

## How corporate funded research is corrupting America's courts and regulatory agencies

A four part investigative series titled "Science for Sale" and launched jointly by the Center for Public Integrity, USA and VICE News, shows how industry-backed research has exploded as government funded scientific research dwindles. Its effects are felt not only in court rooms but also in regulatory agencies that issue rules to prevent disease.

Substances like asbestos and arsenic, whose poisonous properties seem incontrovertible, have become subjects of ceaseless debate. With the aim of obscuring the truth, corporations are steering millions of dollars to scientific consulting firms. Some of these consultants, for example, maintain there are 'safe' levels of asbestos despite statements to the contrary from the WHO and many other august bodies. Air pollution, the hired guns say, really isn't the killer the EPA makes it out to be.

Tainted science affects us all. It is used to fend off or lessen the sting of lawsuits filed on behalf of sick people. It freezes the regulatory process, forcing the EPA to redo chemical reviews underlying rules designed to protect public health, making it harder to protect workers.

One of these scientific consulting firms, Gradient, defends the products of its corporate clients beyond credulity, even exhaustively studied substances whose dangers are not in doubt, such as asbestos, lead and arsenic.

Besides publishing articles which are often aimed directly at regulators, Gradient also routinely submits comments and attends hearings when the US EPA is reviewing a chemical to determine its toxicity. The firm is one of several that the chemical industry relies on to stall regulations. Gradient scientists play an active role in trying to prevent tighter regulations.

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#### MONITOR EDITOR

Geoff Taylor

Archived editions of the Monitor are available online at [www.marcsta.com](http://www.marcsta.com)

OHSA(WA), PO Box 171, Belmont WA 6984

E-mail: [safety@marcsta.com](mailto:safety@marcsta.com)

[www.ohswa.marcsta.com](http://www.ohswa.marcsta.com)



## Legislative/regulatory matters

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### **How corporate funded research is corrupting America's courts and regulatory agencies**

In 2010 when the US EPA was about to report that arsenic posed a much greater health risk than previously thought, even at the amount the EPA allowed in drinking water, Gradient scientists argued that the EPA had left out the most recent research and should redo the analysis. Some members of Congress latched on to Gradient's argument to accuse the EPA of cherry-picking data. They twisted the Agency's arm to start the analysis over again.

The EPA was about to ban most pesticides containing arsenic at the end of 2013 but without a scientific review it had to postpone the ban indefinitely.

Gradient has become a leading scientific voice in trying to prevent further regulation of air pollution. Its clients include two of the most powerful lobby groups in Washington DC, the American Petroleum Institute and the American Chemistry Council and also Navistar, a diesel-truck manufacturer, and the Texas Commission on Air Quality, a regulatory agency that has a history of aligning with industry.

Asbestos related diseases, vinyl chloride, lead and toxic chemicals are other matters which Gradient has continued to defend and these will be considered in future editions of the Monitor.

*Source: Center for Public Integrity, 'Science for Sale,' February 2016*

### **Legislative/Regulatory**

## **Brexit\* could put safety rights at risk**

The union movement in the UK (TUC) has warned that workplace employment and safety rights underpinned by European Union rules would be at risk if the UK votes to leave in the June referendum. Decisions on which rights to keep, amend or revoke would be left to the UK Government.

TUC General Secretary Frances O'Grady said: "Working people have a huge stake in the referendum because workers' rights are on the line."

Lawyers specialising in personal injury and health and safety law said "Brexit couldn't remove totally the right to rely on European health and safety laws but it would reduce them to a bare minimum."

\* **Brexit** – Britain + exit, term to describe the withdrawal of the UK from the EU.

*Source: TUC Risks 741, 5 March 2016*

### **Victorian unions to build 'safety army'**

Union representatives will be visiting every high school in Victoria to talk about how union membership can help workers with occupational health and safety as an integral part of 'setting out to build a Safety Army'.

The campaign will be backed up with high profile social media activity.

The Secretary of the Victorian Trades Hall Council said "We want to build this OHS Safety Army identifying this as the union body's key performance indicator for the year."

*Source: TUC Risks #741, 5 March 2016*

## Industrial manslaughter bill introduced in South Australia

In early March 2016 a Bill to amend the Work Health and Safety Act 2012 was introduced in the South Australian Parliament.

The primary objective of the Bill is to ensure that culpable employers are held responsible for their actions. The Bill seeks to introduce industrial manslaughter.

The offence covers the situation where an individual or corporation's reckless or negligent conduct causes the death of a worker.

Within the Bill an employer is guilty of an offence if:

- the employer breaches their duty of care;
- and the employer knew or was recklessly indifferent to the fact that the act or omission constituting the breach would create a substantial risk of serious harm to a person; and
- and the breach causes the death of a person.

The penalties suggested in the Bill are up to 20 years imprisonment for individuals or fines of up to \$1 million.

Source: Tammy Franks.org, 7 March 2016

## New NZ health and safety legislation

A new health and safety law is set to come into force in New Zealand, bringing new responsibilities for both employers and employees in the workplace.

The Health and Safety at Work Act which takes effect on 4 April is part of a reform package aimed at reducing the number of serious work-related injuries and deaths in New Zealand by at least 25 percent by 2020.

The legislation for the most part will mirror that operating in most Australian states.

**It will also prescribe that both employers and individuals can be held accountable for reckless conduct with penalties of up to NZ\$3 million for employers and NZ\$600,000 and/or up to five years imprisonment for individuals.**

Source: BNA.com, 26 February 2016

## Increased penalties for reckless endangerment of Victorian workers

The Victorian Government has acted to increase the maximum penalty for a body corporate that recklessly endangers a person at a workplace from its current level of A\$1,300,000 to A\$3,000,000.

An example of the offence is an employer failing to repair brakes on a truck that they know are faulty.

This increased level of penalty will bring Victoria into line with national Work Health and Safety Laws.

Source: SafetyAtWorkBlog, 16 March 2016

## Amendments to Dangerous Goods Regulations in WA

The Department of Mines and Petroleum – Resources Safety have released amendments to the following areas of the Dangerous Goods Regulations:

- Storage and Handling
- Explosives
- General
- Security Risk Substances

Source: Dangerous Goods Information Sheet, 8 February 2016, Department of Mines and Petroleum – Resources Safety.

## Asbestos industry backed UK scientists found wanting

In the UK, the editors-in-chief have published an erratum in their current issue of the Journal *Epidemiology, Biostatistics and Public Health* (EBPH) regarding false information in a 2015 paper, 'Critical reappraisal of Balangero chrysotile and mesothelioma risk' which had claimed that cases of mesothelioma contracted by workers and nearby residents were not caused by chrysotile asbestos. However, the source cited in the paper to support this claim provided no such evidence, with the erratum admitting it was an 'erroneous claim'. An earlier correction was made to the paper because of undisclosed conflicts of interest and required the authors to disclose their financial ties to the asbestos lobby.

"Asbestos interests spend tens of millions of dollars for scientists to write articles that deny harm caused by chrysotile asbestos and claim that 'anything but chrysotile (ABC)' has caused harm" said human rights campaigner, Kathleen Ruff.

She said that the ABPH editors had been reluctant to publish either erratum.

Source: TUC Risks, 738, 13 February 2016



## **Four believed dead in power station demolition tragedy**

When a derelict power station at Didcot UK collapsed on 23 February during demolition, one worker was killed and three others were unlikely to be found alive. Five other workers were hospitalised and around 50 were treated for dust inhalation.

Chief Constable Scott Chilton said “the recovery of the bodies and the investigation would be complex and could take many weeks.”

The bodies had not yet been recovered and the company which owns the site and is in charge of the recovery operation , RWE, says it now plans to use explosives to bring down the rest of the structure to speed up the recovery work.

