

## Health and Safety at Work

### INFORMAL MEETING WITH THE CHAIRPERSON OF THE MINISTERIAL ADVISORY PANEL

Key issues considered at the briefing held in November 2017:

- The Panel is working on the amalgamation of all OHS legislation in a new Act, which will be available for a three month discussion period. Inclusion of the Dangerous Goods Act is being considered.
- The new Act will cover all manner of employers, contractors and employees with no exclusions.
- The right of entry of unions will be included under the WHS Act rather than the Industrial Relations Act.
- Guidance Notes and Codes of Practice will be prepared to assist implementation of the new Act.
- There will be one Commissioner responsible for all OHS legislation; one set of regulations for general industry and one for the mining sector. A decision is yet to be made whether the onshore petroleum industry should be treated separately.
- Health and safety representatives will have annual refresher training.
- Psychosocial health will be covered in regulations.
- Codes of Practice for mentally healthy workplaces will apply in workplaces in all sectors of industry.
- "Welfare" will be included in the new Act.

Other issues considered included:

- Mandatory health surveillance in the mining industry.
- The need to address concerns about diesel particulate.
- Increasing the number of inspectors in general workplaces.

Members are advised that the Society will continue to collaborate with the Faculty of Occupational and Environmental Health to ensure a continuing input to the development of the new legislation and, in particular, the requirement to monitor the health of employees.

It is also hoped that further meetings with the Chairperson of MAP can be arranged.





# MERRY CHRISTMAS

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## Legislative/regulatory matters

### New protection for labour hire workers in Victoria

In Victoria, the Government has announced it will establish a specialist regulator under its plan to hold labour hire firms to tougher standards, making it the third state to legislate for the industry in the absence of any action from the federal coalition government.

The legislation to establish a licencing scheme for labour hire operators working in all sectors will be introduced later this year. The scheme is based on the inquiry last year chaired by Professor Anthony Forsyth, from the RMIT University's Graduate School of Business and Law, which recommended labour licencing in three sectors: **horticulture, meat and cleaning industries.**

The final arrangements will not be limited to these sectors, but be universal. Premier Andrews said, "Every worker has the right to be treated with fairness and respect. Under our tough new laws rogue operators will no longer be able to get away with exploitation or abuse." Professor Forsyth has said however, it was 'understandable' that the government had gone further and announced a universal scheme, given that other states were moving in this direction.

*Source: Safety Net Journal 419, 13 September 2017*

### Queensland draft legislation introduces industrial manslaughter

The Queensland Parliament has introduced legislation creating the criminal offence of 'Industrial Manslaughter' despite strong opposition from business and industry groups and concerns about the effect this will have on the national harmonisation of Workplace Health and Safety laws.

The Work Health and Safety and Other Legislation Amendment Bill can expose senior officers to a **maximum of 20 years imprisonment if their conduct substantially contributes to the death of a worker.** Companies can now also be penalised up to A\$10 million if the company's gross negligence results in the death of a worker.

It is difficult to predict how Workplace Health and Safety Queensland will grapple with this when undertaking workplace fatality investigations and how, what might be run-of-the-mill decisions made by senior officers and individuals will be scrutinised.

Only the Australian Capital Territory currently has similar laws, which have never been tested or used.

**The Queensland Government has indicated that it will push for the industrial manslaughter provisions to be adopted across all harmonised jurisdictions as part of an upcoming SafeWork Australia review of the national model health and safety laws.**

*Source: Lexicology, 14 October 2017*



Image for illustration purposes only

# NEW FINES TO PROTECT NSW WORKERS FROM FALLS

SafeWork NSW has announced it will soon have the power to issue penalty notices of up to \$3600 to NSW workplaces if they fail to protect employees against falls from heights.

The regulator says that so far, this year it has attended 234 incidents involving falls from heights, including eight fatalities. Over half these incidents occurred in the construction industry. If the risk of injury to workers is imminent or serious, or if the workplace is considered to be a repeat offender, the fines can be issued on-the-spot.

NSW workers compensation data shows there were 12,136 claims relating to falls from heights between 2013/14 and 2015/16, representing a total cost of \$327 million and total lost work time of 126,945 weeks. This significantly impacts workers, their families and the NSW economy.

**SafeWork NSW Executive Director Peter Dunphy said “A fall, even from a relatively low height can result in serious injury or death. Most incidents could have been prevented if safe work systems such as safety harnesses on work platforms had been used.”**

*Source: SafetyNetJournal, 422, 4 October 2017 Source: NSW Media Release, 29 September 2017*

# SAFETY

## STUDY WARNS OF CRUMB RUBBER HEALTH RISKS

Sports players, both amateur and professional, ground staff and others could be at risk as a result of a “remarkable” lack of occupational health checks on the effects of rubber crumb pitches, a study has found.

The health of some people who work with surfaces made from recycled tyres – such as production workers, suppliers, installers and maintainers – may also be at risk due to inadequate monitoring, the research suggests. Professor Andrew Watterson, author of the study published in the *International Journal of Environmental Research and Public Health*, said it appears that risks are being “downplayed” despite well-documented links between rubber production and illness, bans on landfill disposal of used tyres and concerns about the health of sportspeople and others who use such surfaces. Indoor and outdoor pitches made from artificial grass may be filled with crumb rubber, which can contain hazardous chemicals. Due to data gaps and limitations of earlier studies, the risks posed by low level exposures to these chemicals are constantly being re-assessed and lower control limits applied.

**Professor Watterson, head of the University of Stirling’s Occupational and Environmental Health Research Group, said the lack of health monitoring of sportspeople and crumb rubber production and maintenance workers was “remarkable”, given well-publicised concerns.”**

**An additional concern for Australia is that there is a potential gap in regulation when it comes to imported pitches or artificial grass - because despite possibly containing hazardous chemicals, they are ‘objects’ and thus not regulated under our chemicals regime.**

Source: *SafetyNetJournal*, 422, 4 October 2017

## AUTONOMOUS VEHICLE LAWS

**After a trial period 2018-19, autonomous vehicles (ADVs) are due on our roads from 2020. One of the issues is that of the “fallback driver”, who is to take over if the vehicle asks. The National Transport Commission has been receiving responses during a consultation. See [http://www.ntc.gov.au/Media/Reports/\(E5695ACE-993C-618F-46E1-A876391B8CD9\).pdf](http://www.ntc.gov.au/Media/Reports/(E5695ACE-993C-618F-46E1-A876391B8CD9).pdf)**

**For the submissions see <http://www.ntc.gov.au/submissions/history/?rid=156263&pid=10834> : Ronald Finemore (heavy vehicles) and Maurice Blackburn Lawyers (fallback driver response times), among others, raise some interesting issues .**



## Electrical safety regulations code of practice finalised

Energy Safety has redrafted the *Code of Practice for Persons Working On or Near Energised Electrical Installations*.

