the **monitor**

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



Issue 2 Vol 21 MARCH 2017



Department of Mines and Petroleum mental health programs in the mining sector

The Department of Mines and Petroleum has released the baseline results for psychosocial harm audits of mining operations and petroleum and major hazard facilities conducted from February to October 2016.

The object of the audit program was to establish a baseline against which to measure future progress in mental health risk management in the resources sector.

Conclusion

While there are opportunities for improvement across the four criteria, the audit identified consultation with the workforce on mental health and wellbeing strategies as an area requiring additional focus.

The recommendation for a FIFO Code of Practice to address the impacts on mental health has not been taken up by the WA Government which has decided, instead, to invite a Mental Health Commission representative to join the Mining Industry Advisory Committee (MIAC). This has been asked to review and strengthen existing codes and practices.

Baseline results for psychosocial harm audits

While there are opportunities for improvement across the four criteria, the audit identified consultation with the workforce on mental health and wellbeing strategies as an area requiring additional focus.



Graph showing overall results for mining operations (n = 126)

= met intent of criterion = partially met intent of criterion = does not yet meet intent of criterion



OCCUPATIONAL HEALTH SOCIETY OF AUSTRALIA (WA)

WELCOME

In this issue ...

Legislation/Regulation

Safety

Macquarie University study shows why truck driving is one of	
Australia's deadliest jobs	4
Black lung disease reported in NSW	5
New hazards register released by Resources Safety	
Trump order puts safety rules in jeopardy	6
Trump era dangerous for Latino workers	6
KFC in the UK fined for safety breach	7
Food company agrees to enforceable undertaking after	
worker burnt	7
Existing dress code laws do not address health and safety risks	8
Toll Transport incur \$1 million fine over stevedore's death	9
Fall from heights death leads to category one prosecution	9

Air pollution

Diesel trains may expose passengers to exhaust	. 10
Diesel engine exhaust exposure being ignored by the European	
Commission	. 11
European Commission issues final warning on air pollution	. 12
Chines air pollution linked to respiratory and cardiovascular	
deaths	. 12

Health - physical

Thousands of Californian workers exposed to elevated lead leve	els 13
Blood levels and the workplace exposure standard for lead in the	ne
workplace to be reduced	13
Over-use of digital devices and its health effects	14
Healthcare workers may face serious health problems from	
exposure to surgical smoke	15
Healthcare workers and others at increased risk of ALS	16
World-wide study allows scientists to predict chance of develop	oing
deadly disease	16
UK teachers say stop talking; start acting on workloads	16

Health - psychological

New avenue for anti-depressant therapy discovered
More evidence of the health effects of work-related stress
Members of UK parliament need training to avoid stressing their
staff
Expenditure on mental health services18

Sleep/Fatigue

Sleep deprivation hampers ability to form new memories	19
Link between sleep and cognitive impairment in the elderly 1	9
Japanese union chief blasts mooted 100-hour overtime limit 2	20
Japanese government tells workers to take a break 2	20

Hazardous materials

Attack on the IARC process rejected by scientists	21
Chemical safety data sheets to be scrutinised	21
European coalition calls for glyphosate ban	22
Study links Roundup (glyphosate) to serious disease	22
Tackling silica exposure in the workplace	23
Exposure to chemicals used in LCD production linked to Multiple	5
Sclerosis	

Cancers

Outdoor work and malignant melanoma risk in the UK 2	24
Cancer is a by-product of industrial policy 2	25



Issue 2

Vol 21 MARCH 2017

US cancer death rates decline 25% since 1991 peak 24	5
Asbestos from husband's overalls led to deadly cancer 25	5
High pesticide exposure events can lead to cancer	б
Cancer all-clear for night work was based on 'bad science' 26	б
Teachers need help to support students in remission from	
cancers	7

Nano Technology

	•••	
Nanoparticles - can they	cross biological	l membranes?28

Workers' Compensation

29
29
30

Occupational Health Society of Australia (WA Branch)

1embership	 32

MONITOR EDITOR

Geoff Taylor

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

OHSA(WA), PO Box 171, Belmont WA 6984 E-mail: safety@marcsta.com www.ohswa.marcsta.com

Legislative/regulatory matters

HELMET LAWS CHANGING QUAD BIKE OR UTILITY OFF-ROAD VEHICLE

From 1 February 2017, operators & passengers MUST wear hemlets

Queensland implements road rules for quad bikes and utility off-road vehicles

Under changes to road rules, which come into effect immediately, children under the age of eight will be prohibited from riding quad bikes and utility off-road vehicles being used on road, as well as any child of any age if they are not yet capable of sitting with their feet flat on the floor and hands on handholds.

In addition, the operator of a quad bike or utility off-road vehicle and their passengers are now required to wear a motorcycle helmet on Queensland roads and road-related areas. A \$365 fine will apply for failing to comply with the helmet requirements, plus three demerit points.

According to Workplace Health and Safety Queensland, the new requirements apply on roads and road related areas only – meaning that children and others will continue to be at risk on farms and similar 'workplaces'.

Source: OHS Reps SafetyNetJournal, 391, 1 February 2017

QUEENSLAND

SAFETY

Macquarie University study shows why truck driving is one of Australia's deadliest jobs

A Macquarie University research report has revealed the major reasons why truck driving is one of Australia's deadliest jobs. Safety risks encountered by drivers include long hours, pressure to drive unsafe schedules and feeling unable to raise concerns without placing their jobs in jeopardy.

The report, which was launched at a safety summit organised by the Transport Workers' Union, is critical of the lack of training and the gap left by the government's abolition of the Road Safety Remuneration Tribunal.

"The research highlights a complex mix of regulation. It points to the importance of increasing enforcement and sanctions, particularly to ensure safety for those at the bottom of the supply chain including employees, owner drivers and others," said Associate Professor Louise Thornthwaite from Macquarie University.

"This study highlights a 'blame the victim' culture, and calls for those at the top of the chain of responsibility to be held accountable for safety."

A survey of truck drivers, which forms part of the report, shows that:

- over 80% of truck drivers work more than 50 hours a week, while 10% work over 80 hours;
- one in six drivers who own their own trucks do not believe they can refuse an unsafe load;

• almost one in five owner-drivers said they would not report being pressured to falsify a work diary and 42% said the reason for not reporting would be fear of losing their job.

Source: Safety Solutions, 9 February 2017

BLACK LUNG DISEASE REPORTED IN NSW

Specimen of lung with Progressive Massive Fibrosis, a later stage of CWP. A diseased lung with coal workers pneumoconiosis, or CWP.

The NSW Department of Industry Resources Regulator has confirmed a case of Mixed Dust Coal Workers' Pneumoconiosis, the first reported case of pneumoconiosis in a NSW coal mine worker since the 1970s.

The person affected worked in a number of NSW open cut mines before leaving the industry in 2014.

The Major Investigation Unit of the Resources Regulator is investigating how this case has happened and if there have been any breaches of the work health and safety laws.