*Source: TUC Risks #741, 5 March 2016*



## High rate of death and injury due to falls from ladders

Research by the Alfred Hospital in Victoria has once again highlighted the high incidence of death and injury due to falls from ladders.

From 2007 to 2011, 584 Victorians were admitted to hospital after falling from ladders. Of those, 194 were major trauma cases, 58 ended up in intensive care where they relied on machines to breathe, and 15 were killed.

The number of serious ladder injuries has continued to rise in the years since the research was completed with total admissions for ladder falls nearly doubling from 100 in the year to June 2007 to 190 in the year to June 2014.

**Most had fallen from less than three metres, many from two metres and one dead after falling just one metre.**

*Source: OHS Repts, SafetyNetJournal #352, 24 February 2016*

## Canadian older workers are not an injury risk

According to a recent study in Canada supported by WorkSafe BC, it appears there's good news for employers and older workers alike: no statistical difference was found in the relationship between age and work-injury across occupational groups or across time periods.

In other words, the participation of older British Columbians in the workforce and the potential for workers to remain in particular occupations have yet to result in any changes in the relationship between age and injury risk.

Despite observing no relationship between age and risk of injury in British Columbia compensation claims data, older workers have higher healthcare use and more days away from work following an injury.

The results of the study suggest that the increasing prevalence of chronic conditions particularly arthritis, back problems, diabetes and heart disease, will have important implications in the prevention of workplace injuries.

WorkSafe BC research director Ms Lori Guiton says "The findings of the study show us areas where we might put more emphasis, like the prevention of falls that lead to bone trauma or head injuries, or in case management for workers with pre-existing chronic conditions. Above all it is so encouraging to see that greater participation of older people in the BC workforce has not led to significant differences in injury risk:"

*Source: WorkSafe Magazine, March/April 2016*

## Deaths from overwork continue to increase in Japan

There have been a record number of compensation claims in Japan related to overwork (karoshi) particularly in young and female employees.

Claims rose to 1,456 in the year to March 2015 with cases concentrated in health care, social services, shipping and construction sectors which are all facing chronic worker shortages.

Labour demand is the highest since 1998 with 1.28 jobs per applicant.

The Labour Ministry recognises two types of karoshi – deaths from cardiovascular illness linked to overwork and suicide following work-related mental stress.

Japan has no legal limits on working hours.

*Source: Reuters, 19 April 2016*

## Health care workers in regional Victoria record highest number of workplace injuries

WorkSafe Victoria statistics show that in regional Victoria workplace injury claims were highest in the health care and assistance sector followed by the manufacturing and construction sectors.

OHS Coordinator for the Australian Nursing and Midwifery Federation, Kathy Chrisfield, said that "too many of our members are being injured in workplace incidents, and it is time the health and safety of workers became a focus of employers."

Of the 20 people who tragically lost their lives in workplace injuries last year, nine were in regional Victoria.

*Source: OHSRepsSafetyNet Journal, Safety Net 356*



## Reducing the costs of workplace injury – introducing wearable exoskeletons to reduce physical load at work

A new USA NIOSH report shows that from the standpoint of workplace health and safety, wearable exoskeleton devices may be beneficial in reducing musculoskeletal loads that are not otherwise abated by engineering process change.

Robotic-like suits which provide powered-assist and increase human strength may conjure thoughts of sci-fi and superhero film genres, but these wearable exoskeleton devices are now a reality and the market for their applications in the workplace is projected to increase significantly in the next five years.

An active exoskeleton comprises one or more actuators that augment the human's power and helps in actuating the human joints. A strictly passive system does not use any type of actuator, but rather uses materials, springs or dampers with the ability to store energy harvested by human motion and to use this as required to support a posture or a motion.

NIOSH has been approached by developers of exoskeleton technology transfer which appear to have benefits in some specific industry applications for reducing injury risk factors.

However, NIOSH says that their occupational use should be evaluated for their potential benefits and potential competing risks before widespread workplace adoption.

Source: Sun News Report, 4 March 2016



## Underground gold miners in South Africa finally compensated for lung diseases

In a landmark settlement, 4,365 claimants in South Africa have received compensation after suing Anglo American South Africa Ltd and AngloGold Ashanti Ltd for compensation for dust-related lung diseases, silicosis and silico-tuberculosis resulting from working in unsafe, dusty conditions in underground mines.

In order to qualify for compensation, claimants will need to be medically diagnosed with silicosis and to have worked for at least two years.

A spokesman for one of the plaintiff's lawyers said "that the settlement scheme provides a model and, we hope, the necessary impetus for an industry-wide settlement for all gold mining silicosis victims."

Source: OHS Repts, SafetyNetJournal #355, 16 March 2016

## Workplace fatalities in Canada in 2014

Statistics released by the Association of Workers' Compensation Boards of Canada show that in 2014, 919 workers died on the job – a slight increase from the 902 who died in 2013.

Nearly 60 percent of the fatalities were attributed to occupational disease which is a statistic not likely to be exceeded anywhere in the world.

The dominating occupational disease which resulted in death was asbestos related disease which occurred in a wide range of occupations.

Industries where most occupational disease fatalities occurred:

Construction	232
Manufacturing	158
Government services	98
Transport and storage	73
Mining, quarrying, oil wells	63

Source: Cos Magazine, 19 February 2016

# AIR POLLUTION

## Tracking air pollution in London with the help of pigeons

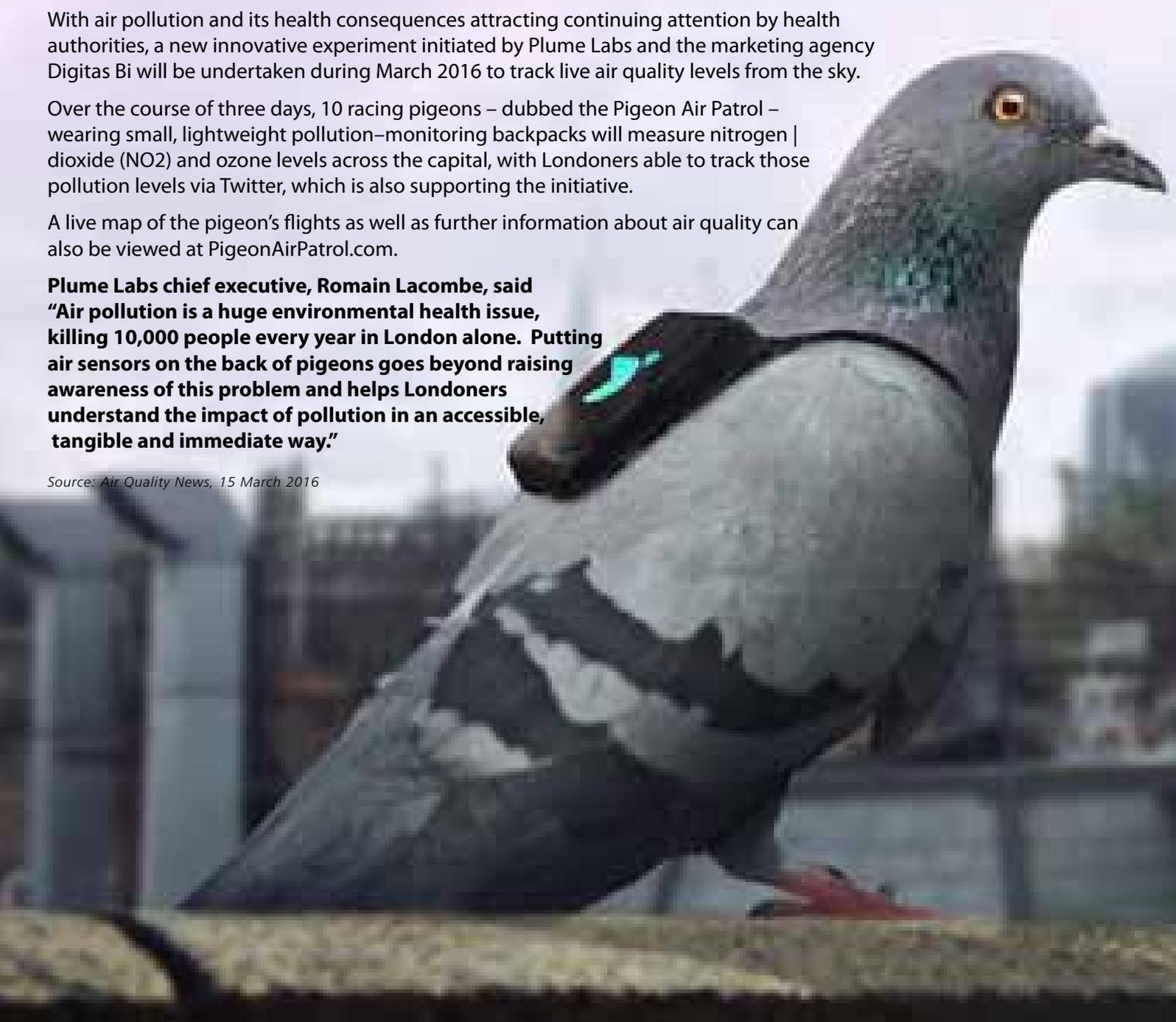
With air pollution and its health consequences attracting continuing attention by health authorities, a new innovative experiment initiated by Plume Labs and the marketing agency Digitas Bi will be undertaken during March 2016 to track live air quality levels from the sky.

