

Latest figures for deaths related to drug poisoning

The Office for National Statistics has released the latest figures for deaths related to drug poisoning (involving controlled and/or non-controlled drugs) and drug misuse in England and Wales from 1993 onwards (<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoningnenglandandwales/2017registrations>).

There were 3756 deaths relating to drug poisoning in England and Wales in 2017, a rate of 66.1 deaths per 1 million population, and similar to levels seen in 2016.

Two-thirds of drug-related deaths were related to drug misuse, accounting for 43.7 deaths per 1 million in 2017; although this was lower than the rate of 45.6 found in 2016, the difference is not statistically significant.

The north east had a significantly higher rate of deaths relating to drug-misuse than all other English regions; London had a significantly lower rate.

Deaths involving cocaine and fentanyl continued to rise while deaths related to new psychoactive substances halved in 2017.

Routine screening of relatives of patients with aortic disease could save lives

Research shows that over 30% of relatives of patients suffering from thoracic aortic diseases have an underlying genetic predisposition to developing an aortic disease themselves (<https://doi.org/10.1161/JAHA.118.009302>).

The study highlights the importance of routine imaging and genetic testing of relatives of patients affected by thoracic aortic diseases in order to identify the diseases early.

The research also suggests that current guidelines for the condition are likely to result in the under-treatment of patients who are potentially at-risk, particularly as screening is not routinely performed in the UK.

Serious case reviews of sudden unexpected infant deaths highlight need to reach high-risk families

Research has been undertaken to develop a detailed understanding of the circumstances of sudden unexpected death in infancy cases in England which were subject to serious case review (Garstang and Sidebotham, 2018). Sudden unexpected death in infancy remains a significant problem with around 300–400 cases annually in England and Wales.

The researchers found that most cases of sudden unexpected death in infancy occurred in hazardous sleep environments and were potentially preventable. They occurred in families well known to services with concerns about neglect, substance misuse and poor engagement.

The study examined serious case reviews in England from April 2011 to March 2014. These were cases of infants aged 0–2 years for whom no clear medical or forensic cause of death was found. Serious case reviews are held to improve the way professionals and agencies work individually and collectively to safeguard and promote the welfare of children.

The researchers gained access to 27 out of the 30 reviews that were held during that period.



Dr Joanna Garstang, Honorary Associate Clinical Professor and Consultant Community Paediatrician, Division of Mental Health and Wellbeing, Warwick Medical School, Warwick

They found that in 18 cases parents did not engage with professionals, 18 families suffered alcohol or drug dependency, there were 14 cases of parental mental health problems, in 13 cases parents had criminal records and there were nine cases of domestic abuse.

Analysis also highlighted that 18 deaths occurred in highly hazardous sleep environments; 16 of those involved cosleeping and 13 of those occurred with parents who were drunk or had taken drugs.

Dr Garstang commented:

‘A remaining challenge is how to deliver safe sleep messages to high-risk families who may be hard to reach. Despite 25 years of safe sleep campaigns, some parents are still not receiving, not hearing, not understanding, or choosing not to follow this advice, resulting in many infants being exposed to hazardous sleep situations. Future research needs to focus on how best to support and engage with these vulnerable families.’

Garstang JJ, Sidebotham P. Qualitative analysis of serious case reviews into unexpected infant deaths. *Arch Dis Child*. 2018 May 25. pii: archdischild-2018-315156. <https://doi.org/10.1136/archdischild-2018-315156>

Obstructive sleep apnoea independently predicts lipid levels

In a cross-sectional study (Gündüz et al, 2018), investigators identified strong associations between several measures of severity of obstructive sleep apnoea and higher total cholesterol, higher low-density lipoprotein cholesterol, elevated triglyceride levels, and lower high-density lipoprotein cholesterol levels. Lipid status was influenced by geographical location with the highest total cholesterol concentration recorded in northern Europe.

The analysis included 8592 adults across Europe who were not diagnosed with hyperlipidaemia and were not taking lipid-lowering drugs, aged 50.1 ± 12.7 years, 69.1% male, body mass index 30.8 ± 6.6 kg/m²,

and with a mean apnoea–hypopnoea index 25.7 ± 25.9 events/hour).

‘Our data clearly suggest that sleep apnoea may have a negative impact on lipid levels, which may in part explain the association between sleep apnoea and increased risk for cardiovascular disease,’ said senior author Dr Ludger Grote, of Gothenburg University, Sweden. ‘Patients with sleep apnoea therefore need careful management of all cardiovascular risk factors including hyperlipidaemia.’