Managing Director and Chief Executive Officer of Coal Services, Lucy Flemming, said:

- "Workers receive periodic health surveillance every three years. Outside of the placement, medical assessments are undertaken for all coal mine workers prior to commencing employment and ongoing assessments are offered to workers after they leave the industry.
- Workers' health is the absolute priority and this latest news only serves to demonstrate the utmost importance of such strict regulations.
- The NSW model of prevention, detection, enforcement and education is essential in protecting workers in the NSW coal industry from harm in the future. Controlling dust exposure, monitoring and ongoing health surveillance are vital components of the prevention and detection strategies that are in place and enforced in NSW."

A similar approach in the planned legislation in Western Australia is warranted and necessary.

Source: NSW Department of Industry, Media Release, 3 February 2017. Pic source: News.com.au

New hazards register released by Resources Safety

The Department of Mines and Petroleum has developed a hazard register which presents the findings of its investigations into 64 fatal mining accidents in the WA mining industry during the period January 2000 to December 2015.

It has been developed to assist industry in preventing similar incidents by raising awareness of the circumstances and hazards associated with fatal incidents, as well as identifying precautions or preventative measures that could avert an incident.

The hazard register enables sites to:

- identify hazards with the potential to cause fatal injuries
- demonstrate how hazards can impact different occupation groups
- identify the activities and tasks being undertaken at the time a fatality occurred
- identify potential precautions or preventative measures.

The guide can be found at www.dmp.wa.gov.au/ Documents/Safety/MSH_G_HazardRegisterUserGuide. pdf

Source: Department of Mines and Petroleum, Safety Alert 17 January 2017

Trump order puts safety rules in

pardy

Trump er dangerous Latino work

An executive order issued by US president Donald Trump could significantly limit or even halt the introduction of new regulations by the government safety regulator OSHA. It is feared the move may also put several recently passed regulations in jeopardy.

The Presidential Executive Order on Reducing Regulation and Controlling Regulatory Costs calls for two prior regulations to be identified for elimination every time a new regulation is issued.

In addition, the order calls for agency heads to ensure the total incremental cost of all new regulations, including repealed regulations, that will be finalised this year have a cost of no greater than zero unless otherwise required by law.

New incremental costs associated with new regulations must be offset by eliminating existing costs associated with at least two prior regulations.

Professor Jody Freeman of Harvard University's Environmental Law Program said: "This policy of 'two for one' regulations is arbitrary, not implementable, and a terrible idea. The purpose of an order like this is to strangle even the most beneficial rules under the guise of cutting red tape." She added it "ignores completely the huge societal benefits that come from many public health, safety and consumer protection rules."

Source: TUC Risks 87, 11 February 2017

The Trump administration's crackdown on undocumented workers living in the US could increase the already skyhigh fatality rates among Latino workers, safety advocates have found.

They say Bureau of Labor Statistics figures show the number of Latino workplace deaths spiked during the Obama presidency, with more Latino workers dying in 2015 than in any year since 2007. This can be attributed to Latino workers' fear of deportations and other consequences of speaking up about unsafe working conditions, according to the National Council for Occupational Safety and Health. Because Obama deported record numbers of undocumented workers, workplace deaths rose too.

Jessica Martinez, co-executive director of the National Council for Occupational Safety and Health said her organisation expects the problem to get worse under Trump. "When you combine the antiimmigrant rhetoric of the Trump administration with the likelihood of decreased [OHS] enforcement, it's a very scary situation. Our fear is that fatalities will rise because of fear and also because of a lack of employer compliance."

Sam Robele of the National Guestworker Alliance, an advocacy group for foreign workers who obtain temporary visas to work in the United States, says that these workers are also now more at risk.

"Whenever there is an increase in the criminalisation of undocumented workers, it puts more pressure on workers to stay in the job that they are in, to not complain, to look the other way when there are hazards. [Choosing between] a stand over work safety and potentially being deported and separated from your children; most people aren't [going to] risk that."

Source: TUC Risks 786, 4 February 2017

The 16-year-old worker suffered severe burns when he handled hot gravy without gloves

KFC IN THE UK FINED £950K FOR SAFETY BREACH

Kentucky Fried Chicken (KFC) has been fined almost £1 million after two young workers were burned with hot gravy.

Joshua Arnold was just 16 when he was scalded with gravy at the Teesside Retail Park store in July 2014, leaving him with second degree burns on his arms. A more experienced female worker was injured preparing hot gravy at KFC in Stockton in December 2015.

The judge said DVD footage showed staff taking hot gravy tubs out of the microwave with bare hands. "In this case, the inevitable happened," he said. "It is the duty of management at every level to ensure that corners are not cut."

KFC admitted criminal safety breaches and was ordered to pay £950,000 in fines and £18,700 in costs. Source: TUC Risks 787, 11 February 2017

Food company agrees to enforceable undertaking after worker burnt

Patties Foods Ltd, a Victorian manufacturer of baked goods, has entered into an Enforceable Undertaking following an incident which occurred in June 2015 when an employee sustained superficial burns to his face and neck while operating a piece of plant which cooked product and moved it along.

Under the Enforceable Undertaking, the company has agreed to implement improvement, conduct local industry 'OHS information sessions', fund participation of a number of non-employees/contractors in Cert IV WHS Training, make donations and sponsor the Victorian Police Legacy Child Safety Handbook.

The option of using Enforceable Undertakings as an alternative to fines/penalties can have a positive and beneficial occupational health and safety effect in the community.

EXISTING DRESS CODE LAWS DO NOT ADDRESS HEALTH AND SAFETY RISKS

In the UK, a parliamentary committee has concluded that women who face demands at work to wear high heels, make-up or revealing outfits require a new legal framework to halt such discrimination.

The report was launched following the treatment of Nicola Thorpe, who reported for work in 2015 as a receptionist at the accounting giant Price Waterhouse Cooper in flat shoes and was told that it was company policy for women to wear heels of a height between 2 and 4 inches.

She was sent home without pay after refusing to buy a pair with at least a two inch heel despite pointing out that men were not required to wear similar attire.

The Committee heard from hundreds of women who had suffered long-term damage as a result of wearing high heels for long periods in the workplace.

They also heard from women who had been required to dye their hair blonde, wear revealing outfits and constantly reapply make-up.

Evidence was also produced which showed "the direct causative relationship between the protracted use of high heels and serious conditions including stress fractures and bunions.

The Committee concluded that under the current law employers are not expected to take dress codes such as high heels into account while calculating health and safety risks.

Source: SHPOline, 7 February 2017



TOLL TRANSPORT INCUR \$1 MILLION FINE OVER STEVEDORE'S DEATH

In December 2016 shipping operator Toll Transport Pty Ltd was convicted and fined a record \$1 million over the death of an employee who was crushed to death while helping load a ship in 2014.

Although Toll had a number of procedures in place to ensure the safety of employees, a Worksafe Victoria investigation found they were inadequate. Critically, a key component of the safety procedure, that a fellow worker be positioned to assist, did not occur.

Worksafe Victoria Executive Director, Marnie Williams, said that the record fine reflected the horrifying failure of the company to look after the safety of its employees.

"It was a catastrophic failure that led to a worker dying in the most horrible circumstances and traumatising all the people who tried so hard to save him."

Source: OHS Reps SafetyNetJournal, 390, January 2017

Fall from heights death leads to category one prosecution

A Queensland Work Health and Safety investigation has led to the prosecution of two family-owned businesses and their directors according to a report by Work Cover Queensland.