Over the course of three days, 10 racing pigeons – dubbed the Pigeon Air Patrol – wearing small, lightweight pollution-monitoring backpacks will measure nitrogen | dioxide (NO<sub>2</sub>) and ozone levels across the capital, with Londoners able to track those pollution levels via Twitter, which is also supporting the initiative.

A live map of the pigeon's flights as well as further information about air quality can also be viewed at [PigeonAirPatrol.com](http://PigeonAirPatrol.com).

**Plume Labs chief executive, Romain Lacombe, said**  
**"Air pollution is a huge environmental health issue, killing 10,000 people every year in London alone. Putting air sensors on the back of pigeons goes beyond raising awareness of this problem and helps Londoners understand the impact of pollution in an accessible, tangible and immediate way."**

*Source: Air Quality News, 15 March 2016*



## MORE EVIDENCE OF THE IMPACT OF AIR POLLUTION

Data compiled by the Global Burden of Disease Project shows more than 5.5 million people worldwide are dying prematurely each year from air pollution with the main culprit being emissions from power-plants, factories, vehicle exhausts and from the burning of coal and wood.

According to the study, air pollution causes more deaths than other risk factors such as malnutrition, obesity, unsafe sex and alcohol and drug abuse. It is the fourth greatest risk behind blood pressure, dietary risk and smoking.

Most of the deaths are occurring in the rapidly developing countries of China and India.

The data is from 2013, the most recent year for which it is available.

*Source: Chemwatch, 18 March 2016*

## Study links air pollution 30 years ago with health consequences today

Exposure to air pollution more than 30 years ago may still affect an individual's risk of dying prematurely today, according to new research from Imperial College, London.

Published online on 9 February in the journal THORAX, the report derives from one of the world's longest running air pollution studies, which followed 368,000 people in England and Wales over a 38 year period.

Air pollution levels were estimated in areas where the individuals lived in 1971, 1981, 1991 and 2001 using measurements from the UK's "extensive historic air pollution monitoring networks."

The study found the highest risks from air pollution were for respiratory diseases such as bronchitis, emphysema and pneumonia. Air pollution also affected mortality risk from cardio vascular diseases, such as heart disease.

Lead author Dr Anna Hansell said **"Our study found more recent exposures were more important for mortality risk than historic exposures, but we need to do more work on how air pollution affects health over a person's entire lifetime. We were surprised to find pollution has effects on mortality that persist over three decades after exposure."**

Source: Air Quality News, 9 February 2016

## Aerotoxic syndrome in aircraft affects flight crew

In the UK, the revelation that two air flights were forced to turn back following an outbreak of sickness among the cabin crew has added further weight to calls for a public enquiry into 'aerotoxic syndrome' according to the union Unite.

The union said that leaks from aircraft engines get into the cabins and not only cause the crew to feel sick but may also be further impairing their health. The union is pursuing 60 cases on behalf of individuals who have symptoms consistent with the syndrome and is also acting on behalf of a deceased crew member.

Unite is also calling on airlines to monitor cabin air quality and for aircraft manufacturers to fit detectors and filters and 'design out' the use of bleed air, therefore reducing the risk of fume events.

Source: OHS SafetyNetJournal #350, 10 February 2016

## Latest news on the UK air quality (Diesel emissions in urban centres) Bill 2015-16

The Bill was introduced in the British Parliament on 23 February 2016 to make provision for urban air quality targets; to require vehicle emission targets and testing to reflect on-road driving conditions; to provide powers for local authorities to establish low diesel emissions zones and pedestrian-only areas; to restrict the use of roads in urban areas by diesel vehicles; to make provision about the promotion of the development of electric tram systems and buses and taxis powered by liquefied petroleum gas in urban centres; and for connected purposes.

It is noteworthy that positive action is being taken by the British Parliament presumably reacting to the IARC decision to declare diesel emissions carcinogenic to humans while the apathy that persists in Australia regarding uncontrolled exposure to the carcinogen persists.

**Australia can no longer be considered a leader in occupational health. In fact, in many areas of public and occupational health it is some 20 years in arrears.**

Source: AirQualityNews, 22 February 2016

## Australians ignoring the health consequences of vehicle emissions

According to the National Transport Commission, Australian consumers bought a record number of fuel-efficient, low-emission cars leading to the biggest year-on-year growth in the percentage of new cars sold since the NTC began analysing the figures in 2004.

Despite the improvement, Australians buy passenger vehicles with carbon emissions intensity an average of 43 percent higher than their European counterparts, according to data from the European Environment Agency.

The CEO of the NTC, Paul Retter, suggests some of the reasons for this:

- Australians generally prefer heavier vehicles with bigger, more powerful engines, and
- our fuel prices are lower.

Mr Retter commented that Europeans also have more incentives to purchase low-emissions vehicles

No comment is made in the report on the range of activities and policies being implemented in Europe and the UK to reduce vehicle emissions which are responsible for deaths and disease.

The report found that Holden, Ford and Toyota reduced their average emission by 1.1 percent between 2014 and 2015, hardly a meaningful reduction.

Source: NTC News, 2 April 2016

# HEALTH - PHYSICAL



## Nearly 5 billion people myopic by 2050

Publishing in *Ophthalmology*, researchers claim that by 2050 nearly five billion people will be myopic, also known as short-sighted, and an additional one billion people will suffer from a more severe form of the condition known as high myopia (currently researchers estimate that myopia affects two billion people worldwide).

The projected increases are widely considered to be driven by environmental factors, principally lifestyle changes resulting from a combination of decreased time outdoors and increased near work activities, among other factors.

Environmental factors e.g. so-called high-pressure educational systems in Asian countries may be a causative factor as may be the use of near electronic devices. Other proposed causes include light levels which may be directly related to time outdoors.

Study author, Kovin Naidoo said "We need to ensure our children receive a regular eye-examination from an optometrist or ophthalmologist, preferably each year, so that preventative strategies can be employed if they are at risk. Furthermore, there are options such as specially designed spectacle lenses, contact lenses and drug interventions, but increased investment in research is needed to improve the efficacy and access of such interventions."

Source: *Drug Discovery and Development*, 22 February 2016

## Being overweight linked to poorer memory

In a preliminary study published in the *Quarterly Journal of Experimental Psychology* researchers from the Department of Psychology at Cambridge University found an association between high body mass index (BMI) and poorer performance on a test of episodic memory.