The previously circulated Draft Code of Practice has been divided into two documents, the document mentioned above that will apply to electricians and a separate WorkSafe document – Working in Roof Spaces 2017, that will provide guidance to tradespersons and others working for reward in the roof space of buildings classified as for domestic purposes.

**The Code of Practice has been completely rewritten with matters relating to occupational safety and health removed. However, the OSH regulations continue to apply as they have in the past.**

**The Guidance Note will be issued by WorkSafe WA.**

It is anticipated that the amendments to the *Electricity (Licensing) Regulations 1991* and to the *Occupational Safety and Health Regulations 1996* will be published in late November 2017 along with the Code of Practice and the Guidance Note.

Source: Energy Safety, 5 October 2017



Government of Western Australia  
Department of Commerce  
Energy Safety



DRAFT Code of Practice  
**Work On Or Near Energised  
Electrical Installations &  
In roof spaces of certain  
buildings**

January 2017

## Trends in injury deaths in Australia

The Australian Institute of Health and Welfare has released a report *Trends in Injury Deaths, Australia 1999-00 to 2011-12*.

Findings from the report:

- The age-standardised rate of injury deaths decreased by an average of 3% per year between 1999–00 and 2004–05 and changed little after that;
- Rates of injury deaths involving transport injury, drowning, thermal injury, suicide and homicide, tended to decline from 1999–00 to 2007–08, while rates of poisoning deaths involving pharmaceuticals fell sharply to 2001–02 before rising again;
- Rates for Aboriginal and Torres Strait Islander people were 2 to 3 times as high as rates for Other Australians over the period from 1999–00 to 2007–08.
- There were 11,192 injury-related deaths in 2011-12 corresponding to a rate of 46 deaths per 100,000 population.

Source: AIHW.gov.au

## Problems with the new draft ISO45001 - OHS Management System

**The Australian Chamber of Commerce and Industry has urged employers to think twice before implementing the new draft international standard for OHS management systems, with components of the draft appearing to be inconsistent with Australian laws.**

ACCI said it is concerned by a surge of articles and workshops promoting ISO 45001 as the new “gold standard” when it is months from completion and might not be fully adopted by Standards Australia.

“We are cautioning businesses not to act prematurely,” ACCI work health and safety associate director Jennifer Low said.

“Internationally, the standard is yet to be finalised and even then, Standards Australia will need to determine whether it adopts it in full, abandons the field, or creates a hybrid version fit for the Australian context,” she said.

“Over 70 countries have been involved in the development of the draft international standard. Several elements appear incompatible with Australian legislation and are highly prescriptive, outside what we now consider good practice.”



# PUBLIC SAFETY – A CONCERN FOR UBER

The Transport for London (TFL) has refused to renew Uber's London licence to operate in London, saying that "TFL considers that Uber's approach and conduct demonstrate a lack of corporate responsibility in relation to a number of issues which have potential public safety and security implications."

Uber has been given 21 days to lodge an appeal and can continue to operate until the appeals process is exhausted. The appeal was subsequently rejected.

The British Trade Union, GMB, said its court action forced the company to defend its record on drivers' employment rights and public safety and brought its exploitative practices into the public gaze.

*Source: SafetyNetJournal, 422, 4 October 2017*

## Three-fold difference in death rates between job groups

Researchers from the University of Glasgow have published the first study to rank mortality rates by occupation in the UK in 30 years. Published in the *Lancet Public Health* the study analysed mortality rates and occupational data together.

It found that doctors and other health professionals have very low death rates while factory and construction workers and those in housekeeping jobs have among the highest death rates.

The authors note that pay and exposure to risks at work are the two major factors underpinning the differences in life expectancy.

The study, which looked at records from 1991 – 2011, found over three-fold differences in mortality rates by occupations, with unemployed men and women faring the worst.

*Source: OHS Repts SafetyNetJournal, 426, 1 November 2017*



## Urgent action needed to prevent drone disaster

Laws must be put in place urgently to prevent a devastating collision between manned aircraft and drones, the UK pilots' union BALPA has warned.

The union alert follows after the US Army confirmed one of its Black Hawk helicopters collided with what appears to be a civilian quadcopter drone near New York City and sustained damage to a main rotor blade and window.

BALPA has been warning about the dangers drones pose for several years. Results of collision testing carried out by BALPA, the Department for Transport and the Military Aviation Authority earlier this year showed that drone impacts on aircraft windscreens and helicopter rotors could be catastrophic, even at relatively modest speeds with small drones. It also highlighted how different a drone strike is to a bird strike and that the industry and regulator need to look afresh at the threat drones pose. BALPA general secretary Brian Strutton said: "This collision is a wake-up call. Luckily on this occasion the helicopter landed safely. But we don't want to rely on luck and we simply cannot wait for a fatal accident before something is done. We now have evidence that drones pose a potentially life-threatening risk to aviation and at the same time we're seeing a rise in the number of cases of drones being flown irresponsibly close to aircraft and airports. That's a recipe for disaster and action must be taken." He added: "We are encouraged that the government has taken onboard calls for a registration and licensing scheme for drones and drone users, but we can't rest on our laurels now.

BALPA is keen to see details of what this new legislation will look like and is continuing to work with the Department for Transport to make sure drones can be safely integrated in to the sky. We need to control this proven threat before there is a disaster and lives are lost."

*Source: TUC Risks 821, 14 October 2017*





# SHOULD DEFIBRILLATORS BE AVAILABLE ON ALL WORK SITES?

St John Ambulance Queensland is urging more workplaces to have defibrillators in the fight to save lives, especially in the construction industry.

Australian Institute of Building National president Paul Heather said the high-risk nature of the building industry meant workplace health had to be at the forefront of employers' minds.

"Currently, AEDs (defibrillators) are not compulsory on Australian worksites," he said.

"It's particularly alarming for the construction industry where workers risk their lives every day when navigating loose wires, operating machinery and generally working in environments that at times can be unpredictable.

Almost 15,000 Australians die unexpectedly from sudden cardiac arrest each year.