The prosecutions are the first category one prosecutions under Queensland safety laws. If found guilty of the alleged offences, the companies face fines of up to \$3 million while the directors could be fined up to \$600,000 each and face five years maximum jail time.

The employee, who had only started the job four days earlier, fell almost six metres to his death, while working on the edge of a roof without protection.

It is alleged that he was several metres ahead of two scissor lifts being used for fall control and not wearing a personal fall protection harness.

Workplace Health and Safety Queensland head, Dr Simon Blackwood, said "that not following simple safety guidelines and taking unnecessary risks is just not on. Had the available and correct controls been used the employee's death would not have occurred."

Source: Safety Solutions, 1 March 2017

AIR POLLUTION

Pic: Professor Greg Evans and Dr. Cheol-Heon Jeong studied levels of black carbon and ultrafine particles inside the cars of commuter trains. They found that passengers were exposed to high levels of these potentially carcinogenic fumes, especially when sitting directly behind the locomotive. Credit: Tyler Irving

DIESEL TRAINS MAY EXPOSE PASSENGERS TO EXHAUST

A new study has found that diesel trains may expose passengers to elevated levels of certain pollutants, especially if they are sitting directly behind the locomotive – these commuters breathe exhaust levels nine times higher than on a busy street.

Researchers from the University of Toronto Faculty of Applied Science and Engineering studied levels of black carbon and ultrafine particles inside the cars of commuter trains. They measured the concentration of airborne particles using two types of portable instruments; one that detects black carbon (BC) and one that detects ultrafine particles (UFP).

In prior research, elevated levels of BC and UFP were measured next to busy streets and highways. One day the sensors were left turned on during a morning commute on the train -- it wasn't until the researchers saw the data that they realised how high the numbers were inside cars pulled by diesel locomotives.

Over the course of 43 trips, the team gathered more data from inside commuter train cars.

They reported that:

- Cars being pulled by diesel trains and located directly behind the locomotive had an average of nine times the levels of BC and UFP compared to air next to a busy city street.
- Cars being pushed by diesel trains during a return trip had air that was generally cleaner than that next to busy city streets.
- When being pulled, cars in the middle of the trains had levels three times lower than the front-most cars. The average BC and UFP concentrations across all pulled cars was about five times higher than on city streets.

Lead researcher Professor Greg Evans said that Metrolinx is taking a number of steps to address the issue, such as installing high-efficiency filters in the ventilation systems of its train cars. The organisation is also moving to locomotives with improved emissions standards and to electrified service on key routes, which will eliminate the diesel emissions altogether.

Source: ScienceDaily, 8 February 2017



DIESEL ENGINE EXHAUST EXPOSURE BEING IGNORED BY THE EUROPEAN COMMISSION

On 10 January, the European Commission published its second draft of the revised Directive on the protection of workers from the risks related to exposure to carcinogens or mutagens at work. The omission of diesel engine exhaust from this draft has prompted criticism by the European trade union movement.

ETUI researcher Laurent Vogel says that "The Commission's refusal to extend the Directive's scope of application to include diesel engine exhaust emissions or to add them to the list of limit values is a sign of capitulation to the aggressive lobbying of employers' associations."

He added that industry lobbying efforts are based on inconsistent arguments. It is claimed that diesel fumes are no longer carcinogenic thanks to the standards which apply to new diesel engines, but this ignores the lack of scientific studies currently available to confirm the purported absence of cancer risk from the fumes generated by these new engines. What is more, workers are still exposed to diesel fumes from older-generation engines, and new engines frequently pose greater risks due to poor maintenance or handling.

Laurent Vogel finds it particularly difficult to understand the Commission's decision given that one of its own working documents states that the lack of legislation prohibiting exposure to diesel engine exhaust at work will result in 230,000 deaths in the EU between 2010 and 2069.

Source: ETUI News, 11 January 2017

European Commission issues final warning on air pollution



The UK has been given a 'final warning' by the European Commission over its failure to address harmful levels of toxic air.

If the Government cannot show it is taking action on nitrogen dioxide pollution within two months, it could face fines of millions of pounds or be taken to the European Court of Justice.

Germany, France, Italy and Spain also received the warning with cities including Berlin, Lyon and Barcelona singled out for their unacceptably high pollution levels.

The Commission called nitrogen dioxide pollution a "serious health risk" and said more than 400,000 people in the EU died prematurely as a result of toxic air.

Source: The Independent, 16 February 2017.



Pic: A London cyclist wears a face mask to avoid inhaling pollution

Chinese air pollution linked to respiratory and cardiovascular deaths

In the largest epidemiological study conducted in the developing world, researchers found that as exposures to fine particulate air pollution in 272 Chinese cities increase, so do deaths from cardiovascular and respiratory diseases.

The researchers found:

- The average annual exposure to PM2.5 in the Chinese cities was 56 micrograms per cubic meter -well above the World Health Organization air quality guidelines of 10 µg/m3.
- Each 10 μg/m3 increase in air pollution was associated with a 0.22 percent increase in mortality from all non-accident related causes.
- Each 10 µg/m3 increase in air pollution was associated with a 0.29 percent increase in all respiratory mortality and a 0.38 percent increase in chronic obstructive pulmonary disease (COPD) mortality.
- Mortality was significantly higher among people age 75 and older and among people with lower levels of education.
- The association between PM2.5 levels and mortality was stronger in cities with higher average annual temperatures.

The authors note that a limitation of their study is that it does not look at the cumulative effect of PM2.5 over many years.

The report can be found online at: http://www.thoracic. org/about/newsroom/press-releases/resources/ chinese-air-pollution.pdf

Source: ScienceDaily, 10 February 2017

Pic credit: ATS. Increases in fine particulate air pollution in 272 Chinese cities linked to increased respiratory deaths



12 / MONITOR / MARCH 2017



THOUSANDS OF CALIFORNIAN WORKERS EXPOSED TO ELEVATED LEAD LEVELS

More than 6,000 Californian workers in munitions, manufacturing and other industries have elevated levels of lead in their blood that could cause serious health problems, according to a new report from the state's public health agency.

The report, conta=ining the results of tests conducted between 2012 and 2014, comes as the state's workplace health and safety agency, Cal/OSHA, is considering a major update of its safety standards for workplace lead exposure for the first time in decades.

Recent science shows chronic, low-level lead exposure can cause lasting harm – heart disease, reproductive problems, cognitive difficulties, kidney failure.

Lead is a naturally occurring element. The soft grey metal and its various compounds have been used in many products, including pipes, paint, batteries, ammunition, industrial equipment and gasoline. Workers can be exposed to lead in the form of dust, either inhaled or swallowed, or by handling leadtainted items.

California requires employers to provide testing of workers if their work uses or 'disturbs' lead (such as removing lead paint from a home) and to take steps to minimise lead dust and fumes.

State researchers warned that there are many other workers who may be exposed to it but are never tested. While battery manufacturers and ammunition manufacturers may routinely test their workers, many other companies, including foundries and painting contractors, do not.

Blood lead levels and the workplace exposure standard for lead in the workplace to be reduced

Safe Work Australia has published a Decision Regulation Impact Statement (DRIS) on managing risks associated with lead in the workplace: blood lead removal levels and workplace exposure standard.

