

# RESEARCH

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**RESEARCH NEWS** All you need to read in the other general medical journals Alison Tonks, associate editor, *BMJ* [atonks@bmj.com](mailto:atonks@bmj.com)

## Kidney stones linked to heart disease in women

Research from the US has confirmed a long suspected association between kidney stones and coronary heart disease, although the link seems confined to women. Analyses of three large and longstanding cohorts showed that female nurses who reported a history of kidney stones at baseline had a higher risk of new coronary heart disease during follow-up than participants without a history of stones: incidence rates in Nurses Health Study I were 754 v 514 per 100 000 person years (adjusted hazard ratio 1.18, 95% CI 1.08 to 1.28) and in Nurses Health Study II were 144 v 55 per 100 000 person years (1.48, 1.23 to 1.78).

A significant association in a cohort of male health professionals disappeared after extensive adjustments for confounding factors such as dietary intake of calcium, body mass index, and use of thiazide diuretics. Altogether, the authors had data from nearly a quarter of a million men and women without heart disease who joined three cohorts in midlife. Roughly 17 000 developed new heart disease during two decades of follow-up.

This isn't the first time researchers have noticed more heart disease in people with kidney stones, say the authors. It seems likely that the association is real, whatever the mechanism behind it. There are several plausible possibilities, including a shared metabolic state that encourages both outcomes. Why women should differ from men is harder to explain.

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## Psychiatric illness contributes to high death rates among people with epilepsy

People with epilepsy are much more likely to die prematurely than members of the general population of the same age and sex. Seizures and the underlying diseases that cause seizures are often blamed, but new research from Sweden also implicates coexisting psychiatric disorders including depression and substance misuse. By interrogating Sweden's national registries, the authors found close to 70 000 individuals with a diagnosis of epilepsy who had been born between 1954 and 2009. Just under 9% of them died prematurely, at an average age of 34 years (n=6155, 8.8%). Of the

972 individuals who died of external causes (not underlying disease), three quarters (n=731) had a psychiatric diagnosis during their lifetime, most commonly substance misuse (n=549).

The odds of a premature death were 11 times higher for people with epilepsy than for general population controls of the same age and sex, and 11 times higher than for unaffected brothers and sisters. People with epilepsy had significantly increased odds of death from external causes, and risks were highest for individuals with comorbid psychiatric problems. Those with the combination of epilepsy and substance misuse, for example, were 21 times more likely to commit suicide, and 43 times more likely to die of a non-vehicular accident than population controls with neither disorder.

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## Helping men make decisions about PSA tests

Decision aids are designed to help patients make high quality decisions about thorny issues, such as whether to have a prostate specific antigen (PSA) test to screen for prostate cancer. Compared with usual care, both web based and print based decision aids helped improve knowledge, increase satisfaction, and reduce uncertainty in a trial of nearly 2000 middle aged and older men from the US. But neither aid had any appreciable impact on screening rates in the following year (45.3% with print decision aid v 47.6% with web decision aid v 44.7% with usual care).

The benefits of using a decision aid looked modest but were sustained for at least 13 months. The expected superiority of web over print failed to materialise, however. Instead, men assessed at one month were significantly more satisfied with the print option (60% highly satisfied v 52.2%,  $P=0.009$ ).

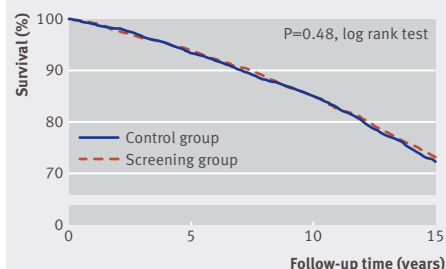
So decision aids do help men in the US, who make decisions about PSA every year, says a linked comment (doi:10.1001/jamainternmed.2013.6561). They may work better if we start to use them before a test becomes embedded in a nation's healthcare system: more than four fifths of these men had already been screened at least once before they entered the trial.

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## No support for population screening with echocardiography

### Survival over 15 years



Adapted from *JAMA Intern Med* 2013, doi:10.1001/jamainternmed.2013.8412

Echocardiographic screening didn't save lives or help prevent strokes or heart attacks in a study in adults recruited from the general population of Tromsø in Norway. International guidelines are right not to recommend it for risk assessment in unselected populations, say the authors.

Norwegian researchers were already tracking a large sample of adults from Tromsø, and in 1994 found they had to randomly select half for echocardiography because they hadn't the capacity to screen everyone. The test picked up abnormalities in 8.9% (290/3272) of those screened, most commonly valve disease. These individuals were referred for further investigations and treatment, but it made little difference to overall survival, which was identical in screened and unscreened adults during the next 15 years of follow-up (hazard ratio for death 0.97 (95% CI 0.89 to 1.06)).

The randomised design arose almost by accident, and none of the outcomes were pre-specified, but this experiment adds much needed evidence to recommendations based previously on consensus, says a linked comment (doi:10.1001/jamainternmed.2013.7029). Participants were unselected and mostly middle aged when screened. Transthoracic echocardiography may be non-invasive but can still cause harm. People with mild abnormalities may get anxious. People with normal tests may get complacent, says the comment. A normal echocardiogram does not rule out coronary artery disease.

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