Life expectancy among males at birth in European republics of former Soviet Union (sources World Health Organisation, Unicef, and V Shkolnikov (personal communication)). Data for 1983-4 not available for some republics.

vested interests, not least in the Ministry of Finance, that opposed it.²

Although alcohol consumption began to increase again in the late 1980s, especially as a result of illicit production and diversion from state trading organisations, alcohol is unlikely to explain all the recent deterioration in life expectancy.³ As Ryan notes, much high quality epidemiological research is now being undertaken in the former Soviet Union, although there is little evidence that it is being acted on by policymakers either there or in the West. What is needed is a mechanism for bringing this work to a wider audience in both regions.

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Improving the detection of glaucoma

Intraocular pressure of greater than 21 mm Hg is an indication to refer

EDITOR,—Ronald Pitts Crick and Maurice W Tuck argue that "to improve the present system of detecting glaucoma the trend to more comprehensive testing by optometrists needs to be encouraged."¹ They suggest that patients should be referred if they have an intraocular pressure of ≥ 26 mm Hg or an intraocular pressure of 22-25 mm Hg plus optic discs or visual fields with features characteristic of glaucoma. Under present regulations, however, a patient should be referred "if there appears to be signs of injury, disease or abnormality in the eye or elsewhere which may require medical treatment."^{2,3} The upper limit of normal intraocular pressure is generally taken to be 21 mm Hg. Thus an intraocular pressure of 22-25 mm Hg, even in the absence of other features of glaucoma, is a sign of disease or abnormality in the eye. An optometrist who did not refer such a patient could be in breach of current regulations.

This needs to be clarified before optometrists can take a more active role in the screening of glaucoma.

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- 1 Crick RP, Tuck M. How can we improve the detection of glaucoma? *BMJ* 1995;310:546-7. (4 March.)
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Link between glaucoma and diabetes is disputed

EDITOR,—Ronald Pitts Crick and Maurice W Tuck highlight the difficulties of screening for glaucoma and twice mentioned diabetes as an important risk factor.¹ Tielsch *et al* have recently cast doubt on this tenet in ophthalmology.² Using data from the Baltimore eye survey, they concluded that there is no evidence to support an association between diabetes and primary open angle glaucoma.

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Lipid lowering dietary advice

EDITOR,—Scientists and practitioners agree that dietary modification should be the first step of any cholesterol lowering regimen, but H A W Neil and colleagues report that the reduction in concentrations of total cholesterol and low density lipoprotein cholesterol after dietary advice given in general practice to hypercholesterolaemic patients by a dietitian, practice nurses, or in a diet leaflet alone was small.¹ The poor response seems to be related mainly to the low dietary compliance in poorly motivated patients. This agrees with our objective evaluations of the compliance to hypocholesterolaemic dietary prescriptions: on the basis of changes in the plasma fatty acid pattern, after two months on the diet only 40% of patients could be defined as good adherers, while 22% had a poor compliance and the remaining a variable adherence over time.² Neil and colleagues conclude that a more intensive intervention than is normally available in primary care is probably necessary and a mass approach to dietary changes is needed.

Instead, better results have been obtained in 65 patients attending a lipid clinic³ and in 45, 9 year old schoolchildren enrolled in a community project for control of chronic diseases.⁴ In the first study, dietary intervention was performed by a doctor and included the evaluation of a seven day food record, practical dietary recommendations, and distribution of a booklet suggesting the adoption of the Mediterranean diet. After six weeks, total cholesterol decreased by 11.3% and low density lipoprotein cholesterol by 15.3% (from 7.12 (SD 0.5) mmol/l to 6.31 (0.7) mmol/l, $P < 0.001$, and from 5.04 (0.5) mmol/l to 4.27 (0.6) mmol/l, $P < 0.001$, respectively) in 25 patients with moderate hypercholesterolaemia and by 9.1% and 9.9% in 40 patients with severe hypercholesterolaemia (from 9.49 (1.4) mmol/l to 8.76 (1.7) mmol/l, $P < 0.001$, and from 7.43 (1.4) mmol/l to 6.70 (1.8) mmol/l, $P < 0.001$).