The heart illness usually has no symptoms or signs before it strikes, and when it does strike it can be deadly without the right emergency response.

A Galaxy Research survey found that only 25 per cent of workplaces have a defibrillator, and only a quarter of employees know how to use one.

*Source: Cairns Post, 30 October 2017.*

Pic above: HSEQ Administrator for 137 The Esplanade Aiden Newton and PRIME construction HSEQ Manager Annette Sommerville with a defibrillator that is always on the work site. PICTURE: STEWART McLEAN

# AIR POLLUTION/AIR QUALITY



## Air pollution exposure on school routes reduces children's cognitive development

A study led by the Barcelona Institute for Global Health (ISGlobal), an institute supported by the “la Caixa” Banking Foundation, has demonstrated that exposure to air pollution on the way to school can have damaging effects on children's cognitive development. The study, published recently in *Environmental Pollution*, found an association between a reduction in working memory and exposure to fine particulate matter (PM2.5) and black carbon during the walking commute to and from school.

The study was carried out in Barcelona and enrolled over 1,200 children aged from 7 to 10, from 39 schools, all of whom walked to school on a daily basis. The children's working memory and attention capacity was assessed several times during the 12-month study. Their exposure to air pollution over the same period was calculated on the basis of estimated levels on the shortest walking route to their school.

Statistical analysis of the findings revealed that exposure to PM2.5 and black carbon was associated with a reduction in the growth of working memory: an interquartile range increase in PM 2.5 and black carbon levels was associated with a decline of 4.6% and 3.9%, respectively, in expected annual growth of working memory. No significant associations were found with exposure to NO2 and none of the pollutants studied were observed to have any effect on attention capacity. In this study, boys were much more sensitive than girls to the effects of both PM2.5 and black carbon.

“Above all, we do not want to create the impression that walking to school is bad for children's health because the opposite is true: walking or cycling to school, which builds physical activity into the child's daily routine, has health benefits that far outweigh any negative impact of air pollution” explains Jordi Sunyer, head of ISGlobal's Child Health Programme and co-author of the study.

“The fact that children who walk to school may be more exposed to pollution does not mean that children who commute by car or on public transport are not also exposed to high levels. His colleague Mar Álvarez-Pedrerol goes on to explain **“The solution is the same for everyone: reduce the use of private vehicles for the school run and create less polluted and safer home-to-school routes.”**

Source: *ScienceDaily*, 7 October 2017



# POLLUTION IS RESPONSIBLE FOR 16% EARLY DEATHS GLOBALLY

The Lancet Commission on Pollution and Health has found that pollution was linked to nine million deaths worldwide in 2015, equivalent to one in six deaths.

Commission findings include:

Pollution causes 16% of all deaths globally.

- Diseases caused by pollution were responsible in 2015 for an estimated 9 million premature deaths -- 16% of all deaths worldwide -- three times more deaths than AIDS, tuberculosis, and malaria combined; and fifteen times more than all wars and other forms of violence. It kills more people than smoking, hunger and natural disasters. In some countries, it accounts for one in four deaths.
- Almost all pollution-related deaths (92%) occur in low- and middle-income countries and in rapidly industrialising countries such as India, Pakistan, China, Bangladesh, Madagascar and Kenya deaths due to pollution can account for up to one in four deaths.
- Welfare losses due to pollution are estimated to cost more than US\$4.6 trillion each year equivalent to 6.2% of global economic output.
- With many emerging chemical pollutants still to be identified these figures are likely to underestimate the true burden of pollution-related disease and death.

**Most of these deaths are due to non-communicable diseases caused by pollution such as heart disease, stroke. Lung cancer and chronic obstructive pulmonary disease.**

*Source: ScienceDaily, 24 October 2017*



## Air pollution and kidney disease

A Washington University team in collaboration with scientists at the Veterans Affairs (VA) St. Louis Health Care System has found that air pollution contributes to kidney failure.

Pollution may increase the risk of chronic kidney disease and, ultimately, contribute to kidney failure, according to the researchers.

The group searched national veteran's affairs databases to evaluate the effects of air pollution and kidney diseases of nearly 2.5 million people over a period of 8.5 years, beginning in 2004. They compared data on kidney function to air quality levels collected by the US-EPA as well as NASA.

The findings suggest that 44,793 new cases of kidney disease and 2,438 new cases of kidney failure may be attributed to levels of air pollution that exceed the EPA's threshold of 12 micrograms per cubic metre of air, which is the highest level of air pollution considered safe for the public, as set by the Clean Air Act of 1990 and updated in 2012.

Senior author Ziyad Al-Aly, MD said "Data on the relationship between air pollution and kidney disease in humans has been scarce. However, once we analysed the data, the link between air pollution and the development of kidney disease was clear."

**The study found that even low levels of particulate matter may adversely affect the kidneys. And those adverse effects increase as pollution levels increase.**

Al-Aly added "In our analyses, the risk of chronic kidney disease and its progression was most pronounced at the highest levels of fine particulate matter concentration," Al-Aly said. "This suggests further study is needed for a broader assessment of the global burden of kidney disease attributable to air pollution."

Source: ScienceDaily, 9 October 2017



## How indoor plants boost air quality and mental wellbeing

The Plant Life Balance research conducted by the University of Melbourne and released on 30 October, alongside an augmented reality app to help Australians decide which plants could be most beneficial to them, has found that having five indoor plants in the home can dramatically boost air quality and mental wellbeing.

University of Melbourne researcher Dominique Hes said "When you are near plants, your brain is actually more relaxed, more in tune, more able to think and communicate and use those higher brain powers when it is relaxed. Current estimates indicating that urban dwellers spend 90 per cent of their time in indoor environments – resulting in a high level of exposure to indoor contaminant compounds. **The benefits of having plants in the home could be compared to how sleep quality affects your life.**"

The research found that those compounds, found in carpets, paint and furniture, can have a negative impact on productivity, mood and allergies.

Source: ABC Net, 31 October 2017

# HEALTH - PHYSICAL



## Several workplace exposures may increase risk of developing Parkinson's disease

Parkinson's disease is the second most common neurodegenerative disorder after Alzheimer's. In Canada it is estimated more than 100,000 people have Parkinson's disease and more than 25 people are diagnosed daily.

It is a chronic disorder with a high survival rate that is characterised by muscle tremors, stiffness, balance problems and slow movements. More than 60 per cent of those with the disease experience memory limitation, anxiety and depression, according to Parkinson Canada.

