screened for myocardial injury and further cardiovascular risk stratification should be performed following this.

▲ Henry CR, Satran D, Lindgren B, *et al.* Myocardial injury and long-term mortality following moderate to severe carbon monoxide poisoning. *JAMA* 2006;**295**:398–402.

Once a defibrillator is in place, don't forget the drugs

► Diminishing the number of shocks given by implantable cardioverter-defibrillators (ICDs) could have significant implications for improving patient quality of life. OPTIC (optimal pharmacological therapy in cardioverter defibrillator patients) was a randomised, controlled, multicentre study that enrolled 412 patients within 21 days of receiving an ICD for spontaneously occurring ventricular tachycardia or fibrillation. Patients were randomised to one of three drug regimens for the following year: β blocker alone ($n = 138$), amiodarone plus β blocker ($n = 140$) or sotalol alone ($n = 134$). β blockers used were either metoprolol 100 mg/day, carvedilol 50 mg/day or bisoprolol 10 mg/day. Amiodarone was loaded as 400 mg twice daily for two weeks, followed by 400 mg/day for four weeks, and then 200 mg/day until the end of the study. Up to 240 mg/day of sotalol was given in divided doses. ICDs were programmed to deliver antitachycardia pacing (ATP) for tachycardias up to a rate of 222/min. Thirty seconds of ATP was allowed before a shock was delivered. Median follow up was 359 days. Overall, shocks occurred in 41 patients (38.5%) assigned to β blocker alone, 26 (24.3%) assigned to sotalol, and 12 (10.3%) assigned to amiodarone plus β blockade. Patients treated with β blockers alone had a 22% annual risk of an appropriate shock and 15.4% annual risk of inappropriate shock. This was reduced to 6.7% and 3.3%, respectively, in the amiodarone plus β blocker patients. The rates of study drug continuation at one year were 18.2% for amiodarone, 23.5% for sotalol and 5.3% for β blocker alone. Adverse pulmonary and thyroid events and symptomatic bradycardia were more common among patients randomised to amiodarone. This study shows that shocks are common in the first year following ICD therapy, but that they can be greatly reduced by the addition of amiodarone and a β blocker. The authors stress, however, that any decision to use this treatment should be based on individual patient needs; potential improvements in quality of life have to be offset against the increased risk of amiodarone induced side effects.

▲ Connolly SJ, Dorian P, Roberts RS, *et al.* Comparison of beta-blockers, amiodarone plus beta-blockers, or sotalol for prevention of shocks from implantable cardioverter defibrillators. *JAMA* 2006;**295**:165–71.

Five portions a day of fruit and vegetables: an evidence based policy

► Increased consumption of fruit and vegetables has been shown to be associated with a reduced risk of stroke in most epidemiological studies, although the extent of the association is uncertain. The authors quantitatively assessed the relation between fruit and vegetable intake and incidence of stroke in a meta-analysis of cohort studies. Studies were included if they reported relative risks and corresponding 95% confidence intervals of stroke with respect to frequency of fruit and vegetable intake. Eight studies, comprising nine independent cohorts, met the inclusion criteria. These groups included 257 551 individuals (4917 stroke events) with an average follow up of 13 years. Compared with individuals who had less than three servings of fruit and vegetables per day, the pooled relative risk of stroke was 0.89 (95% CI 0.83 to 0.97) for those with three to five servings per day, and 0.74 (95% CI 0.69 to 0.79) for those with more than five servings per day. Subgroup analyses showed that fruit and vegetables had a significant protective effect on both ischaemic and haemorrhagic stroke. The mechanism may be related to blood pressure lowering, improvements in lipids, or may reflect a healthier lifestyle.

▲ He FJ, Nowson CA, MacGregor GA. Fruit and vegetable consumption and stroke: meta-analysis of cohort studies. *Lancet* 2006;**367**:320–6.

Journals scanned

American Journal of Medicine; American Journal of Physiology: Heart and Circulatory Physiology; Annals of Emergency Medicine; Annals of Thoracic Surgery; Archives of Internal Medicine; BMJ; Chest; European Journal of Cardiothoracic Surgery; Lancet; JAMA; Journal of Clinical Investigation; Journal of Diabetes and its Complications; Journal of Immunology; Journal of Thoracic and Cardiovascular Surgery; Nature Medicine; New England Journal of Medicine; Pharmacoeconomics; Thorax

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IMAGES IN CARDIOLOGY

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Quadricuspid aortic valve

Quadricuspid aortic valve (QAV) is an uncommon congenital anomaly. The majority of QAVs are associated with aortic insufficiency. QAVs usually have three cusps of equivalent size and a small fourth cusp between the right coronary cusp and the non-coronary cusp. In this view the four leaflets are equivalent and the non-coronary cusp is divided by a commissure.

The preoperative diagnosis of QAVs is important as they can be associated with an abnormally placed coronary ostium. Therefore preoperative coronary angiography is necessary when a QAV is diagnosed. The majority of QAVs are associated with clinically significant dysfunction, most commonly aortic insufficiency.

Aortic root: four equivalent leaflets.

The two non-coronary cusps divided by a commissure (arrows).

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