

Disturbing pacemakers, and other stories

Magnetic drapes are used during surgery to hold metal instruments on the sterile field, but could interfere with the function of implantable electronic devices such as pacemakers and defibrillators. A magnetic drape with 70 magnets was placed with its centre over the pacemakers of 50 patients in a cardiology clinic. For pacemakers showing interference, the drape was pulled away in 3 cm increments until the interference stopped. Interference was observed in 94% of pacemakers, and was more likely in patients with lower body weight (*Anesth Analg* 2013;116:555-9, doi:10.1213/ANE.0b013e31827ab470).

In a randomised trial of antioxidant agents on the hearing threshold of patients, 120 adults with age related hearing loss (presbycusis) were allocated one of the following regimens for six months: ginkgo biloba, α lipoic acid and vitamin C, papaverine chlorohydrate and vitamin E, or placebo. Free radicals are known to play a part in the aetiology of presbycusis, yet this trial failed to show any significant change after treatment (*Journal of Laryngology and Otology* 2013;127:134-41, doi:10.1017/S0022215112003118).

Women with ovarian cancer who take metformin seem to do better than those who do not. Preliminary analysis of a retrospective case-control study (72 cases, 143 controls) indicated that the disease specific rate of survival at five years was significantly better in women taking metformin than in controls (73% v 44%, $P=0.0002$). Analysis excluding disease and patient factors still showed significantly improved survival at five years for women taking metformin (67% v 47%, $P=0.007$). Researchers say metformin is worthy of clinical trials in ovarian cancer (*Cancer* 2013;119:555-62, doi:10.1002/cncr.27706).

Stress, depression, and the risk of suicide often go unrecognised in US programmes of residency training. In a study of 21 surgeons in training, nearly half of those who completed a test of knowledge about the signs of stress and distress were well informed. Immediately after the trainees attended an interactive seminar by a surgeon, awareness and knowledge of correct information among the same group rose to 90%, slipping back to 77% four months later (*American Journal of Surgery* 2013;205:141-6, doi:10.1016/j.amsurg.2012.08.003).

Cardiovascular risk can be improved in people with type 2 diabetes by reducing blood glucose concentrations and lipid profiles and by weight loss. A systematic review of dietary interventions included 20 randomised controlled trials. Glycaemic control improved more with low carbohydrate, low glycaemic index, Mediterranean, and high protein diets than with control diets; the Mediterranean diet resulted in the biggest improvement. Low carbohydrate and Mediterranean diets led to greater weight loss, and high density lipoprotein increased

for all diets apart from the high protein diet (*American Journal of Clinical Nutrition* 2013;97:505-16, doi:10.3945/ajcn.112.042457).

In a Danish study of all twins with atrial fibrillation born since 1912, researchers matched each twin with four other twins without the disorder. Overall, co-twins of participants with atrial fibrillation had 20% higher rates of death than co-twins of unaffected twins. The death rate in identical twins was twice that in non-identical twins. The authors suggest that part of the increase in mortality comes from undiagnosed atrial fibrillation (*Circulation Arrhythmia and Electrophysiology* 2013;6:10-15, doi:10.1161/circep.112.971580).

A "signature" of loss and recovery of consciousness under propofol has been identified on high density electroencephalograms in people during gradual induction of, and emergence from, unconsciousness, while undertaking an auditory task. Researchers found specific changes in behaviour and electrophysiology that marked the transition between consciousness and unconsciousness, which could be used to monitor the brain activity of patients receiving general anaesthesia, to reliably determine whether they are actually unconscious (*Proceedings of the National Academy of Sciences* 2013, doi:10.1073/pnas.1221180110).

Physically demanding work could result in increased disability at older age. Irish researchers looked at work type (both paid work and unpaid housework) and disability in 357 adults aged 57-80 years, and found that over half the participants reported doing physically demanding work. A fifth of participants had complete function, but 65% were limited in function and 15% were disabled in their activities of daily living. Physically demanding work was directly related to functional limitations and disability in older age (*Irish Journal of Medical Sciences* 2013;182:47-55, doi:10.1007/s11845-012-0824-7).

Would your cholesterol improve if your partner was more involved with your effort to adopt a healthier lifestyle? In a randomised controlled trial, CouPLES (Couples Partnering for Lipid Enhancing Strategies, a lifestyle intervention) was tested over 11 months in 255 patients with high cholesterol. Patients received usual care, or a monthly telephone call for goal setting plus a support planning telephone call for their spouse. The intervention group significantly reduced calorie and fat intake and took significantly more intense exercise. However, both groups had similar levels of low density lipoprotein (*Preventive Medicine* 2013;56:46-52, doi:10.1016/j.ypmed.2012.11.001).

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