low cholesterol concentrations are unlikely to be causally associated with deaths from non-coronary causes.

The reasons for the apparent high risk of disease at the bottom end of the distribution of plasma cholesterol concentrations are probably different from those underlying the possible deleterious effects of cholesterol lowering drugs and diet. The postulated adverse effect of interventions has been observed in trials of people with much higher cholesterol concentrations and should be evaluated separately. If the reduction in coronary heart disease that follows a reduction in plasma cholesterol concentrations is balanced by an increase in other causes of death, with no change in all cause mortality, the intervention is of doubtful value. Law *et al* point out that if plasma cholesterol concentration were associated with no disease other than coronary heart disease then a lowering of plasma cholesterol by 0.6 mmol/l, which is associated with an 11% reduction in coronary heart disease, should achieve only a 7% reduction in all cause mortality. In fact, combining all trials, they observed a 4% reduction in total mortality (95% confidence interval -10% to +2%). The trials have not had the power to distinguish between the predicted effect and no effect.

They therefore turn their attention to specific causes of death. A previous analysis suggested that any excess was observed only in trials of drugs, not of diet.⁹ If cholesterol lowering itself is not harmful, and diet is safe, as the balance of evidence from the current and the previous meta-analysis⁹ shows, then attention must focus on the side effects of particular drugs. Law *et al* dismiss all but a handful of the non-cardiovascular deaths as not causally related to the cholesterol lowering treatment. Their argument is plausible but it cannot apply to newer drugs. We shall have to await the outcome from the current crop of trials of the statins to be sure that they do not carry risk.

Where does that leave us? Drugs will be appropriate for those at higher risk only when the benefits outweigh the hazards. Population rates of coronary heart disease will

continue to fall only if there are changes that affect most of the population.¹⁵ Despite scepticism about difficulties in modifying plasma cholesterol concentrations with diet¹⁶ a recent review of 420 dietary observations from 141 groups of subjects showed clearly that a reduction of 10% in the proportion of energy derived from saturated fatty acids would be associated with a plasma cholesterol concentration 0.5 mmol/l lower.¹⁷ This week's papers suggest that this would yield a substantial reduction in death from coronary heart disease without increasing the risk of other disease.

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Arthroscopy

Many of the new procedures should be performed only by experts

In 1976 I made a detailed study of the random incidence and clinical cause of meniscal injuries and wrote an article in the *Lancet* called *Unnecessary Meniscectomy*.¹ At that time awareness was increasing that meniscectomy was not a benign procedure. Before long diagnostic arthroscopy confirmed what orthopaedic surgeons had suspected—that too many cartilages were unnecessarily removed. Within a few years arthroscopic meniscectomy was replacing open meniscectomy as a treatment of choice. Patients came to expect day surgery and far shorter periods off work—though even in 1993 a surprising number of menisci are still removed by open arthrotomy.

Endoscopic techniques can now be used to examine and treat shoulder, elbow, wrist, hip, and smaller joints²⁻⁶ and may even be used to release pressure in the carpal tunnel.⁷ What is the busy purchaser to make of all this provision? What is the current status of arthroscopy of the knee and what are the indications for and scope of arthroscopy in other joints? These questions are of real economic concern now that arthroscopy has become the most common orthopaedic procedure in Britain.

For diagnostic arthroscopy has certainly now become the

norm. But may the pendulum have swung too far? There are many causes for knee pain, and not all of these are helped by arthroscopic manipulations, even if the patient has private health insurance. The decision to examine the knee arthroscopically has to be made carefully and not just because the clinician cannot think of what to do next. We have recently shown,⁸ as have others,⁹ that arthroscopy may rarely have complications. The indications for its use need careful assessment. For example, do we really need to submit patients to general anaesthesia and surgical intervention to inspect or even shave the back of the patella? The relation between the syndrome known as chondromalacia patellae and pathological changes of the patella articular surface is surprisingly unreliable.¹⁰ Other investigations may be simpler and safer. For example, examination of intra-articular fluid often gives reliable information about the surgically relevant disorders within the knee.¹¹

The Bristol group has shown conclusively that magnetic resonance imaging is a very reliable and reproducible method for identifying lesions such as meniscal and cruciate tears.¹² Perhaps a scan should become the primary investigation, with arthroscopy reserved only for those patients in whom tears are

found and those few cases in which time suggests that the scan may have given a false negative result.

What about other joints? In the shoulder arthroscopy has proved its value in the evaluation and treatment of a wide variety of disorders, especially instability or abnormalities of the rotator cuff. Open operations on the rotator cuff and even conventional procedures for recurrent dislocation seem likely to follow open meniscectomy into historical obscurity.

Arthroscopy is also useful in managing loose bodies of the elbow and the ankle, as well as disorders of the ligaments and the synovium. A few experts are now using arthroscopy to revolutionise our concepts of pain and instability in the wrist. This is an area of previous clinical neglect which the arthroscope has opened up—but these are not easy operations and not for the occasional surgeon. And the complication rates recorded with endoscopic carpal tunnel release indicate that this procedure should not as yet go out on general release.

For the time being the verdict should be that arthroscopy of the shoulder, ankle, elbow, hip, and smaller joints offers diagnostic accuracy and scope for minimally invasive surgery,

but these procedures should be confined to very experienced, expert hands.

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Pregnancy's toll in the developing world

Developing countries need integrated programmes devoted to women's reproductive health

About one woman a minute—or half a million women a year—die of complications of pregnancy. The top five killers are unsafe abortion, hypertensive disease of pregnancy, bleeding, obstructed labour, and infection. Most of these deaths occur in developing countries, and the death toll is increasing as the number of women of childbearing age increases.¹ Estimated maternal mortality in Africa, Asia, and Latin America is 600, 400, and 240 deaths per 100 000 live births respectively compared with rates in some developed countries of less than 10 per 100 000 live births.² Many other women suffer the long term effects of poorly managed labours or unsafe abortions.

Deaths and serious illness due to pregnancy are often the final disastrous results of social, economic, and cultural pressures that affect women in the developing world. Undervalued and uneducated as children, many marry young and are overworked and underfed as adults while being denied the power to make choices about their fertility. For example, in India mortality is higher in females than males from birth until the fourth decade, a phenomenon that has been attributed to neglect of female children, including poorer feeding.³ Many girls die as adolescent victims of early marriage and pregnancy—in Ethiopia, of every 1000 teenagers who give birth, 12 die.⁴

In 1987 the World Health Organisation announced an initiative to halve maternal mortality by the end of the century, and the topic has assumed a new urgency as the deadline approaches. Last month representatives from non-government organisations concerned with women's reproductive health met to prepare for their representation at five international events taking place over the next three years: the international conference on population and development (1994), the international year of the family (1994), the world social summit (1995), the commonwealth health ministers' meeting on women and health (1995), and the fourth world conference on women (1995). The meeting was organised by the Commonwealth Medical Association and the Population Council on behalf of Advocacy for Women's Health,

a group of non-government organisations based in Europe.

The meeting heard that for most women in the developing world reproductive health is inseparable from general health. For example, women in Bangladesh and Pakistan spend over half their time between the ages of 15 and 45 either pregnant or breast feeding.⁴ Even after childbearing is over, the burden of economic responsibility for a family can worsen health in middle age. In rural upper Egypt a third of women are widowed or divorced by their mid-40s, according to the Population Council.⁵ Domestic violence and genital mutilation can also greatly affect women's reproductive health.⁶

According to Judith Bruce of the Population Council, three quarters of the world's population live in countries with a policy on population, but most of these policies focus on controlling the population by reducing women's fertility at the expense of personal choice and without regard to other important aspects of women's health. Bruce argued that if governments could be persuaded to concentrate instead on what individual people want and need demographic goals would take care of themselves.

The World Health Organisation has estimated that if all women who wanted no more children were to stop bearing children the birth rate would fall by a third in Africa and Asia and by nearly a fifth in Latin America. In addition, it has estimated that nearly two thirds of maternal deaths in Bangladesh would be averted if Bangladeshi women had only planned children.⁴

Bruce said that comprehensive women's reproductive health programmes should incorporate family planning; antenatal, perinatal, and postnatal care; infertility services; safe abortion; diagnosis and treatment of infection of the reproductive tract; measures to improve adult nutrition; child health; education on sexuality; and attempts to reduce harmful traditional practices. Programmes should also address women's education, employment, and the value of female children.

Such programmes are still a long way off. Chris Elias, also