Its results support existing findings that excess body weight may be associated with changes to the structure and function of the brain and its ability to perform certain cognitive tasks optimally. In particular, obesity has been linked with dysfunction of the hippocampus, an area of the brain involved in memory and learning, and of the frontal lobe, the part of the brain involved in decision making, problem solving and emotions, suggesting that it might also affect memory. However evidence for memory impairment in obesity is currently limited.

The researchers say that the results could suggest that the structural and functional changes in the brain previously found in those with higher BMI may be accompanied by a reduced ability to form and/or retrieve episodic memories. As the effect was shown in young adults, it adds to growing evidence that the cognitive impairments that accompany obesity may be present early in adult life.

Source: *Science Daily*, 26 February 2016

## Australia's painkiller use increased four-fold in 10 years

Researchers at the University of New South Wales say cancer-related pain in the ageing population and chronic-pain have driven a 400 percent increase in the use of common opioid painkillers in Australia over the past decade.

A report published online in the *Lancet* on 3 February 2016 has found that while the use of painkillers including codeine, morphine and oxycodone has increased in high income western countries, developing and poorer regions continue to have little or no access to basic pain medication. Over five and a half billion people are estimated to have little or no access to essential pain relief.

Senior author, Professor Mattick said "the ageing populations and greater care for chronic non-cancer pain are likely drivers of increased use in high-income countries. The lack of availability of these medications in low-income countries for the management of cancer pain is a terrible situation causing massive suffering."

Source: *Drug Discovery and Development*, 8 February 2016

## Do national smoking bans reduce harm to health?

The most robust evidence yet, published in February 2016 in the *Cochrane Library*, suggests that national smoking legislation does reduce the harms of passive smoking, and particularly risks from heart disease.

The updated review found that countries which imposed smoking bans found their populations benefited from reduced exposure to passive smoke, lowering cardio vascular disease.

Tobacco is the second major cause of mortality in the world and currently responsible for the death of about one in ten adults worldwide. Cigarette smoking is identified as one of the greatest public health disasters of the 20th century, with over 20 million attributable deaths.

Review author, Professor Cecily Kelleher from University College Dublin said "The current evidence provides more robust support for the previous conclusions that the introduction of national legislative smoking bans does lead to improved health outcomes through a reduction in second-hand smoke exposure for countries and their populations. We now need research on the continued longer-term impact of smoking bans on the health outcomes of specific sub-groups of the population, such as young children, disadvantaged and minority groups."

Source: *Science Daily*, 4 February 2016

## Further evidence of the health effects of sedentary work

A literature review commissioned by SafeWork Australia and undertaken by Curtin University shows that prolonged unbroken sitting time is associated with a range of health problems including musculoskeletal disorders, cardiovascular disease, diabetes, obesity, some cancers and premature mortality.

**Compounding this, health problems caused by prolonged sitting remain even if a worker exercises every day, highlighting that excessive sitting and physical inactivity are separate health hazards.**

Occupational interventions which include substitution and breaks to minimise the total time spent sitting and to break up periods of sitting at work are suggested by SafeWork Australia CEO, Michelle Baxter.

Source: *Safety Net* 356

## Digital health tool helps cardiac rehab patients shed more weight

Adding a digital health tool to traditional cardiac rehabilitation appears to help people recovering from a heart attack lose significantly more weight in a relatively short period of time, according to research presented at the American College of Cardiology's 65th Annual Scientific Session.

In fact, patients using specially designed health tools on their smartphones and through a Web-based portal lost four times as much weight compared with those undergoing 12 weeks of cardiac rehabilitation alone.

Robert Jay Widmer, M.D., Ph.D., of the Mayo Foundation for Medical Education and Research, and lead author of the study said "These results are exciting because they demonstrate improvement in cardiovascular risk factors over and above guideline-based cardiac rehabilitation."

He said the trend in weight loss in the intervention group is likely explained, in part, by significantly improved dietary habits and frequent reporting via the program. These patients also exercised for an average of 40 more minutes a week, a difference that was not statistically significant.

He said clinical trials are needed to further validate these findings and to determine the sustainability of the results.

Source: *Science Daily*, 23 March 2016



# LEGAL/ILLEGAL DRUGS



## Starting age of marijuana use may have long term effects on brain development

The age at which an adolescent begins using marijuana may affect typical brain development according to researchers at the Center for Brain Health at the University of Dallas.

Findings show study participants who began using marijuana at the age of 16 or younger demonstrated brain variations that indicate arrested brain development in the prefrontal cortex, the part of the brain responsible for judgment, reasoning and complex thinking. Individuals who started using marijuana **after age 16** showed the opposite effect and demonstrated signs of accelerated brain ageing.

"Our findings suggest that the timing of cannabis use can result in very disparate patterns of effects" explained Francesca Filbey Ph.D, principal investigator and Bert Moore Chair of Behavioural and Brain Sciences at the Center for Brain Health. "Not only did age of use impact the brain changes but the amount of cannabis used also influenced the extent of altered brain maturation."

*Source: Science Daily, 10 February, 2016*

## Rat study confirms long-time amphetamine usage has long-term effects on the brain

A study by the University of Illinois has found that rats given regular, high rates of amphetamine at an age corresponding to human adolescence, experience long-term changes in brain function that persist into adulthood.

The study found that amphetamine leads to changes in dopamine signalling. Dopamine is a neurotransmitter that plays a role in memory, attention, learning and feelings of pleasure.

*Source: Science Daily, 30 March 2016*

# HEALTH - PSYCHOLOGICAL



## **New Psychosocial Harms Audit and Guide released by Department of Mines and Petroleum**

The Department of Mines and Petroleum has released a new audit and guide to help identify and manage psychosocial risks in Western Australia's resources industry.

DMP Resources Safety executive director Simon Ridge said that "while the Department acknowledged the complexity of psychosocial harms, it was important to address the risks within an overall safety and health management system. Risks to psychological and physical health due to work should be viewed the same as other workplace risks."

DMP Director Mines Safety and State Mining Engineer, Andrew Chaplyn, said inspectors had been specially trained to identify psychosocial risks as part of their role.

"This training helps inspectors to assess current industry systems and identify areas of improvement. Like all our audit tools, this new audit is available for companies to conduct self-audits and assess compliance. The guide provides information on what to look for."

The *Psychosocial Harms Audit and Guide* is available from [www.dmp.wa.gov.au](http://www.dmp.wa.gov.au)

## Survey of European establishments reveals psychosocial risks

In April, the European Agency for Safety and Health at Work published its overview of the second European Survey of Enterprises in New and Emerging Risks (ESENER-2) for which 50,000 establishments from 36 European countries were interviewed in 2014. The main topics covered were the management of occupational safety and health in general, the management of psychosocial risk in particular, and the participation of workers.

The second enterprise survey has confirmed the finding of the first:

- Worker participation is vital in implementing safety and health measures at work

It is also particularly important for workers to be involved in psychosocial risk management as the very nature of these risks makes them difficult to talk about, making collaboration from all parties even more essential.

The levels of psychosocial risks in European workplaces are high, with 77% of establishments reporting at least one psychosocial risk factor in the workplace.

The most common is having to deal with difficult customers, patients, pupils etc. closely followed by time pressures.

In addition, the survey shows the 41% of establishments in the European Union state that they indeed do not have enough information on how to assess psychosocial risk.

Source: EU-OSHA, 30/3/16

## Increasing the income of low-paid workers can improve mental health

A new study led by the University of Oxford has found that workers who received the national minimum wage in April 1999 reported a decline in symptoms of depression for at least 20 months afterwards.

The researchers discovered that receiving the minimum wage was equivalent to the effect of taking anti-depressants.