Gündüz C, Basoglu OK, Hedner J et al; European Sleep Apnea Database Collaborators. Obstructive sleep apnoea independently predicts lipid levels: Data from the European Sleep Apnea Database. *Respirology*. 2018 Aug 21. <https://doi.org/10.1111/resp.13372>

Women and men experience different benefits from low-calorie diets

The PREVIEW lifestyle intervention study is, to date, the largest, multinational study concerning the prevention of type 2 diabetes. It is an ongoing 3-year multicentre, randomized controlled trial, in which eligible adult participants initially followed an 8-week low-energy diet. The aim was to induce weight loss of at least 8% to qualify for inclusion in the randomized intervention where the focus is on long-term weight loss maintenance. The authors hypothesized that the initial, fixed low-energy diet would have different metabolic outcomes in men than women.

Participants were recruited from eight sites in Europe, Australia and New Zealand. Those eligible for inclusion were overweight individuals (body mass index $\geq 25 \text{ kg/m}^2$) with pre-diabetes according to American Diabetes Association criteria. Outcomes of interest included changes in insulin resistance, fat mass, fat free mass and metabolic syndrome Z-score.

In the study of over 2000 overweight individuals with pre-diabetes who followed a low-calorie diet for 8 weeks (Christensen et al, 2018), men lost significantly more body weight than women, and they had larger

reductions in a metabolic syndrome score, a diabetes indicator, fat mass and heart rate. Women had larger reductions in high-density lipoprotein cholesterol, hip circumference, fat free mass and pulse pressure than men.

‘Despite adjusting for the differences in weight loss, it appears that men benefitted more from the intervention than women. Whether differences between genders persist in the long term and whether we will need to design different interventions depending on gender will be interesting to follow,’ said lead author Dr Pia Christensen, of the Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark.

The researchers stated that it will be important for future studies to investigate whether the greater decreases in fat free mass, hip circumference and high-density lipoprotein cholesterol in women after rapid weight loss compromise maintenance of weight loss and future cardiovascular health.

Christensen P, Meinert Larsen T, Westerterp-Plantenga M et al. Men and women respond differently to rapid weight loss: Metabolic outcomes of a multi-centre intervention study after a low-energy diet in 2500 overweight, individuals with pre-diabetes (PREVIEW). *Diabetes Obes Metab.* 2018 Aug 7. <https://doi.org/10.1111/dom.13466>

Updated international guideline on assessment and management of polycystic ovary syndrome

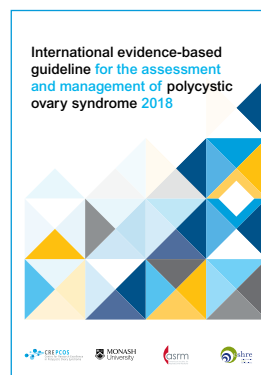
An updated international evidence-based guideline for the assessment and management of polycystic ovary syndrome has been published (https://www.monash.edu/__data/assets/pdf_file/0004/1412644/PCOS-Evidence-Based-Guideline.pdf).

The guideline integrates the best available evidence with international, multidisciplinary clinical expertise and consumer preferences to provide guidance for health professionals, consumers and policy makers. The guideline and translation programme promote accurate and timely diagnosis and optimal and consistent assessment and treatment of polycystic ovary syndrome, with prevention

of complications and improved patient experience and health outcomes for the one in ten women worldwide with polycystic ovary syndrome.

Governance included an international advisory board from six continents, a project board, five guideline development groups with 63 members, consumer and translation committees.

The guideline concludes that the overall evidence is low to moderate quality, requiring significant research expansion in this neglected, yet common condition. Guideline translation will be extensive including a multilingual patient mobile application and health professional training.



Many young people do not know when female and male fertility declines

Most students underestimate the impact of female and male age on fertility, finds research from Australia (<https://doi.org/10.1080/14647273.2018.1482569>). Less than half could correctly identify the age when a woman's fertility declines and even fewer knew when male fertility declines.

Drug repurposing may be of limited clinical benefit

‘Repurposing’ existing drugs can be valuable, but a study found that only 2% of new molecules entering clinical trials were ultimately launched in an area other than the one they were initially tested in (<https://doi.org/10.1016/j.drudis.2018.06.012>). There were no predictive patterns among successfully repurposed products, with similar success rates for small and large molecules, and successes across a wide range of therapeutic areas.

Better optimization can lower risk of infection in patients undergoing hip replacement

A prospective observational cohort study concluded that identification of modifiable factors, use of targeted interventions and beneficial modulation of some of these factors could be effective in reducing the incidence of prosthetic joint infection ([https://doi.org/10.1016/S1473-3099\(18\)30345-1](https://doi.org/10.1016/S1473-3099(18)30345-1)).

Depression and antidepressants increase risk of venous thromboembolism

A systematic review and meta-analysis has found that depression and the use of antidepressants are each associated with an increased risk of venous thromboembolism (Kunutsor et al, 2018). The study has also shown that each class of antidepressants is associated with an increased risk of venous thromboembolism.

