

# MINERVA

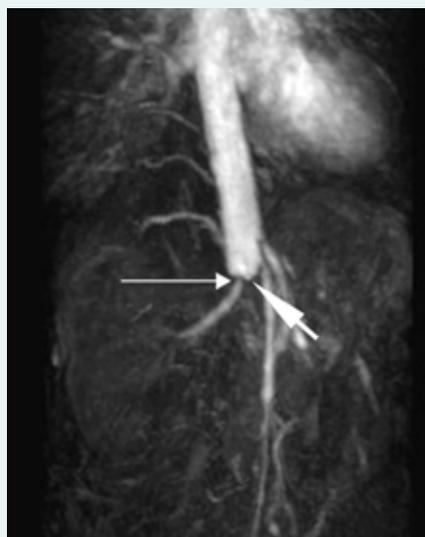
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People with diabetes have a markedly increased risk of myocardial infarction, but a study from Australia shows that their risk relative to the population without diabetes has decreased there by nearly a half during 1998-2010 (*Circuit Outcomes* 2014, doi:10.1161/CIRCOUTCOMES.114.000952). The average annual decline of 3-5% applied to both sexes and to everyone over the age of 55, but unfortunately not at all below that age. As tighter glucose control in itself has little effect on myocardial infarction, most of the benefit must be coming from other sources. At present, the myocardial infarction risk of Australians with diabetes is still about 3-4 times that of the rest of the population.

Concerns have been expressed about the possible adverse cardiovascular effects of sulfonylurea drugs for diabetes for the past 40 years. It's a measure of how little things have advanced that we are still having to pick up clues from cohort studies for lack of adequate randomised trials. In the Nurses' Health Study, 4902 women with diabetes but no cardiovascular disease at baseline were followed up for 34 years. Continuous sulfonylurea therapy for >10 years was associated with twice the risk of coronary heart disease compared with non-users, and combination therapy of metformin and sulfonylurea was associated with a three times greater risk of coronary heart disease compared with metformin monotherapy (*Diabetes Care* 2014, doi:10.2337/dc14-1306).

A substantial proportion of people with heart failure are iron deficient, and this is associated with poorer function and outcomes, independently of anaemia and other factors such as age, severity of disease, and renal function. Few studies of oral iron therapy have been done, but Vifor Pharma Ltd has stepped in to fund a double blind, randomised, placebo-controlled trial of long term intravenous iron therapy with ferric carboxymaltose (*Eur Heart J* 2014, doi:10.1093/eurheartj/ehu385). This resulted in improvement in functional capacity, symptoms, and quality of life. Minerva cites it not because she approves of drug companies trialling their own products, but as an illustration that the heart failure syndrome can often be helped by non-cardiac interventions.

Is there some unknown hormone that mediates the beneficial effects of exercise? Step forward irisin. It was called fibronectin type III domain-



A 46 year old woman who presented with seizures, bilateral papillo-oedema, and blood pressure of 250/140 mm Hg was diagnosed with malignant hypertension. Eight years earlier she had received pelvic radiotherapy for cervical cancer. Blood tests showed severe acute kidney injury (creatinine 477  $\mu\text{mol/L}$ ), and urinary tract imaging found that the kidneys had shrunk from 9.5 cm to 7.5 cm over the preceding four months. Magnetic resonance angiography showed complete occlusion of the infrarenal abdominal aorta (large arrow) as well as the right accessory and left renal arteries, with severe ostial stenosis of the right main renal artery (small arrowhead). These findings were consistent with occlusive vasculopathy secondary to radiotherapy. She was referred for revascularisation.

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containing protein 5 until somebody had the happy idea of naming it after the Greek messenger goddess Iris. A recent article (*Eur J Endocrinol* 2014;171:343-52, doi:10.1530/EJE-14-0204) describes how levels of irisin rise in response to progressive exercise in healthy young subjects. Minerva hopes that an even more important messenger protein will be found worthy to bear the name of minervin.



## An unusual headache

Try the picture quiz in **ENDGAMES**, p 38

A hidden danger within many medical and surgical procedures is exposure to ionising radiation. Many orthopaedic procedures require fluoroscopic guidance using x rays, a fact seldom discussed with patients. Are they likely to run an increased risk of cancer as a result? In the case of total ankle replacement the answer is almost certainly no, because the average dose of radiation is only one fifth of the recommended annual maximum (*Foot Ankle Int* 2014, doi:10.1177/1071100714548062).

Strongyloidiasis, which can affect the skin, lungs, and intestines, was first described in French soldiers returning from Indochina in the 19th century. It is rare in most developed countries, and is associated with working soil which is contaminated with faeces, as indicated by the name of the human parasite, *Strongyloides stercoralis*. A study from the Appalachian wilds of Kentucky finds that 1.9% of the rural population there carry antibodies to *S stercoralis*, with no history of foreign travel (*Am J Trop Med Hyg* 2014, doi:10.4269/ajtmh.14-0310). There's worms in them thar hills.

A study of severe aortic stenosis in older patients confirms that it is a dangerous condition (*Heart* 2014, doi:10.1136/heartjnl-2014-306106). After 3.9 years, patients of mean age 83 who were allocated to medical treatment had a 19% survival rate. If they were treated either with open valve replacement or with the new technique of transcatheter aortic valve implantation, however, their chance of remaining alive was about 60%.

Trying to distinguish maladies of the body from those of the mind and the soul has baffled people from the beginning of recorded history. The Sumerians invoked the influence of hundreds of different gods and demons. Socrates, as described by Plato, could get seriously boring trying to weave distinctions. Each religion put a different spin on the matter, and the two main divisions of Western Christianity differed from each other right up to the last century. How differences between Catholic and Protestant conceptions came to influence modern psychiatry is the subject of a fascinating essay by Herman Westerink in *History of Psychiatry* (2014;25:335-49, doi:10.1177/0957154X14530818). It is called "Demonic possession and the historical construction of melancholy and hysteria," but it goes deeper and wider than the title suggests.

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