The DRIS is the result of Safe Work Australia's review of the current toxicological information and overseas trends in the regulation of lead in the workplace. It examines options to reduce the adverse health outcomes caused by exposure to lead in the workplace.

As a majority of Ministers agreed to the preferred options, action will now be implemented through model work health and safety legislation.

Readers may recall the WA Department of Commerce response to Safe Work Australia's Regulation Impact Statement regarding inorganic lead in February 2016, which revealed that **there is no register of workplaces where lead risk could exist and consequently that health surveillance of employees was unlikely to be carried out at an unknown number of locations in Western Australia. (Monitor February 2016).**



OVER-USE OF DIGITAL DEVICES AND ITS HEALTH EFFECTS

French companies are now required to guarantee their employees a 'right to disconnect' from technology.

Organisations with more than 50 workers must now start negotiations to define the rights of employees to ignore their smartphones.

Over-use of digital devices has been blamed for health effects ranging from burnout to sleeplessness.

The measure is intended to tackle the so-called 'always-on' work culture that has led to a surge in usually unpaid overtime – while also giving workers flexibility to work outside the office.

The law which came into effect on 1 January, follows a previous legally binding agreement reached in 2014 which allowed workers in the technology and consultancy sectors to discontinue answering emails or phone calls outside working hours.

Source: TUC Risks 782, 7 January 2017



14 / MONITOR / MARCH 2017

HEALTHCARE WORKERS MAY FACE SERIOUS HEALTH PROBLEMS FROM EXPOSURE TO SURGICAL SMOKE

A recent survey of healthcare workers found that certain surgical procedures often lack ventilation that removes surgical smoke at its source, according to US National Institute for Occupational Safety and Health (NIOSH).

As a result, some healthcare workers may face serious health problems from exposure.

Thanks to medical advances in electrosurgery and laser surgery, we now have access to minimally or non-invasive procedures for everything from heart disease to glaucoma. For patients, these procedures provide clear benefits, including faster, less painful recoveries.

However, the advances in technology can present new hazards to healthcare workers.

As laser and electrosurgical tools heat body tissues, they generate surgical smoke that contains toxic gases, vapors, and cellular material. Exposure to these substances may cause short-term health problems, such as eye, nose, and throat irritation, and possible long-term illnesses, such as emphysema, asthma, and chronic bronchitis.

The Occupational Safety and Health Administration (OSHA) estimates that 500,000 healthcare workers are exposed to surgical smoke each year.

In a survey of healthcare workers in the US of more than 12,000 healthcare workers, more than 4,500 respondents reported exposure to surgical smoke during electrosurgery or laser surgery and answered specific questions about work practices that control surgical smoke.

Only 47% of the respondents reported always using Local Exhaust Ventilation (LEV) during laser surgery, and even fewer, 14%, always used LEV during electrosurgery.

Few respondents reported that they wore respiratory protection; most wore surgical or laser masks, neither of which provide respiratory protection.

Electrosurgery was the most common source of exposure to surgical smoke, with 4,500 respondents reporting they were present during this procedure. In contrast, 1,392 respondents reported exposure during laser surgery.

Healthcare workers and others at increased risk of ALS

A recent study has identified a link between a substance (formaldehyde) used in the healthcare industry and the deadly motor neuron disease, amyotrophic lateral sclerosis (ALS), as well as a positive association between the disease and two occupations.

ALS is a disease which affects both lower and upper motor neurons. Death usually occurs within three to five years after onset of symptoms related to ALS.

Researchers from Sweden's Karolinska Institute of Environmental Health Sciences looked at the records of 5,020 Swedes diagnosed with ALS. They found it was most prevalent in the precision-tool manufacturing industry, and among glass, pottery and tile workers.

They also identified a statistically non-significant association between medical services work and ALS, but noted that a stronger link was identified in previous research. Previous studies also found that exposure to lead, other metals, solvents and the carcinogen formaldehyde might be associated with its development.

Source: Occupational and Environmental Medicine, Vol 74, Issue 2, February 2017

World-wide study allows scientists to predict chance of developing deadly disease

The world's biggest study into an individual's genetic makeup and the risk of developing lung disease could allow scientists to more accurately 'predict' -- based on genes and smoking -- your chance of developing Chronic Obstructive Pulmonary Disease (COPD), a deadly disease which is the third commonest cause of death in the world.

By comparing 24 million genetic variants -- genetic differences between people -- in each participant with measures of lung health, the scientists from 14 countries, led by a team from the University of Leicester and University of Nottingham, were able to group people based on genetic variants to show their risk of developing COPD.

They discovered that those in the highest risk group were at 3.7 times the risk of developing COPD than those in the lowest risk group. Because smokers are already at higher risk of developing COPD, this could mean that 72 of 100 smokers in the genetically high-risk group will develop COPD in later life.

Through this study, the researchers almost doubled the number of genetic variants known to be associated with lung health and COPD. These advances could help to explain why and how COPD develops and one day could help personalise treatments based on an individual's genetic make-up.

The four-year study involved over 100 scientists and 350,000 people from 13 countries. It is spurring new collaborations with pharmaceutical company partners aimed at developing new medicines for COPD.

UK teachers say stop talking; start acting on workloads

Teaching staff in the UK already know they are overworked and want the government to get on and do something about it, their unions have said.

The comment came after the long-overdue findings of the Department of Education's Teachers Working Time Survey revealed that teachers in England are working on average 54.5 hours per week, with 93 per cent saying workload is a fairly or very serious problem.

Union Secretary, Chris Keates, said "The education of children and young people will not be improved if the teachers remain shackled to workload demands that are impossible to deliver. A coherent Government-wide strategy is needed which secures effective downward pressure to the workload and working hours which are driving teachers and head teachers out of the profession."

Source: SafetyNetJournal, 8 March 2017



Source: ScienceDaily, 6 February 2017 16 / MONITOR / MARCH 2017

HEALTH - PSYCHOLOGICAL

NEW AVENUE FOR ANTI-DEPRESSANT THERAPY DISCOVERED

Finnish researchers have made a ground-breaking discovery revealing new molecular information on how the brain regulates depression and anxiety. In so doing, they identified a new molecule that alleviates anxiety and depressive behaviour in rodents.

The researchers found that a protein called JNK when active, represses the generation of new neurons in the hippocampus, a part of the brain that controls emotions and learning. By inhibiting JNK solely in newly generated nerve cells in the hippocampus, the researchers were able to alleviate anxiety and depressive behaviour in mice.

This previously unknown mechanism brings fresh insight on how the brain works to regulate mood and indicates that inhibitors of JNK, such as the one used here, can provide a new avenue for anti-depressant and anxiolytic drug development.

Depression and anxiety are highly prevalent disorders and represent one of the largest causes of disability worldwide.

These results are important as many patients do not respond to current treatments and it has long been recognised that new mechanistic understanding of these disorders would be necessary to in order to identify drugs for treatment of resistant depression.

