ways, one would, strictly speaking, need hundreds of thousands of randomised trials to arrive at conclusive answers about the efficacy of this form of treatment. Clearly, this is not practical. The Centre for Complementary Health Studies is therefore planning a trial designed to answer the much broader question, "does homoeopathy work (regardless of remedy, dose, etc)?" I would be delighted to hear from potential participants in this multicentre study.

E ERNST
Professor of complementary medicine

Centre for Complementary Health Studies,
University of Exeter,
Exeter EX2 4NT

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Trial puts negative gloss on essentially positive results

EDITOR,—It is well known that reports of trials tend to exaggerate differences between treatments.¹ By using multiple end points, repeated measures, subgroup analyses, and statistical "data dredging" authors are often able to put a positive gloss on essentially negative results. Per Lökken and colleagues' trial of homoeopathy after dental surgery is a reversal of this trend.² Four predefined clinical outcome measures were used: pain, swelling, bleeding, and trismus. There was no difference in the first three of these measures between the groups. Homoeopathy was statistically superior to placebo for the fourth measure. Yet the authors conclude that there was "no significant effect of homoeopathy on pain and other events." One of the key messages states, "no positive evidence could be found for homoeopathic effects."

The results of the trial clearly do not validate the claim that homoeopathic remedies are of appreciable clinical value after dental surgery. But ignoring significant results is surely as much of an error as creating them by massaging data.

ANDREW VICKERS
Director, information services

Research Council for Complementary Medicine,
London WC1N 3JF

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Thyroid cancer in the United States since accident at Chernobyl

EDITOR,—V A Stsiazhko and colleagues' letter on childhood thyroid cancer near Chernobyl raises serious issues on a broader scale.¹ If fallout from Chernobyl travelled hundreds of kilometres it seems reasonable that similar findings may occur in more distant populations.

Fallout from Chernobyl began arriving in Connecticut in the United States, 7250 km west of the reactor, about 15 days after the explosion which occurred on 26 April 1986. The concentration of iodine-131 (one of the few radionuclides tracked) in Connecticut's milk increased in the weeks after the accident (the state average in 1983-90 was about 0.07 Bq/l).²

The rate of thyroid cancer among children aged under 15 in Connecticut rose sharply (from 1.6 to 3.1 per million) after 1989 (figure), when increases in children in the area around Chernobyl began.^{3,4} This change is similar to that seen in the (upwind)

Number of cases of thyroid cancer per million children aged under 15 and age adjusted rate per million population in Connecticut 1935-92 (source: Connecticut tumour registry) and concentration of iodine-131 in milk in Connecticut²

Ukraine.¹ It is also intriguing to juxtapose rates of thyroid cancer for all age groups with those in children. The age adjusted rate in Connecticut between 1985-9 and 1990-2 rose from 34.6 to 42.9 per million, after 10 years of no change.

There is an apparent five year lag between exposure to radioactive fallout from Chernobyl and rising rates of thyroid cancer. In contrast, lag times have been reported to be up to 40 years for iatrogenic thyroid cancer due to irradiation.³ Continued tracking of rates may show a progressive rise in thyroid cancer attributable to fallout of a variety of (iodine and other) high energy nucleotides from Chernobyl. It seems prudent to examine further the long term effects, in particular thyroid cancer, on populations distant from Chernobyl.

WILLIAM REID
Oncologist-haematologist

Biological Therapy Institute,
357 Riverside Drive,
Franklin, TN, USA

JOSEPH MANGANO
Consultant

Radiation and Public Health Project,
786 Carroll Street,
Brooklyn, NY, USA

1 Stsiazhko VA, Tsyb AF, Tronko ND, Souchevitch G, Baverstock KF. Childhood thyroid cancer since accident at Chernobyl. *BMJ* 1995;310:801. (25 March.)

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Spinal cord injury in Rugby Union players

EDITOR,—Timothy Noakes and Ismail Jakoet are right in saying that there are no reliable figures for the number of spinal cord injuries sustained by rugby players.¹ The Duke of Cornwall Spinal Injuries Centre states that 16% of all spinal injuries result from sporting activities, with 2.5% being due to rugby.²

For the past 15 months I have been working as a volunteer for the Trevor Jones Tetraplegic Trust, set up to help people completely paralysed as a

result of sports injuries. The trust has the names of 140 people disabled in this way, and I have analysed details on 98 of these from the registration forms filled in by the patients or, occasionally, a relative. Fifty two of the injuries occurred while the person was playing Rugby Union football: four in the 1970s, 28 in the '80s, and 12 in the '90s. The figures are nowhere near complete: the '90s are only half run, and many of those injured are still in injuries centres.

But I find the figures worrying. There is little evidence of a reduction in the number of such lesions in Britain since the last change in Rugby Union's rules in 1985, as 22 of them were sustained after that date. These are devastating accidents for those who would otherwise have had a promising future. Of the 52 patients, 31 were 25 years old or younger at the time of injury. Only 28 list any present occupation, and 10 of these are students, who may or may not get a job. Insurance compensation is derisory compared with that received by victims of road traffic accidents, and if anyone, with enormous effort, makes a success of a job then any additional income may be clawed back by the social services. "I can't see how I shall ever get off income support," said one man, who had progressed from computer operator to information technology manager for his firm.

It is not only the epidemiology that needs study. Little information is available on the late outcome of spinal injuries: whether those who get adequate compensation fare better, what happens to the unknown number who lose touch with their unit, and how many die at an early age and of what causes. Tetraplegic people live under constant threat of pressure sores, urinary infections, and rejection by society. Rugby, I am told, is a great game; it is certainly a profitable one. But it exacts a dreadful toll from some. My 14 year old, lightly built grandson is now at a school where rugby is played, and I have asked his parents to encourage him to choose another sport. Am I overreacting?