In the second study simple dietary advice was given to parents when blood was taken. This included a list of foods to be avoided and a list of suggested foods to be consumed at home and at school. As an example to start with, a standard isocaloric, moderate fat, moderate cholesterol diet was provided, together with practical information on food preparation. After six weeks, total cholesterol dropped by 14.1% (from 4.58 (0.8) mmol/l to 3.93 (0.6) mmol/l, $P < 0.001$) and low density lipoprotein cholesterol by 16.9% (from 2.78 (0.7) mmol/l to 2.31 (0.5) mmol/l, $P < 0.001$). Both total cholesterol and low density lipoprotein cholesterol remained almost unchanged after 12 months (3.94 (0.6) mmol/l and 2.27 (0.5) mmol/l, respectively).

The above data are similar to those obtained in the long term treatment with some cholesterol lowering drugs, suggesting the high efficacy of simple and low cost dietary advice and the need for a careful evaluation of the compliance to hypocholesterolaemic dietary prescriptions before starting drug treatment. "True dietary resistance" due to genetic factors should also be borne in mind.⁵

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Magnesium in acute myocardial infarction

EDITOR,—Salim Yusuf and Marcus Flather¹ offer no satisfactory explanation for the statistical incompatibility ($P > 0.0001$ for heterogeneity) between the inefficacy of magnesium in the fourth international study of infarct survival (ISIS-4)² and the clearly positive pooled results of the 10 other trials of intravenous magnesium in acute myocardial infarction. Magnesium has been reported to protect contractile function in a dozen experimental models of myocardial ischaemia and reperfusion and is now known to act during the first few minutes of reperfusion.^{3,4} ISIS-4 was unique in that most patients underwent thrombolysis before being randomised to magnesium or control (to accommodate the factorial design). The interval was not recorded but most typically have been three or more hours after randomisation took place at a mean of seven hours from the onset of symptoms. The 30% of patients in ISIS-4 who were not given thrombolytic treatment were randomised at a mean of 12 hours after the onset of symptoms, when spontaneous reperfusion of viable myocardium is unlikely to occur.

ISIS-4 was not designed to test for an anti-reperfusion effect of magnesium. Any subgroup analysis put forward to disprove such an effect

Mortality from ischaemic heart disease in patients treated with magnesium or placebo in second Leicester intravenous magnesium intervention trial

requires (a) evidence that patients in the subgroup were likely to have experienced reperfusion in the presence of a raised magnesium concentration and (b) a power estimate for the analysis.

The second Leicester intravenous magnesium intervention trial in 2316 patients (LIMIT-2) was a placebo controlled trial to test rigorously the findings of the earlier magnesium trials using mortality end points, intention to treat analysis, and an explicit power calculation. Trial treatment was started immediately on admission at a median of three hours from the onset of symptoms. Thrombolysis was also given to 48% of all patients with confirmed acute myocardial infarction in the study, beginning immediately after the loading injection of trial treatment. The figure shows an update of mortality data already reported,⁵ with >99% complete follow up for a mean of 4.5 years and 529 deaths in the analysis.

The lesson to be learnt is that mechanistic insight has an essential role in the planning and interpretation of trials. Even a megatrial cannot test a hypothesis precluded by its design. The clinical message is that a patient admitted with suspected acute myocardial infarction should receive intravenous magnesium immediately and for as long as there is a likelihood of reperfusion (either induced by thrombolysis or spontaneous) taking place. This safe and simple intervention will reduce the risk of death from ischaemic heart disease over the next several years by 21% (95% confidence interval 5% to 35%).⁵

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Mutual trust

EDITOR,—I write from what I believe to be a unique background of eight years at the Medical Defence Union followed by almost two years as the chief executive of a trust. I am astonished at the comments made by Paul Fenn and Robert Dingwall about the new NHS Mutual Fund.¹ Can anyone who has watched the trends in medical

litigation, the subscriptions to defence organisations, and, finally, the introduction of NHS indemnity in Britain and a variation for junior doctors in the Republic of Ireland in the past 10 years really imagine that the scheme will be overfunded? Experience has repeatedly been that inflation in both the size of awards and the frequency of claims always exceeds the worst case scenario. So erring on the side of prudence can be only a good thing, and I would put money on the outcome still being worse than the imagined worst case. And all that is said in the belief that current data are reliable. They simply are not. Not only will this initiative provide a measure of financial smoothing, which is to be welcomed, but—and this is as important for the effective management of NHS resources—we shall be forced to be better at recording incidents in a consistent and comparable fashion. Those of us who have long called for a national register or database of claims will see that a positive step has been made in that direction.

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Medical Insurance Agency's investment portfolio

Medical Insurance Agency invests in tobacco industry

EDITOR,—In common with many other doctors, I imagine, I have recently received a mailshot from the Medical Insurance Agency inviting investment in several portfolios, one of which (the Managed Portfolio with Save and Prosper) is advertised as a special offer to the agency's clients. Top of the list of this portfolio's holdings are those with BAT (British American Tobacco) Industries. It is ironic that an insurance group purporting to have a relationship with the medical profession should invite us in this way to support the tobacco industry, which is responsible for the main cause of preventable deaths in the developed world.

It is inappropriate for members of the medical profession to hold this sort of investment, and doctors with strong feelings should write to the Medical Insurance Agency and encourage it to develop an investment programme that is more ethically sound.

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Medical Insurance Agency's response

EDITOR,—I am sorry that the recommendation of Save and Prosper has caused offence; this certainly is not our intention. The Medical Insurance Agency's policy is to recommend a range of investment opportunities to clients, some of which will be ethically based and some not. This is because our experience since we first promoted ethical funds in 1984 shows that not all members of the medical profession are motivated solely by ethical considerations when investing capital. Indeed, our research indicates that most doctors do not base their buying decisions on ethical decisions alone. I regret, therefore, that it is not possible to limit our recommendations to those companies that have a wholly ethical approach as this would mean limiting the number of worthwhile opportunities we place before our clients.

In the future our policy will be to continue making recommendations that will be of general wide interest; these will include investments that have ethical virtues as well as those that have attractions for other reasons. The Save and Prosper personal equity plan fell into the latter category because of our agreement to waive the initial plan charge—a considerable benefit, for such charges can be as high as 6%. We have designed our fact finding process to obtain clients' comments on ethical funds and then make personal recommendations that take into account individual clients' views.

Readers may be interested to know that I am a lifelong non-smoker. It is also relevant that all the Medical Insurance Agency's profits ultimately support donations to medical charities. We have donated over £4 million to charities in the past 10 years alone and have given enormous support to deserving causes as a result of our operation.

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Practising public health in primary care is easier said than done

EDITOR,—I have received recent publications on relations between public health and primary health.¹ The benefits of collaboration have been recognised but patchily achieved despite a huge shifting of public health work into general practice, which has contributed to its redevelopment as primary health care.

Modern health care requires doctors to understand the disciplines that underpin public health, including epidemiology, statistics, behavioural sciences, and health economics. Allyson M Pollock and F Azeem Majeed are right that public health skills cannot be taught in a four day course on community oriented public health.² Such a course begins to fill two voids: that left by inadequate undergraduate and basic professional education and that created by the historical divorce between public health and clinical medicine, which Hart has deplored.³

Pollock and Majeed are complacent in arguing that the problems that community oriented primary care was designed to address were not present in Britain until recently and that Britain has a strong tradition of applying public health skills in primary care.² Indeed, the two references cited in support of this argument are blistering critiques of the relation between public health and primary care.^{3,4}

John Shanks and colleagues argue for collaboration by public health and primary care on health needs assessment and sharing of information.⁵ They blame poor information sharing on the separation of family health services authorities and district health authorities and have great expectations of the forthcoming merger. I wonder. Scottish health boards have enjoyed such a merger for 21 years, but a gulf between public health and primary care remains.⁶

Convergence of public health and primary care requires correct analysis, frank debate, cultural change, education, and investment. The analysis needs to consider the resources of public health and primary care, and the benefits of sharing them; the differences and similarities in the work agenda; and the obstacles, both past, present, and future, to achieving the long desired goal of convergence.¹ One obstacle ought to be declared, before expectations rise too much. Hart estimated that general practice could undertake the public health function with three sessions per week per 10000 patients (equivalent to about 1500 full time doctors).³ In September 1993 there were 766