Source: ScienceDaily, 18 January 2017

Pic: Researchers used virus tools to find out where in the brain the JNK inhibitor acted to improve mood. They found out the molecule acts to alleviate anxiety and depression by controlling newly born nerve cells in the hippocampus. The image, taken at the Cell Imaging Core, shows these newborn cells in the hippocampus, the region of the brain that controls emotions. Credit: Turku Centre for Biotechnology.

More evidence of the health effects of work-related stress

In a report published in Preventive Medicine, researchers at Quebec and Montreal Universities have found that for men, prolonged exposure to work-related stress has been linked to an increased likelihood of lung, colon, rectal and stomach cancer and non-Hodgkin's lymphoma.

These links were observed in men who had been exposed to 15 to 30 years of work-related stress, and in some cases, more than 30 years.

No link was found in participants who had held stressful jobs for less than 15 years.

The most stressful jobs included firefighter, industrial engineer, aerospace engineer, mechanic foreman, and vehicle and railway-equipment repair worker.

Source: ScienceDaily, 17 January 2017

Members of UK parliament need training to avoid stressing their staff

Management training for members of parliament would help eradicate the widespread stress and bullying reported by their parliamentary staff.

A union survey has revealed that almost 60 per cent of those replying felt stressed, with about the same proportion reporting they work more than their contracted hours 'weekly or all the time'.

The union UNITE said that the underlying problem is that MP's have no experience in managing their own employees before they are elected to the House of Commons.

"What we are dealing with is really just the tip of the iceberg which makes the strong case for a professional programme of management training," said Roisin McDermott, secretary of UNITE's parliamentary staff branch.

"While getting to grips with parliament, most MPs do not have previous experience of having their own employees. This should be taken into account and proper training needs to be put in place to show MPs how to be a good employer, manage a team and provide their staff with the right support in an often highly-pressurised working environment."

Expenditure on mental health services

The national recurrent expenditure on mental healthrelated services in 2014–15 was estimated to be around \$8.5 billion; an average annual real increase of 2.9% between 2010–11 and 2014–15. Overall, national expenditure on mental health-related services increased from \$343 per person in 2010–11 to \$361 per person during 2014–15, adjusted for inflation.

Key points

- Around \$8.5 billion, or \$361 per person, was estimated to be spent on mental health-related services in Australia during 2014–15, an increase from \$343 per person (adjusted for inflation) in 2010–11 (2014–15 dollars).
- \$5.2 billion was spent on state and territory specialised mental health services, an average annual real increase of 2.3% between 2010–11 and 2014–15. Of this, most was spent on public hospital services for admitted patients (\$2.2 billion), followed by community mental health care services (\$1.9 billion).
- Expenditure on specialised mental health services in private hospitals was \$433 million during 2014– 15.
- The Australian Government paid about \$1.1 billion in benefits for Medicare-subsidised mental healthrelated services in 2015–16, equating to 5.3% of all Medicare subsidies. Expenditure on psychologist services (clinical and other) (\$489 million) made up the largest component of mental health-related Medicare subsidies in 2015–16.
- The Australian Government spent \$564 million, or \$24 per person, on subsidised prescriptions under the PBS/RPBS during 2015–16, equating to 5.0% of all PBS/RPBS subsidies. Prescriptions for antipsychotics (49.6%) and antidepressants (36.5%) accounted for the majority of mental health related PBS and RPBS expenditure during this time period.

Source: Australian Institute of Health and Welfare

Source: TUC Risks, 786 4 February 2017

SLEEP / FATIGUE

SLEEP DEPRIVATION HAMPERS ABILITY TO FORM NEW MEMORIES

A new study from Johns Hopkins University School of Medicine has demonstrated that a key purpose of sleep is to recalibrate the brain cells responsible for learning and memory, solidifying lessons learned for when the sleeper is awake.

Using a mouse model, the researchers discovered several important molecules that govern the recalibration process, as well as evidence that sleep deprivation, sleep disorders and sleeping pills can interfere with the process.

Study leader, Graham Diering, Ph.D., said "Our findings solidly advance the idea that the mouse and presumably the human brain can only store so much information before it needs to recalibrate. Without sleep and the recalibration that goes on during sleep, memories are in danger of being lost." He added that a scientific understanding of learning suggests that information is contained in synapses—the connections among neurons through which they communicate.

Experiments in animals have shown that the synapses or the receiving neuron can be toggled by adding or removing receptor proteins, which thereby strengthen or weaken them and allow the receiving neuron to receive more or less input from nearby signalling neurons.

When the neurons are maxed out and constantly firing, they lose their capacity to convey information, stymying learning and memory.

"The bottom line is that sleep is not really downtime for the brain," said Richard Huganit, Ph.D director of the Department of Neuroscience. He added. "It has important work to do then and we in the developed world are short-changing ourselves by skimping on it." *Source: Science Daily, 2 February 2017*

Link between sleep and cognitive impairment in the elderly

Daytime sleepiness is very common in the elderly with prevalence rates of up to 50 percent. Caused by sleep-disordered breathing (SDB), a disruption of normal breathing during sleep, these cause recurrent awakenings and subsequent excessive daytime sleepiness.

In an editorial in the current issue of Neurology, a Boston University School of Medicine (BUSM) researcher stresses that it is now time for physicians to consider the association between these sleep conditions and cognitive impairment in the elderly.

In another article in the issue, researchers investigated an older population (over the age of 65), with and without cognitive impairment. They performed sleep studies on these groups and found that the group with cognitive impairments had more sleep disturbances attributed to SDB.

According to Sanford Auerbach MD, director of the Sleep Disorders Center at Boston Medical Center, the causal link between obstructive sleep apnea (OSA) and cognitive impairment in the elderly is not entirely clear.

"Nevertheless, it does raise the issue that clinicians evaluating OSA in the elderly should screen for cognitive impairments. Furthermore, clinicians evaluating cognitive impairment in the elderly should also screen their patients for sleep disturbance and OSA."



JAPANESE UNION CHIEF BLASTS MOOTED 100-HOUR OVERTIME LIMIT

The Japanese government has proposed that overtime be capped at 720 hours a year per employee, or an average of 60 hours per month.

At the same time, it proposed letting employees work up to 100 extra hours per month during busy periods, on condition that the average is limited to 80 hours over two consecutive months.

The president of the Japanese Trade Union Confederation (Rengo), Rikio Kozu, said the government should respect an existing managementunion agreement that restricts overtime per employee to 45 hours a month and 360 hours a year, when considering a specific limit.

He added that the government should not exempt any industry from the new rules on overtime and also set a mandatory interval of hours between when one working day ends and another begins.

Earlier this year, Japan's Ministry of Health, Labour and Welfare said only 2 per cent of about 1,700 companies surveyed had minimum daily rest periods.

Japanese government tells workers to take a break

The Japanese government is urging people to leave work early and go shopping in an attempt to reduce deaths from overwork and to boost the ailing economy. The voluntary policy - known as Premium Friday - calls on employers to let their workers out at 3pm on the last Friday of every month to start the weekend early. The government hopes the extra time will allow people to unwind from Japan's long working week and to go shopping, stimulating Japan's economy.

The average Japanese worker also takes only half of their paid holidays due to a culture where taking time off is seen as an inconvenience to colleagues.

Around 200 deaths from karoshi – death from overwork – are recognised officially each year and a period of economic downturn and job insecurity is increasing work pressures in the country.