Their paper, published in the journal *Health Economics*, concluded that wage rises for low-paid workers reduce feelings of anxiety and depression partly, at least, because they are under less financial stress.

Professor David Stuckler from the University of Oxford said "Our study found that increasing wages for low income workers can have as powerful an effect on mental health as prescribing anti-depressants."

Professor Martin McKee from the London School of Hygiene and Tropical Medicine commented "So far the focus has been on jobs and profits of employer but, as our research shows, increasing the income of the lowest paid can make an important contribution to their mental health at a time when the National Health Service faces unprecedented pressure."

In February, Prime Minister David Cameron promised an extra \$1 billion for mental health care and said it would mean tens of thousands of people in England with mental health conditions will be supported to find or return to work.

The new research suggests that improving pay rates would be a very effective way to help them stay in work.

Source: TUC Risks, 747 23 April 2016



# OCCUPATIONAL HYGIENE

## Hygiene without numbers

The developing approach of the UK Health and Safety Executive (HSE) to occupational hygiene – the measurement of exposure to chemicals, dust and other exposures at work – has come in for scathing criticism from Hans Kromhout, an international expert of long standing in the occupational hygiene discipline.

Based at Utrecht University's Institute for Risk Assessment Sciences, Kromhout has been a member of both the British and Dutch Occupational Hygiene Societies for more than 30 years.

Writing in the *Annals of Occupational Hygiene* in April he indicated that the approach fell in line with the UK Government's attack on 'red tape'. He said that "he was intrigued and amazed to note that the following title showed up in the programme: Hygiene Without Numbers."

Karen Clayton, director of HSE's long latency risks division, has made a number of recent conference presentations referring to the 'hygiene without numbers' theme.

Kromhout said "I wondered did HSE finally discover the key to the Holy Grail, or were they trying to put the genie back into the bottle given that UK business needs help with cutting red tape nowadays.

The old mantra of 'measurements are expensive', 'measurements delay control measures', 'with statistics you can prove anything', and of course 'if you provide enough guidance on best practices everything will be well-controlled', made up the gist of the message.

Such numberless interventions may be appealing to policy makers, who face the hefty task of creating meaningful and economically feasible guidelines for occupational health. However, treating workers' exposure to chemical, biological or physical agents as a static entity that can be satisfactorily controlled by guidance sheets is factually wrong and ignores the intrinsic variability of occupational exposure."

The paper concludes "Preventing occupational hygiene following the path of demise like its sister discipline occupational medicine in the UK (Raynal, 2015) should be our first priority. Cutting red tape—resulting in fewer carefully inspected and controlled European workplaces—may 'solve' the issue of the burden of collecting numbers in the short term, but this is likely to produce thousands of preventable cases of occupational disease and untimely disability. 'Hygiene Without Numbers' comes with a price and we all know who will have to pick up the bill."

The full article is recommended reading for everyone employed in the occupational health discipline.

Source: *TUC Risks*, 742, 12 March 2016

Health and Safety Executive

## OCM<sup>6</sup>

**Offshore COSHH essentials**



This information will help offshore dutyholders (owners, operators and contractors) to comply with the Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended, to protect workers' health.

This guidance consolidates good control practice and reinforces existing knowledge with additional information.

It will help you carry out COSHH assessments, review existing assessments, deliver training and in supervising activities involving substances hazardous to health.

It is aimed at staff whose responsibilities include the management of substances hazardous to health on offshore installations (eg occupational health specialists, COSHH assessors, supervisors etc). It is also useful for trade union and employee safety representatives.

Following the guidance is not compulsory and you are free to take other action. But if you do follow this guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.

If you need a service provider (eg consultant), OCM sheets describe what they should deliver.

You may need help from a health and safety expert, whose report should cover the points in this sheet.

## Exposure monitoring

**Control approach 4 Special advice**

**What this sheet covers**  
This sheet describes good practice for monitoring worker exposure. It includes advice to test fixed alarms.



**Monitoring**

- ✓ Monitoring means measuring workers' exposures to named substances. Exposure may be by inhalation, by skin contact, or by swallowing.
- ✓ Personal monitoring assesses a person's exposure. Other sampling is used to assess the effectiveness of control measures.
- ✓ Ask consultants tendering for work for evidence of their competence, and of any laboratories they use for analysing samples.
- ✓ Provide past results of monitoring, so the consultant can put new results into context.
- ✓ Monitoring is required:
  - to help select the right controls;
  - where substances present a serious health risk;
  - to check that exposure limits are not exceeded and your control measures work well enough;
  - to help choose the right amount of respiratory protection;
  - to identify any need for health surveillance; and
  - when an inspector has issued an enforcement notice that requires you to monitor exposure.
- ✓ Exposure measurement is not an alternative to controlling exposure.
- ✓ Exposure varies from day to day, so you need the result to be no more than a fraction of the exposure limit, eg below one third.
- ✓ Monitoring always requires workers' co-operation, doing their jobs as normally as possible.
- ✓ Workers should be informed of the result.
- ✓ This sheet also contains a form for use where biological samples require workers' informed consent. See below.
- ✓ Static or background sampling is useful:
  - to check on the performance of extraction equipment;
  - to understand the potential for bystanders to be exposed.

**Caution:** Static or background sampling will not reflect personal exposure.

# SLEEP/FATIGUE

## A good night's sleep is critical for good health

The American Academy of Sleep Medicine and the Sleep Research Society continue to promote the importance of adequate quality sleep.

Adults aged 18-60 years need at least seven hours each night to promote optimal health and well-being. Sleeping less is associated with an increased risk of developing chronic conditions such as obesity, diabetes, high blood pressure, heart disease, stroke and frequent mental distress.

Wayne Giles MD, Director of the Center for Disease Control and Prevention Division of Population Health said "Lifestyle changes such as going to bed at the same time each night; rising at the same time each morning; and turning off or removing televisions, computers or mobile devices from the bedroom, can help people get the healthy sleep they need."

Source: ISHN, 23 February 2016

## Sleeping difficulty associated with type 2 diabetes

A new study strengthens evidence that sleep problems put women at higher risk for developing type 2 diabetes.

For the study, researchers analysed data from 133,353 women who did not have diabetes, cancer or cardiovascular disease. They followed up with the women up to 10 years later and documented 6,407 cases of type 2 diabetes.

Four measures of sleep were assessed: sleeping difficulty, frequent snoring, sleeping less than six hours and rotating shift work or sleep apnea.

According to the researchers, women who reported all four sleep conditions had more than four times the likelihood of developing type 2 diabetes than those with no sleep problems. Any sleep problem, after adjusting for BMI, hypertension, depression and other health factors, was associated with a 22 percent increased risk for type 2 diabetes.

Dr Frank B Hu, a professor of nutrition and epidemiology at Harvard said that sleep problems are associated with excess secretion of the hormones ghrelin and cortisol, which are linked to metabolic problems that increase the risk of diabetes.

Researchers concluded that "Sleeping difficulty was significantly associated with type 2 diabetes."

Source: Bioscience Technology, 9 February 2016

16 / MONITOR / APRIL 2016

## Circadian misalignment helps explain higher risk for cardiovascular disease

New research from Brigham and Women's Hospital in the USA published in the Proceedings of the National Academy of Science in February 2016 may help explain why shift work increases cardiovascular disease.

The study found that short term circadian misalignment, resulting from a rapid 12-hour inversion of the sleep/wake and fasting/feeding cycle that is typical in shift workers, leads to adverse cardiovascular and inflammatory consequences in healthy adults.