Jonathan Squires, a neurologist at the Pacific Parkinson's Research Centre in Vancouver says that Parkinson's is a 'major burden' for the working age population because it can affect people quite young.

While most people develop the disease around age 60, 20 per cent are diagnosed under age 50. Mohammed Ali was diagnosed at 42. Young onset Parkinson's (before age 40) occurs in five to 10 per cent of those diagnosed, says Parkinson Canada.

Some of Squires' patients have lost their jobs because they were not keeping up as well as they used to. Other workers with Parkinson's have found balance to be problematic.

Various studies show there are several workplace exposures that can increase the risk for Parkinson's disease. Employers need to be well-versed in these risks and do their part to prevent their workers from developing this debilitating and chronic disease, says Kay Tesche, from the University of Columbia.

She adds that workers' compensation boards would be wise to review the literature on head injuries and compensating people who had documented head injuries at work if they develop Parkinson's later in life.

Other workplace causes of Parkinson's include:

- Pesticides, one of the best-known potential risk factors disrupting enzymes, proteins and neurons within the brain.
- Head trauma – known to be associated with Parkinson's disease
- Solvents; in 2008 an Ontario worker was granted compensation
- Hydrocarbons and chemicals – various studies have made links between Parkinson's and toluene, xylene, n-hexane, carbon tetrachloride and tetrachloroethylene. A 2012 study found over exposure associated within increased risk
- Vibrations – agricultural workers
- Manganese – potential risk factors.

*Source: Cos Mag, 9 October 2017*

# TIPPING THE SCALES

8 critical actions Australia must take to tackle obesity

[opc.org.au/tippingthescales](http://opc.org.au/tippingthescales)  
#TippingTheScales



1  
Toughen restrictions on TV junk food advertising to kids



2  
Set food reformulation targets



3  
Make Health Star Ratings mandatory



4  
Develop an active transport strategy



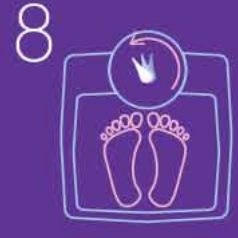
5  
Fund public health education campaigns



6  
Add a 20% health levy to sugary drinks



7  
Establish a national obesity taskforce



8  
Monitor diet, physical activity, weight guidelines

## Obesity addressed in a consensus report

In September 2017 more than 30 leading community, public health, medical and academic groups united for the first time to call for urgent Federal Government action to address Australia's serious obesity problem.

In the ground-breaking new report, Tipping the Scales, the agencies identify eight clear, practical, evidence-based actions the Australian Federal Government must take to reduce the enormous strain excess weight and poor diets are having on the nation's physical and economic health.

Led by the Obesity Policy Coalition (OPC) and Deakin University's Global Obesity Centre (GLOBE), Tipping the Scales draws on national and international recommendations to highlight where action is required. Areas include:

- Time-based restrictions on TV junk food advertising to kids
- Set clear food reformulation targets
- Make the Health Star Rating mandatory by July 2019
- Develop a national active transport strategy
- Fund weight-related public education campaigns
- Introduce a 20% health levy on sugary drinks
- Establish a national obesity taskforce
- Develop and monitor national diet, physical activity and weight guidelines.

The report is an excellent resource for occupational health professionals and contains excellent data and resource references for students researching the issue.

Source: APO. Org, 15 September 2017  
14 / MONITOR / NOVEMBER 2017

## Recent statistics on the health of Australians

The Australian Institute of Health and Welfare has released an update on male health and created a new report focused on female health.

Findings from the report on the health of males (2016):

- Only 1 in 4 men aged 68 and over get sufficient physical activity;
- 1 in 2 Australian men have experienced violence since they turned 15
- Males experience over 3 times the rate of suicide compared to females
- Indigenous males were 3 times as likely to have a potentially preventable hospitalisation compared to non-indigenous males.

Findings from the report on females (2016):

- Females account for 64% of deaths from dementia and Alzheimer's disease
- 87% of women aged 65 and over have a chronic disease
- 1 in 9 women who gave birth in 2009 smoked at some time during pregnancy
- Only 1 in 4 women aged 65 and over get sufficient physical activity.

The full reports are available at <https://www.aihw.gov.au/reports-statistics/population-groups/men-women/overview>

## Wearable device predicts asthma attacks

Although the US Center for Disease Control (CDC) has released extensive reports and guidelines on how to control asthma, an estimated 44,000 asthma attacks occur every single day in the US alone.

The reason that many people struggle to control their asthma is often due to a lack of self-awareness of symptoms that could indicate risk of attack.

Startup Health Care Originals has created a wearable technology that can identify and alert users to precursor symptoms of asthmatic attacks much earlier, allowing them to take the necessary steps to stop or reduce the attack and prevent future problems.

The technology, known as ADAMM Intelligent Asthma Monitoring, is a soft, flexible, waterproof, wearable Internet of Things device, which communicates with a smart phone app and web portal using Bluetooth, WiFi, and cellular connections. It attaches to the upper torso using skin-safe adhesive and tracks precursor symptoms of asthmatic attacks, including cough rate, respiration patterns, heartbeat, and body temperature.

Co-founder Jared Dwarika said "When a patient first begins using the device, they are required to use it at least 18 hours per day. This is necessary to collect their baseline respiratory behaviour. What that does is it starts to track your symptoms so you can start determining the particular times of the day that your symptoms increase."

"Asthmatics often have patterns. Some people get increases during the night, for example. By collecting these symptoms continuously throughout the day, we can determine what your normal is and your baseline."

Users are not required to wear the device as often after the baseline period has past. Once the device starts to understand the times and events that cause asthmatic triggers the user only has to wear the device during optimal periods/risk periods. However, it is important that they still wear the device every day for several hours at a time, and the longer they wear it, the better results they will achieve.

Source: RD Mag, 21 September 2017



## New hope from old drugs in fight against Parkinson's disease

Researchers at the Department of Global Health and Social Medicine (IGS) at the University of Bergen (UiB), in collaboration with researchers from Harvard University, have analysed information from about 100 million drug deliveries in the National Prescription Drug Registry in Norway since 20014.

In the study, Parkinson's treatment was linked to the prescription of asthma medicine and blood pressure medicine. In this way, the researchers could see the links between drug use and disease.

Researchers compared Parkinson's against asthma and blood pressure medication in the prescription register.