Source: TUC Risks 785, 29 January 2017

Pic: Employees of Japanese company Suntory drink at a pub after finishing work at 3pm in Tokyo on Friday. Photograph: Toru Yamanaka/AFP/Getty Images

Source: Japan Times, 4 February 2017

HAZARDOUS MATERIALS



Attack on the IARC process rejected by scientists

The newly appointed US ambassador to the United Nations has launched a scathing attack on the international body which could embolden an industry lobby angry at the UN's role in assessing chemical cancer risk.

One already in the crosshairs is the International Agency for Research on Cancer (IARC), which is under the purview of the UN's World Health Organisation.

The appointee, South Carolina governor Nikki Haley has signalled that international agencies will have to answer to an 'America First' administration hostile to global policymakers.

After industry criticism of recent cancer assessments by the agency, notably on the pesticide glyphosate, and calls spearheaded by the American Chemistry Council (ACC) for the US to cut funds to IARC, Republican lawmakers have rallied to the industry call, claiming that IARC has a "record of controversy, retractions, and inconsistencies" and asked why the National Institutes of Health has spent \$40 million since 1992 to fund it.

Prolonged attacks however have been refuted by many of the world's top research scientists, including leading US cancer epidemiologists.

A June 2015 paper, signed by a large group of international scientists, concluded "as a group, we have looked carefully at the recent charges of flaws and bias in the hazard evaluations by IARC Working Groups, and we have concluded that the recent criticisms are unfair and unconstructive.

The IARC monographs have made, and continue to make, major contributions to the scientific underpinning for societal actions to improve the public health."

Source: TUC Risks, 786, 4 February 2017

Chemical safety data sheets to be scrutinised

An inspection programme by health and safety regulators across the European Union is to determine how legally required safety information on hazardous chemicals is communicated in company supply chains and followed in workplaces.

The key element of the European Chemicals Agency (ECHA) project will be to investigate the quality of the safety data sheets that contain guidelines on the safe use of hazardous substances.

Inspectors will check if the extended safety data sheets used in the workplace are consistent with chemical safety reports (CSRs) prepared by the chemical firms manufacturing the substances. They will also go through the exposure scenarios attached to the safety data sheets.

The European Chemicals Agency (ECHA) says one objective of this enforcement project is to ensure that workers handling hazardous chemicals, especially substances of very high concern, receive sufficient and correct safety information.

The project will also map how effectively extended safety data sheets are passed on and communicated all the way through the supply chain, from manufacturers of chemicals to end users.

Source: TUC Risks, 783, 14 January 2017

EUROPEAN COALITION CALLS FOR GLYPHOSATE BAN

A European Citizens' Initiative (ECI) supported by unions and environmental groups is calling on the European Commission "to propose to member states a ban on glyphosate, to reform the pesticide approval procedure, and to set EU-wide mandatory reduction targets for pesticide use."

They claim that they now have a chance to make their voices heard and the European Commission has to listen if they collect one million signatures this year.

The global food and farming union, International Union of Food (IUF), has backed calls for a ban on glyphosate.

Meanwhile, industry lobbyists from across Europe are waging a well-resourced campaign to block measures to protect workers from substances that cause cancer and other serious health effects.

The campaign has already stalled progress for a decade, with an unambitious and scaled back European Commission proposal for revising the EU Carcinogens and Mutagens directive only emerging in 2016.

The industry is now lobbying hard to prevent improvements to the directive proposed in a paper under consideration by the European Parliamentary Employment Council.

In January, nine of the biggest industry lobby groups in Brussels sent a joint letter to the Committee urging the lawmakers to drop amendments that would promote stricter exposure limits, better monitoring of employees health or the addition of other dangerous substances to the regulation.

Source: TUC Risks 786, 4 February 2017 TUC Risks 788 18 February 2017

22 / MONITOR / MARCH 2017

Study links Roundup (glyphosate) to serious disease

A group of British scientists say that they have conducted an unprecedented, long-term study showing a link between Roundup - one of the most widely used herbicides in the world - and severe liver damage in test rats.

In the research findings published in the journal, *Nature*, in January scientists said their tests used cutting-edge technology to demonstrate that "extremely low doses" of the herbicide administered to rats through their drinking water had caused "nonalcoholic fatty liver disease (NAFLD)" over a two-year period.

The research has sparked further debate in the international scientific community over the potential health hazards to people caused by exposure to the well-known weed killer.

Source: OHSReps SafetyNetJournal 390, 25 January 2017





TACKLING SILICA EXPOSURE IN THE WORKPLACE

Discussions convened by the Institution of Occupational Safety and Health (IOSH) in 2016 have resulted in a new pact to tackle the risks from inhaling silica dust at work. Respirable crystalline silica (RCS) is encountered in a wide range of jobs from construction to mining, ceramics, stone masonry, quarrying, brickmaking and fracking. Exposures can cause the lung-scarring disease silicosis, lung cancer and other chronic health problems.

The voluntary IOSH-backed pact falls short of a key UK trades union demand for a tighter silica exposure standard, backed up by rigorous enforcement. In 2015, UK safety regulator the HSE admitted firms were continuing to expose workers to excessive levels of silica dust.

The current Safe Work Australia Workplace Chemicals Evaluation will include review of the exposure standard for silica.

Source: TUC Risks 792, 7 January2017

Exposure to chemicals used in LCD production linked to Multiple Sclerosis

In a ground-breaking judgment, a Seoul court has ruled that the multiple sclerosis suffered by a former worker on the Liquid Crystal Display (LCD) production line at Samsung Electronics is a work-related disease.

While cancers and other disorders have been recognised officially at other Samsung plants, the 10 February ruling marks the first work-related disease to be recognised on Samsung's LCD line.

The employee began working in 1997 when she was 17 years of age. She contracted the disease in March 2000 and left the company three months later. She filed the lawsuit in 2013 after her compensation claim for a work-related illness was rejected.

Judge Lee Gyu-hun said "The fact is that [she] was exposed to organic solvents such as acetone on the job; that she worked on shifts, including a night shift, before the age of 20; that she worked on a night shift in a sealed space; and that she did not have enough exposure to ultraviolet rays appear to have been factors that caused or exacerbated her multiple sclerosis."

The judge noted there had already been four confirmed cases of multiple sclerosis among workers at Samsung Electronics. "The number of patients at Samsung Electronics is much higher than the standard prevalence rate, and no other risk factors were confirmed for [her] aside from her work environment."

The attorney acting for the worker said "Samsung and its suppliers repeatedly defied court requests to provide chemical data used in LCD production."

Source: TUC Risks 788, 18 February 2017

After five years of legal battle, a former Samsung employee, Kim Mi-seon won a ruling in favor of her workers compensation claim. Her handwritten sign reads: "Samsung must apologise, sufficiently compensate its victims and have [safety] measures in place."



MARCH 2017 / MONITOR / 23



OUTDOOR WORK AND MALIGNANT MELANOMA RISK IN THE UK

British workers exposed to the elements account for 2 per cent of cases of the most deadly form of skin cancer, a new study has concluded.

