested by authoritative speakers to remedy the rising incidence. Seemingly, little has been achieved and it may well be time the matter was rescheduled for further consideration.



Major campaign to get employees back to work

The Workers' Compensation Regulator in Queensland has launched a new advertising campaign to raise awareness of the health benefits of early return to work and the importance of good communication between injured workers, employers and health professionals.

The advertisements encourage injured workers, employees and medical professionals to embrace strategies and practices to get more injured workers to recover at work, or if they are absent from the workplace, to return to work as soon as they are certified functionally capable.

The main message from the television, radio, online, press and billboard advertising is "There's nothing like getting back for getting better."

Source: Safe Justice Queensland

Incidence of LTI Claims 2010/11 – 2013/14

Lost time injury claims lower in unionised Canadian construction workplaces

A study by the Institute for Work and Health in Ontario has found that workers at unionised construction workplaces are more likely to file job-related injury claims but less likely to file claims that result in time off work.

Ben Amick, co-lead investigator said that the findings suggest that unionised workers may be likely to report injuries including those that don't require time off work, **at workplaces where managers and supervisors are committed to safety.**

Source: Labour Reporter, 4 September 2015

26 / MONITOR / SEPTEMBER 2015

Mesothelioma compensation award upheld by High Court

The High Court has upheld the award of \$425,000 to an employee who was exposed to asbestos dust while working at the Gove alumina refinery in the 1970s.

Rio Tinto, who later bought the refinery, had continued to dispute the award because they claimed that the claim should have been made through the Northern Territory workers' compensation legislation and not via common law.

Source: ABC News, 12 August 2015



Occupational Health Society of Australia (WA)



Members

Matthew ATKINS
Anitha ARASU
Emma BARRETT
Joyce BLAIR, Next Health
Alan CLARKSON (Snr)
Allaine COLEMAN, CGU Workers' Compensation
Terry CONDIPODERO, GR Engineering Services
Maria DANIEL
Roslyn DAWSON, Northwest Aviation Services
Diana GEMMELL
Lynette GILBERT, QHSE Consultant, Tidehill Pty Ltd
Patrick GILROY AM, MARCSTA
Matthew GIPP, Cooke & Dowsett P/L
Ross GRAHAM
Dr Andrew HARPER
Emma HORSEFIELD, Jardine Lloyd Thompson
Dr Janis JANSZ, Curtin University
Ralph KEEGAN, Frontline Safety and Training Services
Cheryl KELLY, Viento Group Limited
Sheryl KELLY
Dave LAMPARD, WA Police Union
Joe MAGLIZZA, Holcim Australia Pty Ltd
Alison MARTINS, OH&S Consulting
Eoghan McKENNA
Peter McMAHON, Main Roads WA
Mike MORRIS, Liquid Limit Strategic Consulting
Rosalee MORRIS, Disability Services Commission
Peter NICHOLLS, FMR Investments
Dr Nicol ORMONDE, Ormonde Health Consulting
Terence PESTANA
Craig POWER, OH&S Consulting
Dr Karina POWERS, Ability OPN
Peter ROHAN, Department of Mines and Petroleum
Sherrilyn SHAW, Return to Work Solutions
Dr John SUTHERS, Occupational Physician
Prof Geoffrey TAYLOR, Curtin University
Dr Christine TEAGUE, Edith Cowan University
Les VOGIATZAKIS, Matrix Composites and Engineering
Dr Kar Chan WAN, RediMed

Said ABDILAH, Student, Curtin University
Mamadou BAH, Student, Curtin University
Alayna CAMPBELL, Student, Curtin University
Kevin LEE, Student, Curtin University
Jacqueline LUSENO, Student, Curtin University
Deepak MARU, Student, Curtin University
Claire PRATLEY, Student, Curtin University
Claire PRENDEVILLE, Student, Curtin University
Tim RICHARDS, Student, Curtin University
Izzie SHMUKLER, Student
Merima SULEJMANI, Student, Curtin University
Erandhi YATAWARA, Student, Curtin University

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.

Membership to the Society is open to all those interested in occupational health and safety.

\$50 ordinary membership

\$20 student membership.

Simply email safety@marcsta.com with your details.

Subscription invoices for 2015/16 will be emailed to existing members in October.

MARCSTA **work health and safety programs**

www.marcsta.com



MARCSTA develops and implements work health and safety training programs relevant to all workplaces.

Under the new Work Health and Safety Laws, employers have a duty of care to provide a healthy and safe workplace for workers and contractors.

MARCSTA training programs are now available to organisations wishing to conduct occupational health and safety training of employees.

All our courses underpin relevant units of competency from nationally accredited training packages.

The courses are based on adult learning principles, are interesting, engaging, relevant and current. The information presented is based on solid research by MARCSTA, independent experts and regulatory bodies.

Training materials are supplied in a non-editable PDF format at a cost of

\$40 per person.

If required, your organisation's details and logo can be included as well as any other custom content you require.

Programs . . .

- **Work Health and Safety Induction**
- **Workplace Health and Well-being**
- **Extended Working Hours and Your Health and Safety**
- **OHS Training for Supervisors and Managers**

All the work is done for you.

You can print as many manuals as you require, when you need them. (Dependent on a signed agreement authorising production of specified numbers of training manuals).

Generally, each course comes complete with downloadable PDF versions of:

- **Training Manual**
- **PowerPoint Presentation (ppt format)**
- **Assessments**
- **Assessments Scoring Guide**

Should you wish to take advantage of this arrangement please contact MARCSTA on safety@marcsta.com or 6272 6120.

visit www.marcsta.com for complete program content and course details