The investigations were conducted after the researchers at Harvard found effects of these drugs in animal experiments, and attempted to grow brain cells from Parkinson's patients. The trials showed that these medicines had opposite effects.

To see if these medicines also gave the same effects to humans, American researchers collaborated with IGS and the Norwegian Prescription Register. This registry is unique in the world context.

"We analysed the entire Norwegian population and found exactly the same effects as the animal experiments, and the pieces fell into place. These are medicines that have never been considered for Parkinson's disease before," says Professor Trond Riise at IGS.

"These findings provide a unique opportunity for new treatment of this serious disease, and we expect clinical trials to test the drug when these results become known," says Trond Riise.

Source: DDD Mag, 2 September 2017





# HEALTH - PSYCHOLOGICAL

## One hour of exercise a week can prevent depression

An international research team has found that 12 per cent of cases of depression could have been prevented if participants undertook just one hour of physical activity each week.

The study involved an analysis of nearly 34,000 Norwegian adults who had their levels of exercise and symptoms of depression and anxiety monitored over 11 years.

Lead author Associate Professor Samuel Harvey from Black Dog Institute and UNSW said "These findings are exciting because they show that even relatively small amounts of exercise -- from one hour per week -- can deliver significant protection against depression.

**"We are still trying to determine exactly why exercise can have this protective effect, but we believe it is from the combined impact of the various physical and social benefits of physical activity.**

"These results highlight the great potential to integrate exercise into individual mental health plans and broader public health campaigns. If we can find ways to increase the population's level of physical activity even by a small amount, then this is likely to bring substantial physical and mental health benefits."

"With sedentary lifestyles becoming the norm worldwide, and rates of depression growing, these results are particularly pertinent as they highlight that even small lifestyle changes can reap significant mental health benefits."

Source: ScienceDaily, 9 October 2017. Pic: Huffington Post

## Mental health and FIFO working arrangements

The WA Government has provided a grant of \$498,841 to the University of Western Australia's Centre for Transformative Work Design, which will enable the institution to research the wellbeing and mental health impact of FIFO arrangements on workers.

The research program will seek to understand the range of workplace factors that contribute to mental health issues in FIFO workers and identify positive strategies that can be used by individuals, families and organisations.

A research reference group including the Mental Health Commission; family representatives; employee and employer representatives; and mental health, and alcohol and other drug peak bodies will guide the project.

Last month, the government announced another new partnership with The University of Western Australia which saw \$500,000 invested into UWA's Centre for Transformative Work Design for the development of a comprehensive set of mental health support resources for WA workplaces.

It can only be hoped that progress reports will be provided on both projects on a regular basis to enable input from occupational health professionals.

Source: Safety Solutions, 26 October 2017



## Anxiety and depression rate in workers at record high

Research by the UK Council for Psychotherapy shows that rates of moderate to extreme anxiety and depression among employees has soared by 30.5 per cent since records began in 2013.

Part-time workers appear to be bearing the brunt, with the figure among this group having risen by more than a third (33.6 per cent) in the same period. Collated from a GP Patient Survey with 781,174 respondents – 346,465 of whom were in full time employment and 105,040 who were part-time workers, the findings show that rates of moderate to extreme anxiety and depression among workers have risen from just over 7 per cent in 2013 to nearly 10 per cent in 2017. In 2013, the rate for those in full-time employment was 6.85 per cent, in 2017 this has risen to 8.89 per cent – a rise of 29.7 per cent. For those in part-time employment the rate of 8.66 per cent in 2013 has risen to 11.57 per cent in 2017 – a rise of 33.6 per cent.

UKCP is calling for an urgent review of workplace practices.

Chief executive Professor Sarah Niblock said: "It is extremely worrying. Ministers must realise that the crisis is here, and the crisis is now. The government promised a review of workplace practices and mental health back in January – but we're still waiting for this to materialise. This work must be sped up, as workers cannot wait." The professor added: "Compared with the potential cost to the economy in lost productivity, high quality psychotherapies are cheap."

Source: TUC Risks, 821, 14 October 2017



## Mindfulness – are the health claims credible?

The director of Brown University, Rhode Island, USA clinical and affective neuroscience laboratory, Willoughby Britton, has expressed concern that there is little scientific evidence to back up most of the health claims surrounding the practice of mindfulness.

He claims that there is not even an agreed-upon definition of mindfulness that researchers can use to test the concept's effectiveness. He adds that meditation researchers are concerned the exaggerated claims of mindfulness benefits will mislead vulnerable people and keep them from receiving evidence-based treatment.

**A recent evidence review by the US Agency for Healthcare Research and Quality found that mindfulness-based therapies provided only moderate help in treating anxiety, depression and pain, and did little to reduce stress or improve a person's quality of life. The review found no evidence that mindfulness could help people deal with substance abuse, eating habits, sleep problems and weight control, the researchers said.**

Despite this, Britton believes mindfulness could be helpful, but hype has drowned out any sensible approach to the topic.

In a new paper, Britton and 14 other experts say it's time to replace the hype with serious scientific rigour. He says that even well-designed randomized experiments are not delivering clear results because there's no consensus on what the term mindfulness actually means.

Source: Medicine Net, 12 October 2017



# Suicide-causing factors prevalent in Australian workplaces

Australian researchers have identified an association between forming the idea of suicide, suicide attempts and death, and the psychosocial job stressors that more than one in five Australian workers are exposed to.

In a comprehensive, systematic review of literature on the topic, researchers from three Victorian universities, and France's University of Angers found that adverse psychosocial conditions – like low supervisor support – are associated with higher odds of suicide thoughts and mortality.

In addition to the review, the researchers studied Australian cohorts and found similar associations, particularly among male blue-collar workers.

People who attempt suicide may have many things going on in their lives, but employers can play a role. **Lead researcher Dr Allison Milner from the University of Melbourne's Centre for Health Equity said that employers can address adverse psychosocial work conditions. They can begin by asking workers if there is anything wrong in the workplace, and what can be improved.**

"Making sure that you are not afraid of acknowledging suicide and trying to break down stigma about suicide, and building that into a psychologically safe workplace is probably a way to go", she said.

Source: *SafetyNetJournal* 421, October 2017

In January in the UK, Prime Minister Theresa May commissioned an independent review into how employers can support the mental health of their employees, and what they can do to help individuals remain and thrive in work.

The final *Thriving at Work* report was recently released by the government, finding that as well as there being a human cost, there is also a financial one, with employers losing billions of pounds through employees being less productive, less effective, or off sick due to poor mental health.