There had been previous reports that both depression and use of antidepressant drugs might be associated with an increased risk of venous thromboembolism, but these were conflicting.

Although the study could not prove if the observed findings are mainly driven by the antidepressant drugs or depression itself or both, it does show that a relationship exists between depression, antidepressant use and venous thromboembolism. The findings highlight the need for clinicians to evaluate patients' excess risk of venous thromboembolism.

Kunutsor SK, Seidu S, Khunti K. Depression, antidepressant use, and risk of venous thromboembolism: systematic review and meta-analysis of published observational evidence. *Ann Med*. 2018 Jul 12:1-17. <https://doi.org/10.1080/07853890.2018.1500703>

Death rates from cerebrovascular disease are declining overall in Europe

New research (Shah et al, 2018) has shown that deaths from cerebrovascular disease are declining overall in Europe but that in some countries the decline is levelling off or death rates are even increasing.

Cerebrovascular disease is the second single largest cause of death in Europe after heart disease, accounting for 9% of deaths in men and 12% of deaths in women each year.

The study used data from the World Health Organization to examine mortality trends in ischaemic stroke, haemorrhagic stroke and subarachnoid haemorrhage in Europe between 1980 and 2016. Age-standardized mortality rates from stroke were higher in men than in women for all countries. For stroke, they were much lower in western Europe than the rest of the continent.

Across the whole of Europe for the most recent period, there had been significant decreases in death rates from all three types of cerebrovascular disease in 33 (65%) countries for men and women. However, there had been increases in three countries (6%) for men (Azerbaijan, Georgia and Tajikistan) and in two countries (4%) for women (Azerbaijan and Uzbekistan). Subarachnoid haemorrhage



Dr Nick Townsend, Associate Professor in Public Health Epidemiology, Department for Health, University of Bath, Bath

among women was the only type of cerebrovascular disease for which more countries demonstrated plateauing or increasing trends than decreases in recent years.

'When we looked at the type of stroke and for the most recent period for which data were available, the trends could be quite different,' said lead author, Dr Nick Townsend, associate professor in public health epidemiology, University of Bath, Bath. 'This shows

that considering all cerebrovascular disease over the whole period hides a lot of the story. In the most recent period, there were increases in ischaemic stroke in eight countries among men and nine for women, increases in haemorrhagic stroke in three countries in men and one for women, and increases in subarachnoid haemorrhage in five countries for men and eight countries for women.'

He added: 'Our findings highlight a need to counter inequalities by understanding local contexts in disease occurrence and treatment.'

Shah R, Wilkins E, Nichols M, Kelly P, El-Sadi F, Wright FL, Townsend N. Epidemiology report: trends in sex-specific cerebrovascular disease mortality in Europe based on WHO mortality data. *Eur Heart J*. 2018 Aug 14. <https://doi.org/10.1093/eurheartj/ehy378>

Cardiac magnetic resonance imaging shows early warning signs of heart problems in patients with newly diagnosed lupus

Cardiovascular disease is a leading cause of death in patients with lupus. A new study showed that imaging tests revealed signs of cardiac impairment in patients newly diagnosed with lupus, even before they had any symptoms of chest discomfort (Guo et al, 2018).

To determine whether cardiac magnetic resonance imaging might uncover early indicators of silent heart problems in patients with lupus, a team from China studied 50 patients recently diagnosed with lupus, 60 patients with longstanding lupus, and 50 healthy controls.

Imaging tests revealed structural and functional changes in the hearts of patients with lupus, and the extent of the changes – including signs of scarring, or fibrosis – were related to lupus stage. The findings indicate that early detection and treatment of heart problems may benefit patients with lupus.

Current tests that assess lupus patients' heart health often do not examine changes that are visible with cardiac magnetic resonance. Therefore, cardiac magnetic resonance may be useful for detecting the markers of cardiac problems that arise early in the disease process. When these markers

are evident, certain therapies may help protect patients' hearts from additional damage.

'Our findings may affect current lupus diagnostics and treatment – meaning more patients with silent cardiac insults could be identified and receive proper treatment,' said Dr Jun Pu, of Shanghai Jiao Tong University in China.

Guo Q, Wu LM, Wang Z et al. Early detection of silent myocardial impairment in patients with new onset drug-naïve systemic lupus erythematosus - a three-center prospective study (Myocardial Impairment in New Onset SLE). *Arthritis Rheumatol*. 2018 Aug 2. <https://doi.org/10.1002/art.40671>

Mindfulness improves sleep-related measures in patients with fibromyalgia

Researchers have conducted the first-ever study exploring the effects of mindfulness for improving sleep in individuals with fibromyalgia (Amutio et al, 2018).

Although practicing mindfulness has already shown promise in reducing the general symptoms of fibromyalgia, this is the first time its impact on sleep has been specifically studied.

Involving researchers from the UK, Spain and Chile, the randomized controlled trial included 39 middle-aged women diagnosed with fibromyalgia, as the condition has a seven:one higher prevalence in women aged 20–50 years old compared to men of the same age.

Participants were allocated either to an intervention group or a waiting list control group. The intervention involved 2-hour weekly group meditation sessions over a period of 7 weeks, with training in mindfulness exercises as well as other contemplative techniques. Assessments were taken before, after and 3 months following the intervention.

Results showed that compared to the control group, individuals in the mindfulness group demonstrated significant improvements

across each sleep-related measure, with the intervention effects maintained at the follow-up assessment:

- 30% improvement in sleep quality
- 23% improvement in subjective insomnia
- 22% improvement in sleep impairment
- 20% improvement in daytime sleepiness.

Dr William Van Gordon, from the University of Derby's Centre for Psychological Research, said: 'This study shows that meditation can improve the overall sleep quality of people suffering from chronic pain conditions such as fibromyalgia. The findings are important because poor sleep quality has been shown to intensify pain, fatigue, and social interaction problems in people suffering from fibromyalgia.'

He concluded: '...the evidence base for using mindfulness as a means of treating fibromyalgia is starting to look more convincing.'

Amutio A, Franco C, Sánchez-Sánchez LC, Pérez-Fuentes M del C, Gázquez-Linares JJ, Van Gordon W, Molero-Jurado M del M. Effects of mindfulness training on sleep problems in patients with fibromyalgia. *Front Psychol*. 2018. <https://doi.org/10.3389/fpsyg.2018.01365>

Competencies for personalized, culturally sensitive safeguarding for adults

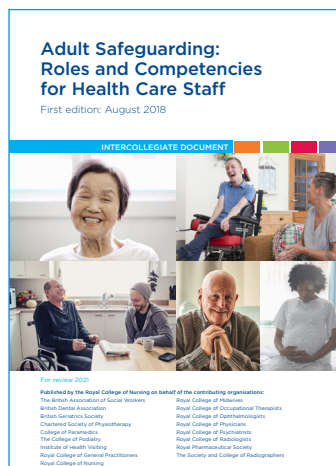
Health-care staff frequently work with people in their moments of greatest need and can witness health and social inequalities which have a direct impact on the lives of people they care for.

An intercollegiate document, involving over 30 health-care organizations, has been designed to guide professionals and the teams they work with to identify the competencies they need in order to support individuals to receive personalised and culturally sensitive safeguarding (<https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/>

publications/2018/august/pdf-007069.pdf). It sets out minimum training requirements along with education and training principles.

The document is concerned with the competencies required to support adult safeguarding. It focuses on the knowledge and skills needed to undertake this important and core professional role.

The document sets out a framework that will help staff, employers and commissioners understand the role and level of education, competence awareness and systems which correlate to a particular job purpose.



Exercise improves symptoms of patients with chronic kidney disease

Just 12 weeks of aerobic and strength-based exercise reduces symptoms and levels of fatigue in patients with chronic kidney disease, a new study has found (Wilkinson et al, 2018).

The researchers randomly divided 36 non-dialysis patients with chronic kidney disease into two groups. The first group completed aerobic exercises, such as walking and cycling. The second group was given strength training exercises, such as leg presses, in addition to the aerobic activities. Exercises were completed three times per week for the duration of the study. The difficulty of the exercises was increased as the patients got fitter and stronger.

Symptoms were measured using a kidney-specific symptom questionnaire which asked patients to rate on a scale of 0 to 5 how frequent and how much impact 11 different symptoms have on their lives.

Across both groups, the total number of symptoms was reduced by 17%, with large improvements seen in fatigue, with reductions between 10 and 16%. Performing aerobic exercise reduced the symptom 'shortness of breath' by 40%, and 'itching' by 35%.

By adding strength training exercises, participants reported an increase in 'muscle strength and power' by 41%, as well as feeling less weak and having fewer muscle spasms and episodes of stiffness.

Dr Tom Wilkinson, from the University of Leicester's Department of Infection, Immunity and Inflammation, said: 'We have now shown that exercise has positive benefits on patients' reported symptoms. To maximise the health benefits, patients should undertake both aerobic and strength training exercises.'

Wilkinson TJ, Watson EL, Gould DW et al. Twelve weeks of supervised exercise improves self-reported symptom burden and fatigue in chronic kidney disease: a secondary analysis of the 'ExTra CKD' trial. *Clinical Kidney Journal* 2018. <https://doi.org/10.1093/ckj/sfy071>