Senior author Frank A.J.L. Scheer of the hospital's Division of Sleep and Circadian Disorders said "our findings provide evidence for circadian misalignment as an underlying mechanism to explain why shift work is a risk factor for elevated blood pressure, hypertension, inflammation and cardiovascular disease

Specifically, researchers found that circadian misalignment:

- Increased 24 hour systolic blood pressure and diastolic pressure
- Reduced blood pressure dipping usually associated with sleep
- Decreased measures of autonomic nervous system activity (controlling bodily functions such as blood pressure)
- Increased inflammatory markers

Researchers say that "further research is needed to investigate countermeasures for the adverse cardiovascular effects of circadian misalignment, such as the timing of eating and exercise.

Source: Chemwatch, 5 March 2016

# FLASHING LIGHT AT NIGHT ADJUSTS SLEEP CYCLE

Exposing people to short flashes of light while they're sleeping could provide a fast and efficient method of preventing jet lag, according to a study by researchers at the Stanford University School of Medicine, California. Researchers led by senior author of the study, Jamie Zeitzer, PhD, assistant professor of psychiatry and behavioural sciences, have been working on developing an optimal technique for using light exposure to help people adjust more quickly to changes in their sleep cycles.

Current light-therapy treatments for sleep disturbances include sitting in front of bright lights for hours at a time during the day, which allows you to transition your body clock to a new time zone in small steps prior to taking a trip.

The researchers found that short flashes of light at night are more effective than continuous light exposure and could speed up the process of adjusting to a different time zone before a trip.

The transfer of light through the eyes to the brain does more than provide sight; it also changes the biological clock. A person's brain can be tricked into adjusting more quickly to disturbances in sleep cycles by increasing how long he or she is exposed to light prior to traveling to a new time zone.

The study found that a sequence of 2-millisecond flashes of light, similar to a camera flash, 10 seconds apart, elicited a nearly two-hour delay in the onset of sleepiness, the most efficient and fastest method of adjusting the internal clock. For participants exposed to continuous light, the delay was only 36 minutes.

Zeitzer explained the flashing light therapy as follows:

"If you are flying to New York tomorrow, tonight you use the light therapy. If you normally wake up at 8 a.m., you set the flashing light to go off at 5 a.m. When you get to New York, your biological system is already in the process of shifting to East Coast time."

He added, "We have found that most people can sleep through the flashing light just fine."

*Source: Bioscience Technology, 9 February 2016*



*Jamie Zeitzer sets up a flashing light in his lab. His research shows that exposure to short flashes of light during sleep can help prevent jet lag.*

*Pic: Norbert von der Groeben*



# NOISE

## NOISE AND BODY FAT - UNCOVERING NEW CONNECTIONS

New research reported in the March issue of *Environmental Health Perspectives* shows that exposure to traffic noise at home is associated with body composition outcomes such as larger waist circumference and higher body mass index (BMI).

The authors used noise-mapping software to estimate exposures from road traffic, railways and air traffic for addresses based on the most noise exposed façade of the participants' homes.

Researchers found that all measures of adiposity were significantly associated with road traffic noise.

Each 10db increase in average road traffic noise exposure over five years was associated with an average increase in waist circumference of 0.35cm and an average increase in BMI of 0.18 points.

Source: *Chemwatch*, 26 March 2016

# HAZARDOUS MATERIALS

## France acts to implement chemical substitution

On 14 January 2016 the French National Assembly voted for adoption and first study of a new regulation to promote substitution. The regulation is called Detox and has been proposed by Jean-Louis RoumeGas from the group Ecologiste.

The regulation aims at providing incentives and support for companies to substitute hazardous chemicals and for customers to receive more information on the chemical content of products through labelling.

The candidate list provides the bottom line of what substances need to be substituted legally within the near future. To be able to plan substitution and innovation well ahead of time it is wise to use the tools to predict upcoming regulations as well as future consumer demands.

*Source: Chemwatch, 15 January 2016*

## US EPA active in funding clean up diesel engines nationwide

The US EPA has announced the availability of \$26 million in grant funding to establish clean diesel projects aimed at reducing emissions from the nation's existing fleet of diesel engines.

Approximately 90 percent of the nation's freight tonnage and nearly all highway freight trucks, locomotives and commercial marine vehicles are powered by diesel engines.

Priority funding is available for projects that significantly reduce diesel emissions and exposure in areas designated as having poor air quality. Projects that engage and benefit local communities that demonstrate efforts to reduce emissions may also apply for funding.

Since 2008 the EPA has awarded nearly 700 grants, many of which fund cleaner diesel engines that operate in economically disadvantaged communities whose residents suffer from asthma, heart and lung disease.

*Source: US EPA Media Relations, 26 February 2016*

## Beware of toxins in the clothes you purchase

Thousands of chemicals are used in clothes manufacturing. Researchers at Stockholm University have examined if there are chemicals in the clothes we buy as well. Several substances related to health risks were identified and not even organic cotton was a guarantee for non-toxic textiles.

In a new thesis, 60 garments from Swedish and international clothing chains have been tested. An initial analysis found thousands of chemicals in the clothes and around a hundred were primarily identified. Several of the substances were not on the producer's lists and are suspected to be by-products, residues or chemicals added during transport.

"Exposure to these chemicals increases the risk of allergic dermatitis, but more severe health effects for humans as well as the environment could possibly be related to these chemicals. Some of them are suspected or proved carcinogens and some have aquatic toxicity," said Giovanna Luongo, PhD in analytical chemistry at Stockholm University.

The researchers washed the clothes and then measured the levels of chemicals. Some of the substances were washed off, with a risk of ending up in aquatic environments. Others remained to a high degree in the clothes, becoming a potential source of long-term dermal exposure. It is difficult to know if the levels of these harmful substances are hazardous, and what effects chemicals in our clothes can have in the long run.

*Source: ScienceDaily, 23 October 2015*

## WILL EUROPE BAN THE USE OF GLYPHOSATE?

The European Parliament has now adopted a resolution strongly opposing the Commission proposal to re-approve the controversial weedkiller, glyphosate, for use in Europe for 15 years.

While the 374 to 225 vote is non-binding on the European Commission and EU governments, it will nevertheless carry strong moral weight since it comes from the EU's only elected body directly representing EU citizens and will force a discussion of the issues raised.

*Source: The Ecologist*

## WorkSafe Victoria takes the initiative with employer advice about glyphosate

WorkSafe Victoria has issued an information sheet advising employers about minimising risks to employees and others when using herbicides such as glyphosate.

It provides a background on the production and uses of the herbicide and the decision by the International Agency for Research on Cancer (IARC) to classify it as probably carcinogenic to humans (Group 2A).

WorkSafe believes it is appropriate to provide information to Victorian employers about the current issue regarding the classification of glyphosate and to remind employers of their occupational health and safety duties relating to the use of the chemical despite the ongoing debate among international health and regulatory bodies concerning the IARC classification.

The paper outlines the duties of employers in relation to up-to-date material safety data sheets and the risk management requirements in accordance with hierarchy of control measures.

It is hoped that WorkSafe WA will be encouraged to take a similar approach.

Source: WorkSafe Victoria, February 2016

## Reducing workplace exposure to silica – US shows the way

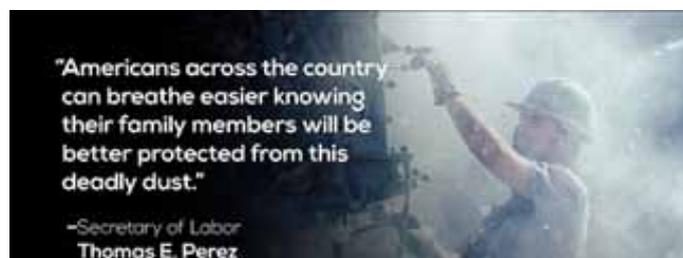
In a surprising move the US Government has gone where the UK had refused to go, introducing new standards to sharply reduce workplace exposures to silica. The move in March by the US Labor Department means the US will halve the occupational exposure standard from 0.1mg/m<sup>3</sup> to 0.05 mg/m<sup>3</sup> with the change phased in from June this year, with construction given one year's grace to meet the requirements and the other industries longer.