Employers and managers have a duty of care to the staff they work with, particularly due to *The Health and Safety at Work Act 1974*, which requires employers to take reasonable steps to look after employees' mental health and welfare, and all senior members of staff should be looking at how they can help support their team's mental health.

Nearly two-thirds of people say that they have experienced a mental health problem and this can affect them at work. The report found that 300,000 people with a long term mental health problem lose their jobs each year.



## Mental health in the workplace - the importance of workplace participation

The World Health Organization has issued an information sheet on mental health in the workplace. In a list of good interventions it highlights the importance of workplace participation noting the necessity for "involving employees in decision-making, conveying a feeling of control and participation; organisational practices that support a healthy work-life balance."

A recent WHO led study estimated that depression and anxiety disorders cost the global economy US\$1 trillion each year in lost productivity.

Source: *TUC Risks*, 825 11 November 2017

# SLEEP / FATIGUE

## The consequences of sleep deprivation

Poor sleep is both a symptom and a cause of serious health conditions and also a leading contributor to traffic and workplace accidents. The dangers of sleeplessness have become such a concern to medical experts they have called for education strategies and changes to workplace, health and safety laws to help ensure people are properly rested.

According to a survey commissioned by News Corp, in partnership with Princess Cruises, a third of Australian adults, 37 per cent, get less than seven hours sleep per night.

Experts are concerned that people are not getting the necessary amount of sleep, where eight and a quarter hours is the normal benchmark.

Australia's Sleep Health Foundation warned sleeplessness was responsible for a \$1.8 billion annual health bill and lost productivity costs amounting to \$17.9 billion.

**Professor Dorothy Bruck of Victoria University says if four out of every 10 Australians are suffering from inadequate sleep, half of those would be experiencing ongoing, pathologically high levels of daytime sleepiness.**

**And everyone who routinely goes without sleep would know they can't function at normal levels of alertness, concentration and emotional control. "This lack of sleep had harmful effects on everyday function, and exacerbated health conditions from heart disease and stroke through to diabetes and depression in tens of thousands of Australians."**

To be exact, 3,017 deaths in 2016-17 were estimated to have been partly caused by sleeplessness, including traffic and industrial accidents or as a consequence of heart disease or diabetes.

**When asked the reason for their sleep difficulties, 44 per cent of respondents blamed stress at work, school or in relationships, while 37 per cent cited health issues or physical pain. Interestingly, health issues and physical pain were the key reasons for sleep difficulties among those aged 45 and over and stress the bigger problem for adults.**

The survey found an irregular routine, such as not getting to bed at the same time each night, was a reason given by 27 per cent of people for sleep difficulties. Other reasons given included the use of stimulants, such as caffeine, alcohol or food (25 per cent), using electronic devices or technology before bedtime (24 per cent), and environmental factors such as light, noise or extreme temperatures (20 per cent).

Source: *The Australian*, September 2017

## Japan's nurses suffering from chronic fatigue

Seven in ten nurses always feel exhausted, a Japan Federation of Medical Workers' Union survey has found.

Over 33,000 nurses were included in the latest study conducted five yearly, which found 71.7 of the respondents had symptoms of chronic fatigue, such as an inability to recover from tiredness. In addition, 62.5% felt stressed and 55.3% were concerned about their health. These figures are the same level as the previous survey in 2013.

Around 80% of the respondents had an experience of making or nearly making a medical error.

Almost a third of the respondents said they had health problems. Nearly three quarters said they often think about giving up their careers, mainly because "the workload is too heavy due to labour shortages."

The Union is urging the government to establish rules to reduce working hours of nurses on a shift-work system, especially for those on the night shift, and the introduction of a sufficient interval between one shift and the next. The union also demands government measures to eliminate labour shortages and increase health care workers' wages.

Source: *TUC Risks*, 820 7 October 2017





## Hong Kong: Deadly bus crash linked to driver fatigue

Transport workers in two of Hong Kong's biggest unions have called on the government to carry out a complete overhaul of franchise bus drivers' pay structure and working hours to minimise overwork and lower traffic accident risks.

This came as transport officials said they would consider reviewing guidelines for drivers' shifts after a recent deadly bus crash. Three people were killed and 31 others injured when Citybus-operated double-decker mounted a pavement and ploughed into pedestrians. The driver, 44, was arrested on suspicion of dangerous driving causing death and released on bail. Kung Sui-tong, deputy head of the Motor Transport Workers General Union's Citybus branch, said the driver had a record of being "reliable and hardworking" during his five years of employment.

He was to start at 9pm on the night of the crash, but agreed to his supervisor's request to start at around 5pm, Kung said. The driver had recently been working 14 hours a day – the maximum number the department recommends for drivers. But Citybus claimed he had sufficient rest time of at least 10 hours as stipulated by regulation, between shifts. However, both the union and the separate Federation of Bus Industry Trade Unions called for a more progressive pay scale for drivers to reduce their reliance on overtime work. "Because of the low salary, some bus drivers have to work overtime to support themselves," said federation vice-chair Henry Hui Hon-kit, a Citybus driver. The department's guidelines on working hours and rest times – which stipulate drivers may work up to 11 hours per day – did not help either, he said. Cheung Tsz-kei, the general union's principal vice-chair, said the problem of overwork would persist if drivers did not get a rest break of at least 20 to 30 minutes between routes. His union is also calling for rest stations at all bus terminuses.

Source: TUC Risks 820, 11 October 2017

Pic: Transport workers call on the government to carry out a complete overhaul of franchise bus drivers' pay structure and working hours to minimise overwork and lower traffic accident risks

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# NOISE

## New hearing aid technology to eliminate background noise

For hearing aid users, holding a conversation in a busy crowd is impossible: the unfiltered environment can be a confusion of unwanted voices and annoying disturbances.

According to the National Institutes of Health, nearly 30 million adults could benefit from using hearing aids, but research has shown that one in five of those who should wear them do not, with difficulty in noisy situations and background noise cited as a common reason.

To overcome this problem a research team at Michigan State University are working on developing a smart hearing aid device that can enhance the clarity of conversation and remove unwanted sounds in the background.

"The biggest challenge is filtering the sound quickly, in real-time," said Xiao Zeng, the lead researcher on the project. "That means processing sound very fast, in about 10 milliseconds. Otherwise, sound and moving lips don't synch and it tends to cause dizziness or drowsiness of hearing aid users."