Dr Lesley Rushton, lead researcher from Imperial College London, said: "We've shown previously that people often don't understand the risks of damage caused by sun in the UK. But this research shows you don't have to work in the Mediterranean or a traditionally sunny country for the sun to damage your skin."

She added: "It's important to get to know what your skin is normally like, and to tell your doctor if you notice any changes to how your skin looks or feels. Skin cancer can appear as a new mole or mark, or it can be a change to something you've had for a while. Now that we have a clearer picture of the extent of the damage caused, employers need to make sure they take sun exposure at work seriously and work out how to reduce it."

The authors found the main industries "of concern" were construction, agriculture, public administration and defence and land transport.

According to the Cancer Council of Victoria, workplace sun-related injuries and diseases not only kill workers but have cost Australian workplaces \$63 million in compensation payments over the last 10 years.

Outdoor workers receive up to 10 times more exposure to the sun's ultraviolet (UV) radiation – putting them at significantly higher risk of skin damage and skin cancer. Each year 200 melanomas and 34,000 other skin cancer diagnoses in Australia can be attributed to UV exposure in the workplace.

Source: Cancer Hazards, 26 January 2017. Source: Safety Net 390, 25 January 2017

Cancer is a by-product of industrial policy

Much of the past effort against cancer has fixated on the wrong enemies, with the wrong weapons, a leading expert has said.

US professor Devra Lee Davis said while effort was focused internally on genetic factors, the external influences – what we breathe, drink, eat and absorb through our skin – is being overlooked. Writing in *The Hill*, she said "the great majority of cases of cancer occur in people, born with healthy genes, as a result of carcinogenic exposures at work, home, and school."

But she said the failure to recognise this has "less to do with science, and more to do with the power of highly profitable industries that rely on public relations to counteract scientific reports of risks. Studies of identical twins tell us that most cases of cancer do not arise because of inherited defects. Only one in 10 women who develop breast cancer is born with defective genes. This means that most cases come about because of ways that our healthy genes interact with the world around us."

She added: "The list of workplace causes of cancer provides a litany of largely ignored factors. Women who work at night – like nurses or those who work in electronics – have lower levels of melatonin and higher rates of breast cancer. Men who work with chemicals or electromagnetic fields have higher rates of brain cancer and leukaemia. Those who work with wood dust and formaldehyde have higher rates of nasal cancer."

The professor, who authored the *The secret history* of the war on cancer a decade ago, concluded: "If we had acted on what has long been known about the industrial and environmental causes of cancer when this national war first began, millions of lives could have been spared — a huge number of casualties for which those who have managed the effort against the disease thus far must answer."

Source: Cancer Hazards, 22 February 2017

US cancer death rates decline 25% since 1991 peak

A steady decline over more than two decades has resulted in a 25% drop in the overall cancer death rate in the United States. The drop equates to 2.1 million fewer cancer deaths between 1991 and 2014.

The drop is a result of steady reductions in smoking and advances in early detection and treatment, and is driven by decreasing death rates for the four major cancer sites, lung, breast, prostate and colorectal. The report also finds significant gender disparities in incidence and mortality. For all sites combined, the cancer incidence rate is 20% higher in men than in women, while the cancer death rate is 40% higher in men.

The gender gap in cancer mortality largely reflects variation in the distribution of cancers that occur in men and women, much of which is due to differences in the prevalence of cancer risk factors. For example, liver cancer, a highly fatal cancer, is three times more common in men than in women, partly reflecting higher Hepatitis C virus infection, historical smoking prevalence, and excess alcohol consumption in men. The largest sex disparities are for cancers of the oesophagus, larynx, and bladder, for which incidence and death rates are about 4-fold higher in men. Melanoma incidence rates are about 60% higher in men than in women, while melanoma death rates are more than double in men compared to women.

In Australia, the latest cancer report from the Australian Institute of Health and Welfare (AIHW) shows that while cancer is a major cause of ill health, and more cases are being diagnosed, death rates have continued to fall since the 1980's and incidence rates have also decreased in recent years.

"The rate of new cancer cases rose from 383 per 100000 people in 1982 to a peak of 504 per 100,000 in 2008, before falling to an expected rate of 470 per 100,000 people in 2017." said AIHW spokesperson Justin Harvey.

Source: dddMag, 10 January 2017

Asbestos from husband's overalls led to deadly cancer

A retired chef died from mesothelioma, an inquest in Hertfordshire UK has concluded.

The inquest heard that prolonged exposure to asbestos from her husband's overalls from his work as a mechanic had caused the mesothelioma diagnosed in November 2015.

The coroner heard that Jill Moore had spoken of washing her husband's work clothes twice weekly and shaking dust from his overalls. He recorded a conclusion that Mrs Moore died as a result of an industrial disease.

Source: TUC Risks 788, 18 February 2017



HIGH PESTICIDE EXPOSURE EVENTS CAN LEAD TO CANCER

An ongoing US Agricultural Health Study that is monitoring the health of more than 57,000 private and commercial pesticide applicators has added to growing evidence that high exposure to certain pesticides may spur prostate and other cancers in people handling the chemicals.

The study, published in the journal *Environmental* and *Molecular Mutagenesis*, included 596 male pesticide applicators. It found that men who had experienced a "high pesticide exposure event", meaning a spill or other accident, that would leave them highly exposed, were more likely to have elevated levels of DNA methylation in a gene linked with increased prostate cancer risk.

Source: Work cancer hazards, 23 February 2017

Cancer all-clear for night work was based on 'bad science'

Top researchers have warned that an Oxford University study that concluded the classification of night work as a cause of breast cancer in women is no longer justified was based on 'bad science'.

Three of the most respected epidemiologists on night work and breast cancer have now said they "fully disagree" with this conclusion, noting a succession of methodological flaws in the research "invalidate" its conclusions.

Published papers substantiating the epidemiologists' rejection of the Oxford University study appear in the Journal of the National Cancer Institute, Vol 107, No. 12, Oct 6, 2016 and Hazards Magazine, No. 136. Dec 2016. Source: ETUL News, 20 December 2016. Pic: Hazards Dec 2016





TEACHERS NEED HELP TO SUPPORT STUDENTS IN REMISSION FROM CANCERS

Research from The University of Western Australia has found more needs to be done to help teachers support students returning to school after cancer treatment.

Cancer affects more than 600 children under the age of 15 in Australia every year, however there is currently little research on the important role teachers play in supporting those students.

Anne Gaunt, a Masters student in UWA's Faculty of Education interviewed primary school teachers in Government and independent schools who have experience in dealing with students in remission from illnesses such as leukaemia and brain cancers.

Through talking to teachers she found many children who survive cancer end up with learning difficulties such as memory and recall problems, fine motor skill deficits and a loss of concentration. She said teachers needed to help identify these difficulties, which could often be confused with a socio-emotional or health issues related to cancer treatment.

"Sixty years ago, cancer was a death-sentence, but today eight out of 10 children diagnosed survive," Ms Gaunt said.

"There is a serious problem of educational equality for children left with neurocognitive disability from their treatment. My research aims to shed light on this important issue for WA schools. Although adverse neurocognitive effects are discussed for survivors of central nervous system cancer therapies, there is no research into how this matter is addressed in Australian classrooms."

The research has been published on The University of Western Australia's website.

At right: Ms Anne Gaunt



MARCH 2017 / MONITOR / 27



NANO-TECHNOLOGY

Nanoparticles - can they cross biological membranes?

In an article published in November 2016 in *Science Advances,* Dr Vladimir Baulin from the Rovira i Virgili University, in Spain showed how nanoparticles can cross biological – or lipid – membranes. This is the first observation to show directly how tiny gold nanoparticles can cross the main part of a biological membrane.

The lipid membrane is the ultimate barrier protecting cells from the outside environment and if the nanoparticles can cross this barrier they may go into cells.

More recently, researchers from the French National Institute for Agricultural Research (INRA) have also shown that nanoparticles of titanium dioxide contained in the additive E171 can cross the intestinal barrier in animals. Immune system disorders linked to the absorption of the nanoscale fraction of E171 particles were observed.

Nanomaterials have been formulated into most of products used in our daily life. They are found everywhere: in cosmetics (creams, toothpastes, and shampoo), food components, clothes, buildings cement, paints, car tyres, oil, electronic products, etc.



Source: ETUI News, 2 February 2017

Pic: Vladimir Baulin has demonstrated how nanoparticles cross a lipid membrane and says we need to find out how exactly they affect living organisms.

WORKERS' COMPENSATION

NO

RESPASSING

GE EMPLEYEES

The General Electric plant in Peterborough has been a city landmark for over a century. What was once seen as a beacon of progress is now blamed by some as the cause of hundreds of cases of cancer developed in former workers. (MELISSA RENWICK / TORONTO STAR)

Stronger protection planned for workers exposed to hazardous chemicals in Ontario

The Province of Ontario aims to have a dedicated occupational disease response team in place by the end of the year to improve prevention and enforcement, as well as to help workers who get sick from chemical exposures file compensation claims.

Michael Speers, a spokesperson for the Ministry of Labour, said it was "critical" that job-related illnesses be treated with the same gravity as physical injuries in the workplace, which have declined over the past decade.

Last month, a newspaper investigation on the struggle of hundreds of former General Electric workers in Peterborough to get compensation for often terminal illnesses like brain cancer highlighted criticism that occupational disease in the province is often not monitored, reported or compensated.

Speers said that the ministry is exploring ways to improve information sharing, including linking work history with electronic medical records, tracking dangerous substances in workplaces through the public health system and improving awareness about hazardous substances.

The investigation by the Toronto Star revealed decades' worth of government reports that repeatedly warned of poor housekeeping, shoddy ventilation, and lack of personal protective equipment, and noted the sheer volume of materials now known to be carcinogenic historically used at GE. The company says it has always taken the health and safety of its employees seriously and that "as more information became available about chemical use, GE, like other industrial companies, reduced or eliminated their usage."

Former workers interviewed by the Star, most with decades of service at GE, described a workplace where asbestos fibres floated thick in the air, where open pots of lead and mercury dotted the shop floor, and where 23 massive dip tanks of varnishes and solvents used to coat and degrease motors belched fumes throughout the plant.

Source: Toronto Star, 16 January 2017

Victorian worker awarded \$600k+ for failure of employer to exercise duty of care

The Victorian Supreme Court has awarded \$635,000 in damages to a state government employee with known mental health issues for a "breakdown" after managers failed to properly consider her condition when they addressed a mounting conflict with a supervisor.

The judge found that the State Department of Human Services breached its duty of care and exacerbated the youth welfare case manager's psychological injuries when it failed to exercise the standard of care "reasonably expected of an employer".

This included the department's failure to formally recognise the worsening relationship between the worker and the supervisor; to develop and implement policies to handle bullying complaints and serious interpersonal conflict; and to refuse her request to be transferred.

Source: Workplace Express, 13 February 2017



WORKPLACE SAFETY AND JOB DEMANDS CONTRIBUTE TO ABSENTEEISM AND JOB PERFORMANCE

A study published in *Health Affairs* by researchers at the Colorado (USA) School of Public Health has found that workers who had a work-related injury in the past year, worked demanding jobs, and had a chronic health condition had significantly higher lost productivity costs than those without those indicators.

The study analysed data provided by the State's workers' compensation insurer from the nearly 17,000 employees who participated in workplace wellness programs. Researchers examined the combined impact of workplace safety, employee health and job demands on productivity, in the form of absence and job performance.

The study found that workers with physically demanding jobs were most likely to take time off from work due to an illness or injury, while workers with both physically and cognitively demanding jobs were more likely to come to work but be unproductive.

Study investigator Dr Natalie Schwatka commented: "If employers want to increase productivity, they need to think about the health and safety of their employees. Companies can do this by fitting the job to the worker, not fitting the worker to the job. This means designing or modifying work tasks with employees' past injuries, chronic health conditions and task difficulty in mind."

Principal author, Dr Kim Jinnett said: "By focusing on work-related outcomes such as attendance, job performance and [leaves of absence], employers can make better decisions about how their investments in employee health and providing support at work impact these kinds of outcomes."

Source: SATPR News, 7 February 2017



Occupational Health Society of Australia (WA)



Membership of 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.

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 Western Australia
- 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 Fees

Current fees:

\$50 for ordinary members.

\$20 for students.



Occupational Health Society of Australia (WA)

Members

Ms Joyce Blair, Next Health Group Mr Dean Butler, Avon Valley Physiotherapy Pty Ltd Mr Forbeteh Walters Chenwi, Safety Agency Cameroon Mr Alan Clarkson Snr, SHEQ Australia Ms Allaine Coleman, CGU Workers' Compensation Dr Peter Connaughton Mrs Gwendoline Dempsey Mr Michael French Ms Paulette Gayton, Fusion Psychology and Consulting Mrs Lynette Gilbert, Tidehill Pty Ltd Mr Patrick Gilroy, AM Mr Ross Graham, On Call Safety Services Mr Antony Green, Holcim (Australia) Pty Ltd Ms Zoë Holdaway, Zone Workplace Health Solutions Dr Janis Jansz, Curtin University of Technology Ms Sheryl Kelly, CGU Workers' Compensation Mr David Lampard, WA Police Union Ms Shona Lindley, Jardine Lloyd Thompson (JLT) **Mr Robert Loermans** Mrs Kylie Longhurst, Prensa Pty Ltd Dr John Low, OccuMed Dr Michael Lucas, Occupational Physician Ms Jacqueline Luseno Mr Joseph Maglizza, Holcim (Australia) Pty Ltd Ms Alison Martins, OH&S Consulting Mr Deepak Maru Mr Eoghan McKenna, Logic Health Mr Peter McMahon, Safety Expertise Australia Ms Rosalee Morris, Disability Services Commission Mr Peter Nicholls, FMR Investments Pty Ltd Dr Nicol Ormonde, Ormonde Health Consulting Pty Ltd Mr Craig Power, Right Solutions Australia Pty Ltd Mr Peter Rohan, Department of Mines and Petroleum Mr Izzie Shmukler Mrs Paula Sinclair Dr John Suthers Prof. Geoff Taylor

Mr Grant Thompson Mr Les Vogiatzakis, Dangerous Goods and Safety Services Mr Stephen Walker Dr Kar Chan Wan, OccuMed