US officials estimate that the new silica standard, when fully in effect, will save hundreds of lives a year.

Exposure to silica is linked to lung cancer and other respiratory, kidney and auto-immune diseases.

David Michaels, head of the regulator OSHA, said "Today we are taking action to bring worker protection into the 21st century in ways that are feasible and economical for employers to implement."

Source: TUC Risks, 2 April 2016



## Asbestos-laden water pipes pose major health risk

Australians are facing a multi-billion dollar task over the next decade to repair or replace asbestos laden cement pipes in our water networks that have reached the end of their lifespan. The Water Services Association of Australia (WSAA) estimates the cost at approx. \$8 billion.

According to the ABC the Association revealed about 40,000 kms of water pipes contain asbestos cement that is starting to wear out and water utilities are monitoring how they are holding up.

It says that it is leading a project to compile best practice in the disposal of asbestos pipes, particularly with regard to minimising health risks.

Risks associated with asbestos fibres relate to airborne fibres. Fibres can become airborne when a pipe is undergoing works, decommissioning or is damaged. So all relevant regulations should be adhered to when handling asbestos cement pipes under these circumstances, to protect and ensure the health of employees and the public.

Source: SafetySolutions, 22 April 2016



# CANCERS

## Chemical exposure causes workers ovarian cancer

In South Korea a court has ruled that exposure to carcinogenic chemicals at a Samsung chip factory caused a worker's ovarian cancer.

The worker died in 2012 after battling the cancer for more than a decade.

The court said that the glues used to put a silicon wafer on a lead frame contained formaldehyde, a known carcinogen, and phenol, a known promoter of tumours, according to the material safety data sheets. The court also blamed many night shifts and the factory's ventilation system.

Bano Lin, an advocacy group, says it has details of more than 200 current or former Samsung workers suffering from grave diseases, such as leukaemia. Of them, 76 have died. Less than a dozen cases had a causal relationship recognised by courts or the Government.

Source: *Daily Mail, Australia*, 29 January 2016

## Chemical exposures result in bladder cancer in Japan

Two of five workers at a chemical factory manufacturing dyes and pigments are demanding that the Japanese Government acknowledge that their bladder cancer be recognised as job-related. Five workers who were employed there have developed bladder cancer.

The two, who have worked at the plant for nearly 20 years, say poor working conditions including a lack of ventilation, that routinely makes workers sick, could have caused the cancer.

All five workers were involved in mixing or drying aromatic amines including the potent bladder carcinogen o-toluidine.

The case parallels a US Goodyear plant where over 60 workers exposed to o-toluidine are reported to have developed bladder cancer.

Source: *TUC Risks* #736, 30 January 2016

## Talcum powder again found to cause cancer

Johnson & Johnson will pay \$72 million in damages to the surviving family members of a woman who died from ovarian cancer that was linked to the company's talcum powder products.

Jacqueline Fox of Alabama claimed in her lawsuit that she used Baby Powder and Shower to Shower for feminine hygiene for decades, until she was diagnosed with ovarian cancer two years ago. She died in October 2015.

The debate over talcum powder which is a naturally occurring material related to asbestos, made up of magnesium silicon and other elements, continues.

As early as 1971, scientists had identified that ovarian tumours contained high concentrations of talcum. The WHO has also identified the material used mostly in cosmetic products as "possibly carcinogenic to humans."

The plaintiff was one of roughly 70 plaintiffs on the ongoing litigation.

Readers will note the article in the *Monitor* of 15 July, 2015 where talcum powder was found to result in mesothelioma.

Source: *Bioscience Technology*, 25 February 2016



## Occupational categories linked to thyroid cancer

A recent study which examined 462 cases of thyroid cancer recorded in the Connecticut Tumor Registry has identified seven occupational groups that are at increased risk of thyroid cancer.

The researchers identified the following groups:

- health diagnosing and treating practitioners; nurses (largely attributed to exposure to radiation from diagnostic radiographs)
- building cleaners and pest controllers
- janitors and other cleaners (attributed to exposure to various cleaning chemicals e.g. petrochemicals, solvents, pesticides)
- cooks and food preparation workers
- retail sales persons (attributed to electro-magnetic fields generally from computerised cash registers and micro-ovens)
- customer service representatives and financial managers

Source: OHS Reps SafetyNetJournal, 355, 16 March 2016

## European unions call for an end to work cancer

Unions, warning that occupational cancer kills 100,000 people every year in the European Union, are calling for an end to this preventable waste of life.

The union federation, ETUC, says occupational cancer is the most common work-related cause of death, with between eight and 16 percent of all cancers in Europe the result of exposure at work.

Criticising the EU's do-nothing workplace health and safety strategy, Esther Lynch of the ETUC said "occupational cancer is the ignored epidemic. Workers are dying, literally in their thousands every year, and for 12 long years the EU has done nothing about it. These deaths are the result of preventable workplace exposures." She added "workers who have been exposed to cancer-causing substances or processes should get regular health checks during and after their employment."

Source: Safety Net 356

## Pancreatic cancer is four diseases, each with treatment possibilities

An international team lead by Australian researchers has studied the genetics of pancreatic cancer, revealing it is actually four separate diseases, each with different genetic triggers and survival rates, paving the way for more accurate diagnoses and treatments.

Over seven years, scientists analysed the genomes of 456 pancreatic tumours to determine the core processes that are damaged when normal pancreatic tissues change into aggressive cancers.

"We identified 32 genes from 10 genetic pathways that are consistently mutated in pancreatic tumours, but further analysis of gene activity revealed four distinct subtypes of tumours" said study leader Professor Sean Grimmond, Director of Research at the University of Melbourne Centre for Cancer Research.

"Knowing which subtype a patient has would allow a doctor to provide a more accurate prognosis and treatment recommendations. Importantly, there are already cancer drugs, and drugs in development, that can potentially target the parts of the damaged machinery driving pancreatic cancers to start.

Source: ScienceDaily, 24 February 2016





# LUNG CANCER DEATHS SOAR IN CHINA'S STEEL COUNTRY

The death rate from lung cancer in the heavily industrialised province surrounding Beijing has more than quadrupled in the last four decades, with researchers pointing to worsening air pollution as a likely culprit, according to a local cancer hospital and a report published Friday in an influential Chinese news outlet.

From 1973 to 2012, lung cancer cases in the province, Hebei, soared 306 percent, well above the national average, and accounted for almost a quarter of all cancer deaths, according to figures from the Tumor Hospital of Hebei Province.

The hospital's report said new cases of lung cancer were "rapidly surging" in Hebei, but it did not explore any possible causes of the surge. That may be because it touches on a very politically sensitive area: air pollution.

Chinese officials routinely censor news about how China's rapid economic growth has given rise to widespread environmental degradation, including some of the world's worst air pollution. Last year, a former television reporter's searing account of the country's catastrophic air pollution was pulled from the Internet after it caused a sensation.

*Source: The New York Times, 19 February 2016*

Picture above: A steel factory in Hebei Province, which surrounds Beijing. Satellite photos of northern China regularly show a miasma of smog centered on the province. Credit Kevin Frayer/Getty Images

# NANOPARTICLES

## New method to identify nanoparticles in tissue may shed light on their health impact

A team of researchers from Stony Brook University, SUNY Polytechnic Institute, and George Washington School of Medicine has demonstrated a pioneering method for the rapid visualisation and identification of engineered nanoparticles in tissue. The research, detailed in a paper published in *Microscopy Research and Technique*, is a cost-effective hyperspectral imaging method for nanomaterial analysis that may shed light on nanomaterials' potential health impacts.