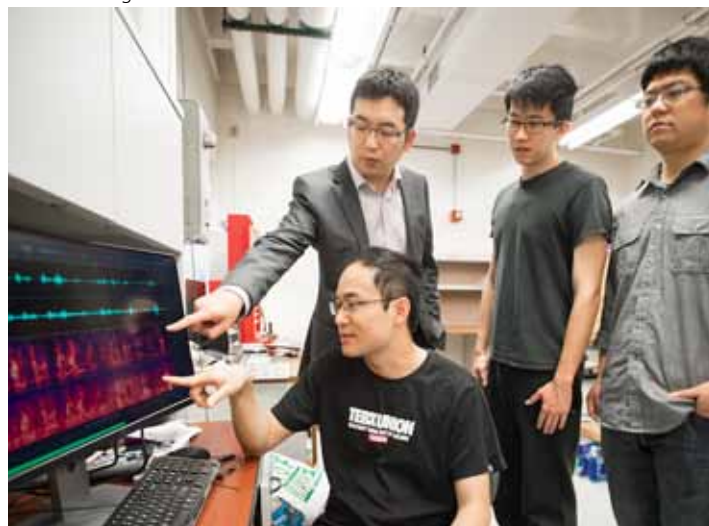
"Human voices are very close, complicating our task," added research associate Kai Cao. "We are having success with a machine learning-based approach and are hoping to work out the subtle frequency differences. If we can do that, your cell phone should also be able to enhance voices and mitigate the other noises."

Sun, the undergraduate member of the team, is working on the miniaturization of the hardware of the smart hearing aid device.

The team plan to deliver the first by the end of May 2018.

Source: RD Mag 4 November 2017

Pic Xiao Zeng and team



# HAZARDOUS MATERIALS

## Reducing solvent exposures results in less disability and welfare costs

A new Swedish study has investigated whether the decreased use of paints based on organic solvents has led to a decreased risk of neuropsychiatric disorders in painters by studying their rates of disability pensions.

Chronic toxic encephalopathy – brain damage caused by chemicals – is a recognised industrial disease in solvent-exposed painters.

While about 40 per cent of paints were solvent based in the 1970s, two decades later this had fallen to about 4 per cent.

The report noted: “High exposure to organic solvents increased the risk for disability pension in neurological disorders, and the risk decreased when the use of organic solvents decreased.”

**The authors concluded their study “showed an increased risk for disability pension in neurological disorders compatible with brain disorders caused by organic solvents.** Thus, it is reasonable to assume that the decrease in disability pension in neurological disorders is due to a change in the occurrence of neurological diseases and that the decreased use of organic solvents in paints has contributed to this decrease.”

Source: TUC Risks, 822 21 October 2017



## Belgium steps up efforts to prevent risks to reproductive health in the workplace

A Royal Decree published in the Belgian Monitor in September has extended the scope of worker protection regulations to cover not only carcinogens and mutagens, but also reprotoxic substances. This represents the final stage of regulatory reforms which the Belgian Government initially hoped would run in parallel to a similar process launched by the European Union back in 2002.

Lack of progress at EU level, however, ultimately forced Belgium to take unilateral action, following the example of other EU Member States such as France, Germany, Austria, Finland and the Czech Republic.

An amendment adopted by the European Parliament and the Council of Ministers in July 2017 means that Europe itself will now be obliged to take action by the first quarter of 2019 at the latest, in the form of a Commission proposal concerning the protection of workers against reprotoxic substances.

Reprotoxic substances in Belgian workplaces will, in future, be subject to the stringent set of regulations intended to prevent occupational exposure to carcinogens, since carcinogens and reprotoxic substances have several things in common: their effects on human health are extremely serious and often irreversible, and in many cases exposure is “invisible” because of the potentially long delay between exposure in the workplace and the onset of a health-related problem.

Source: ETUI, 13 September 2017





## Toll of asbestos in UK schools Italian study confirms asbestos pollution risk to workers and others

In the UK, the head of education of the public service union UNISON said that asbestos in schools is killing teachers, support staff and pupils and cuts to school funding can only make the situation worse.

The union says that a recent Freedom of Information request by the Joint Union Asbestos Committee revealed that at least 335 primary and secondary school teachers died of mesothelioma in Britain between 1980 and 2015, along with eight school secretaries, eight nursery nurses, 18 school midday assistants and 24 teaching assistants between 2003 and 2015.

Although the number of students affected is not recorded, the union says that a US government agency has estimated that for every teacher and support staff death from mesothelioma, nine former pupils will die of the condition.

Jon Richards, Unison Head of Education, said: "The cuts in schools budgets and the fragmentation of the school system have undermined how health and safety risks such as asbestos are managed. In addition the cuts in the schools building programme means that old, asbestos ridden and poorly maintained buildings continue to be used to teach our children putting them and staff at risk."

Source: TUC Risks 823 – 28 October 2017

A recent study aimed to describe mesothelioma incidence in the Italian national priority contaminated sites (NPCS) on the basis of data available from the Italian National Mesothelioma Registry (ReNaM) and then to profile those sites.

The researchers found 2,683 incident cases of mesothelioma (1998 men, 685 women) were recorded in the study period. An excess of mesothelioma incidence was confirmed in sites with a known past history of direct use of asbestos (among men) such as Balangero, Casale Monferrato, and Broni, in sites with shipyards and harbours (eg, Trieste, La Spezia, Venice, and Livorno), and also in settings without documented direct use of asbestos. The analysis ranked the sites of Broni and Casale Monferrato (both genders) and Biancavilla (only for women) the highest.

**The authors concluded that the study confirms that asbestos pollution is a risk for people living in polluted areas, due to not only occupational exposure in industrial settings with direct use of asbestos but also the presence of asbestos in the environment.**

Source: SafetyNetJournal, 423, 11 October 2017

# 10 Dangerous Chemicals to Ban from Your Home

1. Phthalates
2. BPA
3. Chlorine
4. Radon
5. PFCs
6. Lead
7. Pesticides & Fertilizers
8. Formaldehyde
9. Parabens
10. PBDEs & PBBs

## SAFE WORK NSW MOVES TO REDUCE INJURIES AND DISEASES FROM EXPOSURE TO HAZARDOUS SUBSTANCES

The NSW Government has launched a five year project to reduce injuries and diseases from hazardous chemicals, which will involve more than 10,000 workplace visits and focus on formaldehyde and crystalline silica.

