

Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

Reviewers

Addiction

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substance misuse

Cardiovascular disease

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Diabetes

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Obstetrics and gynaecology

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Sexual health

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Smoking cessation

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Cardiovascular disease

Running significantly reduces cardiovascular and all cause mortality risk

Even modest amounts of running, 5-10 minutes a day, at a relatively gentle pace, < 6 miles an hour, can significantly lower the risk of death from cardiovascular disease and all causes, according to a study in the *Journal of the American College of Cardiology*.

This was a sizeable observational study involving 55,137 adults spanning a broad age range (18 to 100, mean age 44 years). Duration and intensity of running were recorded on a medical history questionnaire by leisure time activity. The mean period of follow-up was 15 years.

Nearly a quarter (24%) of participants went running. There were 3,413 deaths from all causes and 1,217 cardiovascular deaths during the study period.

Runners had a 30% and 45% lower adjusted risk of all cause and cardiovascular mortality, respectively, when compared with non-runners. Furthermore, they had an extra

three-year life expectancy benefit.

In dose-response analyses, the mortality benefits in runners were similar across quintiles of running time, distance, frequency, amount, and speed, compared with non-runners.

Interestingly even fairly modest running patterns appeared to confer significant benefit.

Running one to two sessions per week, running for up to 50 minutes, less than 6 miles, < 506 metabolic equivalent-minutes or at a pace of less than 6 miles per hour lowered mortality risk, compared with non-runners.

The researchers also looked at running behaviour and found that habitual runners had the most significant benefits, with 29% and 50% lower risk of all cause and cardiovascular mortality, respectively, compared with those who never ran.

This study provides further motivation for people to get off the sofa, put on their trainers and hit the road.

It also seems important to maintain the running habit but there is no need to go too hard at it. Running relatively short distances at a fairly slow pace for as little as 5-10 minutes per day can result in a marked reduction in the risk of death from all causes and cardiovascular disease.

The benefits seen in this study are substantial and could be attainable by a significant proportion of the population.

DR PETER SAVILL

● Lee D-C, Pate RR, Lavie CJ et al.
Leisure-time running reduces all-cause
and cardiovascular mortality risk.
J Am Coll Cardiol 2014;64(5):472-481.
doi:10.1016/j.jacc.2014.04.058 »

Sexual health

Could HPV infection be transmitted by the use of vibrators?

Human papilloma virus (HPV) was detected on vibrators 24 hours after cleaning, in a small study in the United States. This finding suggests that shared use of sex toys could lead to transmission of HPV.

Women aged 18 to 29 were recruited as part of a larger study looking into the sexual behaviour of women who have sex with women and men.

A total of 28 women were recruited and 20 consented to participate. These women were sent kits that contained two new vibrators designed for vaginal use, a commercially available cleaning product, and swabs.

Vibrator 1 was a 'rabbit' style vibrator which is designed as a shaft for inserting into the vagina and an arm for clitoral stimulation, composed of a thermoplastic elastomer (TPE) material. Vibrator 2 was a smooth surface silicone-based product.

Participants used the vibrators

intravaginally and alone on different occasions but at least 24 hours apart, and were randomised to the order of vibrator use.

They were asked to clean the vibrators using water and the cleaning product supplied. Self-sampled vaginal swabs were collected for HPV testing as well as three sets of samples from the vibrators: immediately after self-use, immediately after cleaning and 24 hours after cleaning.

Participants also completed an online survey which asked about vibrator use and cleaning procedures.

All the vaginal swabs were tested for 37 HPV genotypes. The vibrator samples were tested only if the vaginal swab was positive. The 24 hour post-cleaning vibrator swab was tested only if the vibrator swab tested positive for HPV immediately after cleaning.

HPV was detected in 75% (9/12) of the vaginal samples. Vibrator 1 (TPE material) had more samples positive for HPV at every collection time frame and especially 24 hours after cleaning. Vibrator 2 (silicone) had similar numbers of samples that tested positive before and immediately after cleaning but no samples tested positive 24 hours after cleaning, see table 1, below.

HPV, which causes genital warts, is a common sexually transmitted infection in both the UK and the United States.

More than 65% of women who identify themselves as bisexual report the use of a sex toy with a partner.¹

This study was designed to add to the understanding of the mode of transmission of HPV through sex toys and role of cleaning in its prevention.

Although small and lacking in power, this study suggests HPV transmission via shared vaginal sex toys might be feasible, even after cleaning.

The likelihood of HPV detection differs depending on the material used; the authors speculate that more

swabs tested positive from vibrator 1 because it was composed of a more porous material than vibrator 2.

The authors also suggest potential further research that might include the use of different cleaning products to clean sex toys, as well as advice on storage after cleaning.

DR RICHARD MA

● Anderson TA, Schick V, Herbenick D et al. A study of human papillomavirus on vaginally inserted sex toys, before and after cleaning, among women who have sex with women and men. *Sex Transm Infect* 2014; 90: 529-531

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1 Herbenick D, Reece M, Sanders SA et al. Women's vibrator use in sexual partnerships: results from a nationally representative survey in the United States. *J Sex Marital Ther* 2010;36:49-65



Table 1

Frequency of human papillomavirus detection on vibrators

	Vibrator 1 (TPE)		Vibrator 2 (silicone)	
	Shaft n = 9 (%)	Handle n = 9 (%)	Shaft n = 9 (%)	Handle n = 9 (%)
Before cleaning	8/9 (89)	7/9 (78)	6/9 (67)	6/9 (67)
Immediately after cleaning	5/9 (56)	4/9 (44)	4/9 (44)	3/9 (33)
24 hours after cleaning*	2/5 (40)	2/4 (50)	0/4 (0)	0/3 (0)

*Only samples HPV positive immediately after cleaning were tested (TPE: shaft n = 5, handle n = 4; Silicone: shaft n = 4, handle n = 3)
TPE = thermoplastic elastomer

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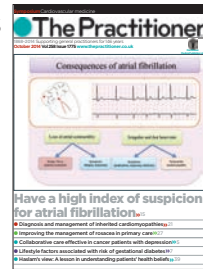
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Smoking cessation

Smoking cessation services for inpatients could help more than a million smokers

Offering smokers admitted to hospital behavioural support and pharmacotherapy could help reduce smoking rates significantly, a national audit has shown.

A year's data, from April 2010 to March 2011, was extracted for more than half a million (551,320) patients aged over 15 registered with GP surgeries in England that contribute to The Health Improvement Network.

Combining this data with linked hospital episode data the researchers identified how many smokers had a finished consultant episode (FCE) during the study year.

Within the study population there were 172,537 FCEs delivered over 151,342 inpatient episodes. Smoking status was known for 74% of these patients and for 61% of those who did not have an FCE.

The prevalence of current and former smoking was higher in those patients who had a consultant episode compared with those who did not. Of patients with no FCE in the study year, 14.7% were current and 19.8% former smokers while for those with at least one FCE the figures were 17.0% and 30.2%, respectively. Overall one in six patients admitted to hospital was a current smoker.

The prevalence of current or former smoking was similar across most hospital specialties but was highest in

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those treated for mental illness. The prevalence of current smoking for those with mental illness at around 50% was more than double that for other specialties.

Smoking is the biggest avoidable cause of illness and death in the UK. Yet despite the high priority given to the delivery of smoking cessation interventions, the proportion of smokers who receive treatment in the UK remains low, and is falling.

Extrapolation of the data to the whole of England would suggest that around 2.6 million episodes of inpatient care are undergone by approximately 1.1 million smokers each year.

In 2013, NICE recommended routine and systematic delivery of smoking cessation support to smokers using secondary care.¹ However, up to now, the prevalence of smoking among patients using hospital services, and therefore the number who might benefit, was unknown.

The authors conclude that their findings 'indicate that default provision of behavioural support and pharmacotherapy to smokers treated as inpatients in English hospitals has the potential to reach 1.1 million smokers each year. NICE data indicate that this approach is cost effective for both hospitals and wider society.'

Extending this to outpatients would further increase the number of smokers reached, they add.

DR JEZ THOMPSON

● Szatkowski L, Murray R, Hubbard R et al. Prevalence of smoking among patients treated in NHS hospitals in England in 2010/2011: a national audit *Thorax* 2014;0:1-3

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1 National Institute for Health and Care Excellence. PHG48: Smoking cessation in secondary care: acute, maternity and mental health services. NICE. London. 2013

Mental health

Why do we like to put things off?

It will soon be time for the annual ritual of New Year's resolutions, which we invariably fail to follow and put off again until next year. It would appear that the blame lies with our prehistoric ancestors.

A twin study from the United States has found that procrastination (*pro*: in favour of, *crastinus*: tomorrow) is an inherited trait which is strongly linked to impulsivity.

Data were gathered from the Colorado Longitudinal Twin Study. There were 663 participants, from both identical and same-sex fraternal twin pairs.

Participants were asked to complete a number of questionnaires designed to measure procrastination, impulsivity and goal management ability. Behavioural genetic model-fitting analysis was used to determine the relative contribution of genes and environment.

Both procrastination and impulsivity were found to be moderately heritable (46% and 49% respectively). There was a perfect correlation ($r = 1.0$) between the genetic components of the two traits i.e. they are always inherited together.

Conversely, the environmental influences on the two traits were only weakly correlated ($r = 0.33$), which is the reason why procrastination and impulsivity can be distinguished as separate observable personality traits (moderately correlated; $r = 0.65$).

Further analysis suggested that there was a substantial overlap (68%) between the inheritance of procrastination-impulsivity and the inheritance of an inability to achieve both short- and long-term goals.

At first sight it would appear surprising that the genetic predisposition for procrastination and impulsivity is one and the same. We might have expected procrastinators to act slowly and only after careful deliberation. However, it does make sense: procrastinators may struggle to complete tasks, lack self-discipline and be easily distracted.¹

It has been suggested that impulsiveness was an advantageous trait for our hunter gatherer ancestors who needed the ability to act quickly and decisively.² However, it is a handicap in the modern world where we need to be able to prioritise and pursue long-term goals.

Previous studies have suggested that procrastination is only weakly linked to anxiety. Unexpectedly, perfectionists seem to be less likely to procrastinate than the rest of the population. There is a weak to moderate association with lack of self belief and depression.

A downward spiral may occur where procrastination leads to depression (as a result of perceived failure and social stigma), and depression in turn exacerbates procrastination.¹

Samuel Johnson felt that we are all to some extent prone to 'the folly of allowing ourselves to delay what we know cannot be finally escaped'.³

It can be a debilitating problem and further research, in particular to determine whether or not CBT is an effective treatment, should be undertaken without delay!⁴

In the meantime, my advice is to abandon New Year's resolutions.

DR PHILLIP BLAND

● Gustavson DE, Miyake A, Hewitt JK, Friedman NP. Genetic relations among procrastination, impulsivity and goal-management ability: implications for the evolutionary origin of procrastination. *Psychol Sci* 2014;25:1178-88

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- 3 Hale White W (Ed). Selections from Dr Johnson's "Rambler" (p83). Oxford University Press. 1907
- 4 Rozental A, Carlbom P. Internet-based cognitive behaviour therapy for procrastination: study protocol for a randomised controlled trial. *JMIR Res Protoc* 2013;2:e46

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Obstetrics and gynaecology

Anatomy and histology of the G-spot revealed

A small study from Poland has identified an anatomically distinct discrete G-spot within the vagina.

Anterior vaginal wall tissue was surgically removed, post-mortem, from eight women (age 37-68 years) who had died suddenly from acts of violence, suicide or drug overdose. Consent for each procedure was given by the Department of Forensic Medicine, Warsaw Medical University.

Excised specimens were subjected to microdissection and histological analysis which employed haematoxylin and eosin staining, and in two cases immunohistochemical staining as well.

In all eight women an anatomically distinct area was identified within the anterior vaginal wall. The area was located on average 4.5 cm proximal to the vagina's vulval opening, and was on average 7 mm long. In seven of the women the area was located just to the left of the urethra.

Histologically, it consisted of a neurovascular tangle of grape-like venous structures, resembling an arteriovenous malformation, with feeder arterioles within a fibroadipose tissue bed. Nerve bundles and a large nerve ganglion were also identified.

These neurovascular features are not typical of the rest of the vaginal wall, and the presence of the large nerve ganglion had not been described in this area previously.

In the 1950s Ernst Gräfenberg stated that an erotic zone was located on the vaginal wall along the course of the urethra. Later, and apparently in his honour, this became known as the

G-spot. Since then imaging techniques have been used to try and locate this area with precision, but with little success.

Two accompanying commentaries^{1,2} in the same issue of the *BJOG* continue to debate whether the G-spot is fact or fantasy.

The demonstration of an anatomically discrete, neurovascular structure containing a nerve ganglion, located in the vicinity of the presumed G-spot is of interest not just in the discipline of sexual medicine but also to gynaecologists as well.

The investigators plan further studies but in the meantime they caution surgeons operating in this area that 'precautions should be undertaken during an operation on the anterior vaginal wall to avoid ligating vasculature or injuring the G-spot complex.'

DR CHRIS BARCLAY

● **Ostrzenski A, Krajewski P, Ganjei-Azar P et al. Verification of the anatomy and newly discovered histology of the G-spot complex. *BJOG* 2014;121:1333-39**

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- 2 Puppo V. The G-spot does not exist. *BJOG* 2014;121:1341

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