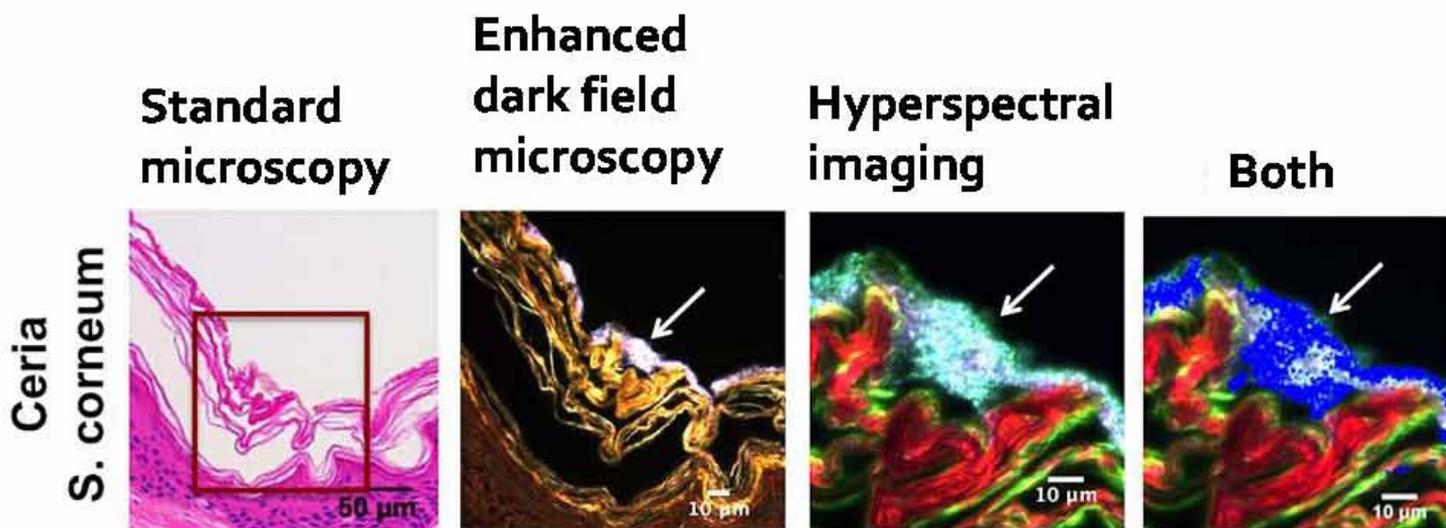
The researchers were able to detail how they located metal oxide nanoparticles in an ex vivo porcine skin tissue model of cutaneous exposure.

Molly Frame of Stony Brook University, a co-author of the paper said:

“By laying the groundwork for the most efficient means with which to visualize nano materials in great detail, we are able to better evaluate the health implications of these particles as they come into contact with humans in the work environment and beyond, potentially paving the way for enhanced measures that can ensure health and safety in the workplace.”

She explained that Stony Brook Biomedical Engineering lab had created a low volume Franz chamber system for exposure to the nanometal oxides. Its low volume aspect enabled very small amounts of the toxic nanometals to be used to test dermal penetration of the materials, a necessary step for the imaging.

Source: Science Daily, 26 March 2016



Nanoparticles are not visible by standard microscopy. The left image shows that ceria (cerium oxide) nanoparticles on the surface of the skin (stratum corneum) are simply not visible. Improvements in microscopy, such as enhanced dark field microscopy, enabled the research team to image very dense areas of the metal oxide, cerium oxide. The newer technology, hyperspectral imaging, enabled them to not only visualize the nanoparticles in lower density but also the elemental confirmation that it is ceria being viewed, not the oxide of a different element. - See more at: <http://sb.cc.stonybrook.edu/news/general/2016-03-29-new-method-to-identify-nanoparticles-in-tissue-may-shed-light-on-their-health-impact.php#sthash.LY4NXqiV.dpuf>

# MEMBERSHIP OF THE OCCUPATIONAL HEALTH SOCIETY OF AUSTRALIA (WA)



## **Membership Fees**

At the first meeting of the incoming Committee of the Society on 26 February, the matter of annual subscriptions was considered at length. It was agreed that the current fees should be retained at \$50 for ordinary members and \$20 for students.

## **Subscription to the *Monitor***

The availability of the *Monitor* newsletter on a no-cost basis was also discussed and, while it was confirmed that the widest local, national and international audience should continue to have access to the publication (currently some 530 recipients), it was reasonable to expect recipients to become members of the Society.

Local members enjoy discounts at events organised by the Society.

Readers of the *Monitor* are therefore being encouraged to consider completing the Application for Membership which appears in every edition.

The *Monitor* is the only publication available at this time that provides readers with information on events and research being carried out worldwide, ensuring a wide and authoritative coverage of occupational health, hygiene, workers' compensation and safety.

The Committee feels that membership of the Society is warranted and the nominal fees assist in ensuring the continuation of the *Monitor*.



## Occupational Health Society of Australia (WA)



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

\$50 ordinary membership

\$20 student membership.

Simply email [safety@marcsta.com](mailto:safety@marcsta.com) with your details.

### Members - Ordinary

Alan CLARKSON (COHSPrac), SHEQ Australia  
Allaine COLEMAN, CGU Workers' Compensation  
Dr Peter CONNAUGHTON  
Maria DANIEL  
Debbie GASKIN, DFES  
Paulette GAYTON  
Lynette GILBERT, QHSE Consultant, Tidehill Pty Ltd  
Patrick GILROY AM, MARCSTA  
Ross GRAHAM  
Anthony GREEN, Holcim  
Dr Janis JANSZ, Curtin University  
Ralph KEEGAN, Frontline Safety and Training Services  
Sheryl KELLY, Kreating Inventive Safety Solutions  
Dave LAMPARD, WA Police Union  
Shona LINDLEY, Jardine Lloyd Thompson  
Robert LOERMANS, Chevron  
Joe MAGLIZZA, Holcim Australia Pty Ltd  
Alison MARTINS, OH&S Consulting  
Peter McMAHON, Main Roads WA  
Peter NICHOLLS, FMR Investments  
Dr Nicol ORMONDE, Ormonde Health Consulting  
Dr Karina POWERS, Ability OPN  
Peter ROHAN, Department of Mines and Petroleum  
Prof Geoffrey TAYLOR, Curtin University  
Dr Kar Chan WAN, OccuMed

### Members - Student

Muhammad AHMED, Student, Curtin University  
Georgina GREENLAND, Student, Curtin University  
Jacqueline LUSENO, Student, Curtin University  
Deepak MARU, Student, Curtin University  
Tim RICHARDS, Student, Curtin University  
Izzie SHMUKLER, Student



## Occupational Health Society of Australia (WA)

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

The aims of the Society are:

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

**Visit [www.ohswa.marcsta.com](http://www.ohswa.marcsta.com) for more information.**



# Occupational Health Society of Australia (WA)

## APPLICATION FOR MEMBERSHIP

### MEMBER INFORMATION

Title (Mr, Mrs, Ms, Dr etc)	
Firstname	
Surname	

### PREFERRED MAILING DETAILS

Address			
Suburb		Postcode	
Home Phone			
Mobile			
E-Mail			

### EMPLOYMENT INFORMATION – Only complete if you wish company to be recorded against your name

Company/Self Employed	
Work Phone	
E-Mail	

### EDUCATIONAL/PROFESSIONAL DETAILS (if applicable)

Please attach your resume.
----------------------------

### APPLICATION FOR: (an invoice will be issued)

- Student Membership \$20       General Membership \$50

### AGREEMENT / SIGNATURE

I certify that the information provided in this application is correct and I agree to adhere to the constitution and code of ethics of the Association. I also give consent to the Society to collect, use and disclose my personal information in accordance with the National Privacy Principles in matters relating to the Society.

Signature \_\_\_\_\_ Date \_\_\_\_\_

POST OR EMAIL THIS APPLICATION TO THE ADDRESS BELOW: