

MINERVA

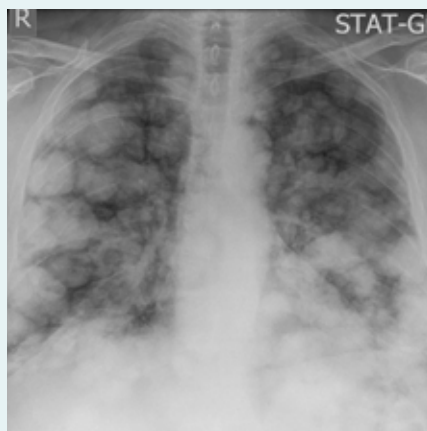
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Why are some combinations of musical notes perceived by Western listeners as pleasant and others not? Some attribute it to the phenomenon of “beating,” where dissonance increases the interference between frequency components in the ear. Others say that consonant chords contain harmonically related frequencies. On testing these two theories in people with congenital amusia (a neurogenetic disorder that causes abnormal pitch perception), researchers found that harmonicity, rather than beating, underlies the perception of consonance (*Proceedings of the National Academy of Sciences* 2012, doi:10.1073/pnas.1207989109).

The international neurosurgical community has yet to agree on how best to tackle spontaneous supratentorial intracerebral bleeds. Conservative measures include medical treatment and conventional craniotomy, but minimally invasive surgery (MIS) might have a place. A meta-analysis of 12 high quality, randomised controlled trials (of nearly 2000 patients) concluded that patients who would benefit from MIS more than other treatments were those of either sex, aged 30-80 years, who had superficial haematomas of 25-40 mL and Glasgow coma scores greater than nine, and who presented within 72 hours after onset of symptoms (*Stroke* 2012;43:2923-30, doi:10.1161/strokeaha.112.667535).

A fire that spread rapidly through an intensive care unit in the United Kingdom seems to have arisen from an oxygen cylinder that was being prepared to aid transfer of a self-ventilating patient to another hospital. The cylinder was placed on the bed with its valve pointing to the head of the bed, not yet connected to tubing. A loud hiss was emitted as the valve opened; sparks appeared at the cylinder outlet, followed immediately by a loud bang and four foot flames emerging from the valve of the cylinder (*Anaesthesia* 2012, doi:10.1111/anae.12089).

The sleeping tablet zolpidem could be responsible for a large number of inpatient falls. Researchers compared the fall rates of adult inpatients given zolpidem (n=4962) and those prescribed but not actually given zolpidem (n=11 358). Multivariate analysis found zolpidem use to be a strong, independent, and modifiable risk factor for inpatient falls (3.04% v 0.71%, P<0.001). The high risk remained after accounting for age, sex, insomnia, delirium status, dose, length of stay,



A 72 year old man presented to the emergency department with pleuritic chest pain and shortness of breath. A chest radiograph revealed numerous rounded opacities throughout both lungs, strongly suggesting metastatic deposits. On further questioning, he mentioned a swelling in the right sublingual region, and fine needle aspiration confirmed primary adenoid cystic carcinoma. He is currently undergoing treatment. Adenoid cystic carcinoma is relatively uncommon in the salivary gland and is often associated with spread to lungs. Patients can survive for many years, despite these radiographic changes, which are characteristically extensive.

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Patient consent obtained.

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visual impairment, gait problems, and cognitive impairment (*Journal of Hospital Medicine* 2012, doi:10.1002/jhm.1985).

Lonely older adults are at increased risk of health challenges, which in turn raises their stress levels. Researchers examined whether health related self protection (using positive reappraisals or avoiding self blame) could prevent increases in diurnal cortisol secretion and levels of C reactive protein (CRP). Among the lonely participants, self protection at baseline predicted lower increases of cortisol at two years and lower CRP levels at six years. Participants who were not lonely did not show these changes in the first place (*Psychosomatic Medicine* 2012;74:937-44, doi:10.1097/PSY.0b013e3182732dc6).



A 28 year old cyclist hit by a car in a road traffic incident

Try the picture quiz in **ENDGAMES**, p 48

Vitiligo—characterised by autoimmune melanocyte destruction—seems to protect against skin cancers, despite fairer skinned people having a higher risk of these cancers. Researchers contacted patients with vitiligo aged 50 or older and presenting to one dermatology clinic over 15 years. Half of the 2635 surveys were completed, and all skin cancers reported throughout each patient’s life were confirmed by pathology reports. Patients with vitiligo had a threefold lower probability of developing melanoma and non-melanoma skin cancers than non-vitiligo controls (*British Journal of Dermatology* 2012, doi:10.1111/bjd.121111).

Olanzapine, a drug usually used to treat psychosis, was tested in a randomised, double blind, placebo controlled study of patients with bipolar depression. Patients on olanzapine had significantly greater improvements than controls on depression rating scores in terms of response and remission, but not on actual recovery. In line with the usual side effects of olanzapine, this group gained significantly more weight and had higher cholesterol levels than controls (*British Journal of Psychiatry* 2012, doi:10.1192/bjp.bp.112.108357).

Children with migraine are at significant risk of impaired school performance, according to a Brazilian study of over 5600 children (*Neurology* 2012, doi:10.1212/wnl.0b013e318271f812). Teachers provided performance information, researchers captured symptoms of attention deficit and hyperactivity disorders, and parents gave information about headaches and behaviour. Children with episodic and chronic migraine were significantly more likely to perform poorly at school than children without headaches; school performance was significantly influenced by the severity and duration of headaches.

Smoke free legislation is associated with fewer hospital admissions for smoking related diseases in the heart, brain, and respiratory system (*Circulation* 2012, doi:10.1161/circulationaha.112.121301). Researchers did a random effects meta-analysis of 45 studies investigating 33 smoke free laws, with a median follow-up of 24 months. Comprehensive laws were associated with significantly lower rates of admission and death for all three disease groups. Differences in risk did not change with longer follow-up, and comprehensive laws were associated with larger changes in risk compared with workplace laws only.

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