Exposure to crystalline silica dust can cause silicosis and lung cancer, and was identified as a major re-emerging health issue in a recent parliamentary inquiry.

Formaldehyde solutions are used in a range of industries and products, and can cause nasal cancers and other health effects like serious eye damage through direct contact, and eye, nose and throat irritation through inhalation.

State Better Regulation Minister, Matt Kean, said that Safe Work would engage business, industry and stakeholders over the next five years to improve safety standards and workplace practices while enhancing hazardous chemical laws.

**“We will work closely with other work health and safety regulators to review national standards and ensure they are in line with international best practice,” he said.**

**“Health monitoring tests will also be reviewed to ensure they are most effective for detecting occupational respiratory diseases.”**

“Whether you are an employer or a worker, and regardless of your industry, occupation or background, workplace safety is everyone’s responsibility,” he said.

*Source: NSW Government Media Release, 24 October 2017*



# CANCERS

## Workplace exposures to carcinogens in Ontario

A new Canadian report *Burden of Occupational Cancer in Ontario: Major Workplace Carcinogens and Prevention of Exposure* profiles 11 priority carcinogens that are well-established causes of cancer and the most common known or suspected carcinogens found in Ontario workplaces.

According to the report, the best opportunity to decrease the burden of occupational cancer is to prevent and control exposure to four key carcinogens:

- solar ultraviolet radiation;
- asbestos;
- diesel engine exhaust; and
- silica.

The report proposes four overarching policy recommendations to help reduce the burden of occupational cancers, including:

- strengthening occupational exposure limits so they are up to date, rigorous and based on evidence of health effects;
- reducing or eliminating the use of toxic substances in the workplace and creating registries of worker exposure to occupational carcinogens for tracking and monitoring purposes; and
- including construction workers and employers in the Designated Substances Regulation.

Alice Peter, director of population health and prevention at Cancer Care Ontario said “The policy recommendations in this report have been developed with several sectors in mind, and it is our hope that this information will be a call to action for governments, employers and other health and safety organisations to drive change and help prevent future occupational cancers among Ontario workers.”

Source: *CosMag*, 11 October 2017

## Respirable silica and the risk of cancer

According to Cancer Council Australia, over 230 lung cancer cases in Australia each year are caused by exposure to silica dust in the workplace.

It is also estimated that around 600,000 Australian workers each year are exposed to silica dust at work, including miners, construction workers, farmers, engineers, bricklayers and road construction workers, as well as those working in demolition.

Terry Slevin, chair, Occupational and Environmental Cancer Risk Committee said “Silica is surprisingly common — it’s found in stone, rock, sand, gravel and clay, as well as bricks, tiles, concrete and some plastic materials.”

“When these materials are worked on or cut, silica is released as a fine dust that’s 100 times smaller than a grain of sand. It’s so small you can’t see it — but if you breathe it in, in some cases it can lead to lung cancer.”

The Cancer Council Australia has published a new fact sheet on silica and cancer risk, available at [www.cancer.org.au/workcancer](http://www.cancer.org.au/workcancer).

Source: *SafetySolutions*, 24 October 2017



## Exposure to workplace carcinogens not just a matter of exposure limits

A plan to reduce occupational cancer rates in Europe misses both the point and many of the causes, the UK national union federation TUC has said. The trade union body estimates over 70 per cent of cancer cases are caused by exposures at work not covered by the European carcinogens directive, and adds even where there are control limits proposed these are often 'completely inadequate'.

TUC head of safety Hugh Robertson says solar radiation is the biggest single cause of occupational cancers and these are usually easily prevented, but aren't on Europe's list. Shiftwork, diesel exhaust, radon and passive smoking are other notable absentees.

Robertson added that "The Commission needs a proper strategy for dealing with cancers based on the principle that no workers should be exposed to carcinogens because of their work. They should put much more emphasis on removal and substitution, rather than just maximum exposure limits. It is not just the regulations that need to be sorted out, it is also enforcement. At present, employers are meant to remove carcinogens where practicable and, if they cannot prevent exposure, through other means regardless of whether there is an exposure limit, but most employers reckon that if they are operating at below the maximum limit that is enough, and regulators seem to accept that."

Source: *CancerHazards*, 21 September 2017

## An update on the connection between breast cancer and the environment



**In a detailed research report published in *Environmental Health*, September 2017, the authors examined the continually expanding and increasingly compelling data linking radiation and various chemicals in our environment to the current high incidence of breast cancer.**

**Singly and in combination, these toxicants may have contributed significantly to the increasing rates of breast cancer observed over the past several decades.**

**Exposures early in development from gestation through adolescence and early adulthood are particularly of concern as they re-shape the program of genetic, epigenetic and physiological processes in the developing mammary system, leading to an increased risk for developing breast cancer.**

**Increasing evidence from epidemiological studies, as well as a better understanding of mechanisms linking toxicants with development of breast cancer, all reinforce the conclusion that exposures to these substances – many of which are found in common, everyday products and by-products – may lead to increased risk of developing breast cancer.**

Source: *Chemwatch*, 10 October 2017



# CANCER

## Scientists reveal the relationship between sugar and cancer

A nine-year joint research project conducted by VIB, KU Leuven and VUB has led to a crucial breakthrough in cancer research.

Scientists have clarified how the Warburg effect, a phenomenon in which cancer cells rapidly break down sugars, stimulates tumour growth.

This discovery provides evidence for a positive correlation between sugar and cancer, which may have far-reaching impacts on tailor-made diets for cancer patients. The research has been published in the leading academic journal *Nature Communications*.

**The project's main focus was the Warburg effect, or the observation that tumours convert significantly higher amounts of sugar into lactate compared to healthy tissues. As one of the most prominent features of cancer cells, this phenomenon has been extensively studied and even used to detect brain tumours, among other applications. But thus far, it has been unclear whether the effect is merely a symptom of cancer, or a cause.**

Prof. Johan Thevelein of the VIB-KU Leuven Institute, Belgium said "Our research reveals how the hyperactive sugar consumption of cancerous cells leads to a vicious cycle of continued stimulation of cancer development and growth. Thus, it is able to explain the correlation between the strength of the Warburg effect and tumour aggressiveness. This link between sugar and cancer has sweeping consequences. Our results provide a foundation for future research in this domain, which can now be performed with a much more precise and relevant focus."

Source: *ScienceDaily*, 14 October 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](mailto: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](http://www.ohswa.marcsta.com) for more information.**



## Occupational Health Society of Australia (WA)

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