ANNE SAVAGE
Medical adviser

Trevor Jones Tetraplegic Trust,
London W1X 1RA

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Training in family planning encompasses several disciplines

EDITOR,—P D Woolley seems not only to have misunderstood the editorial by Yvonne Stedman and Max Elstein¹ but to be unaware of the developments in family planning and sexual health issues.²

Basic training in family planning has been structured for many years, long before training in most other specialties, and includes knowledge of infections. Two years ago the Faculty of Family Planning and Reproductive Health Care of the Royal College of Obstetricians and Gynaecologists was founded; it has developed a membership examination (MFFP), which will start this autumn and includes genitourinary medicine in its syllabus. In contrast, doctors can and often do become consultants in genitourinary medicine without experience in family planning or gynaecology.

Family planning is rapidly becoming a consultant led specialty, often by people with broad experience and multiple qualifications, including in genitourinary medicine. As in most services, other clinicians in various grades will always be needed to help with family planning clinics, and no one thinks that family planning should encompass all genitourinary medicine.

Surely, however, family planning services should be accessible and acceptable to all who need them

while always maintaining highest medical standards. How best to achieve this will vary depending on local needs, interests, skills, and geography, and the only way forward is by dialogue, collaboration, and cooperation. Departments that remain blinkered and defensive will not serve the community and are more likely to wither while their populations continue to be at risk.

A M C WEBB
Senior clinical medical officer

Mancunian Community NHS Trust,
Manchester M14 5BY

M KISHEN
Clinical director

Women's Health,
North Mersey Community NHS Trust,
Liverpool L2 1TA

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Calculating drug doses

Mass concentration can't be used universally

EDITOR,—S Rolfe and N J N Harper draw attention to the NHS specification for ampoule labels and suggest that all drugs should be measured as mass concentration.¹ The original work that was undertaken on ampoule labelling arrived at the same conclusion.² Wider discussions with practitioners when the NHS specification was being prepared highlighted potential dangers of making the changes that Rolfe and Harper now request. The NHS specification also recognises that many biological products—for example, vaccines—cannot be defined in terms of mass concentration.

Lee Baldwin suggests that adopting a standard for type size might enable more information to be placed on ampoule labels.³ The particular problem with ampoule labels is their small size. The information on the labels needs to be kept to a minimum so that essential information, defined in the NHS specification as volume, generic name, amount, route(s) of injection, and expiry date, are clearly legible.

DAVID S NUNN
Senior executive, national medicines sourcing

NHS Executive,
North Thames,
London W2 3QR

- 1 Rolfe S, Harper NJN. Ability of hospital doctors to calculate drug doses. *BMJ* 1995;310:1173-4. (6 May.)
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Teaching of undergraduates must be improved

EDITOR,—I have always found it curious that the drugs whose concentrations are most likely to be expressed as per cent or as 1 in x thousand are also the most important drugs used in resuscitation. One can speculate on the reluctance of the appropriate authorities to tamper with the presentation of such important drugs, yet it comes as no surprise to find that most doctors are unable to deal with these expressions of concentration effectively.¹ Although anaesthetists scored highly in the survey of S Rolfe and N J N Harper,² I believe that the results of the survey reflect poorly on our specialty.

The performance of anaesthetists in the survey merely illustrates the importance of familiarity in being able to make these simple calculations reliably. Most of the staff called on to use these drugs in the emergency setting, however, do not have this same benefit of familiarity. Until we

express all concentrations as mass per unit volume, as Lee Baldwin suggests,² we should ensure that all medical staff, and in particular junior doctors involved in resuscitation, are able to use the current units of concentration correctly. This responsibility must fall to anaesthetists since medical students receive most exposure to drugs whose concentrations are expressed in this way when they are being taught anaesthetics. Unfortunately, in my personal experience, from several different regions, this does not happen at present. Whereas most medical students reaching the end of their anaesthetic module will, for example, be able to describe the differences between various neuromuscular blocking agents, they cannot even begin to explain what is meant by a 2% concentration of a drug. More seriously, nobody has ever explained the expression to them, let alone emphasised it.

My impressions are borne out by the current survey, which suggests that, in addition to improving the expression of drug concentrations, we might also ensure that current teaching of undergraduates provides the best preparation for routine clinical practice.

ALAN M COHEN
Senior registrar in anaesthetics

Department of Anaesthetics,
Royal Brompton Hospital,
London SW3 6NP

- 1 Rolfe S, Harper NJN. Ability of hospital doctors to calculate drug doses. *BMJ* 1995;310:1173-4. (6 May.)
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Provision of screening for Down's syndrome

EDITOR,—There are no official statistics on the extent or type of maternal serum screening for Down's syndrome. An ad hoc survey found that in 1991 one third of pregnancies in Britain were screened, less than half for multiple markers.¹ We have obtained more recent data from the United Kingdom national external quality assessment scheme for screening for Down's syndrome.

The primary purpose of the scheme is to monitor analytical and interpretive quality, and currently 78 laboratories participate. Although there is no legal requirement to join the scheme, participation is a condition for accreditation of the laboratory. Each month samples are distributed for assay of concentrations of α fetoprotein, unconjugated oestriol, intact human chorionic gonadotrophin, and free β human chorionic gonadotrophin as appropriate.²

A questionnaire was included with the samples distributed in November 1994, requesting the annual number of pregnancies in the geographical area served, the number of women screened annually, and the current weekly number and size of analytical batches tested. The product of the batch number and size multiplied by 52 is an indirect estimate of the laboratory's annual throughput of specimens. All but 10 questionnaires were returned.

The number reported as being screened annually was 354 549, or 44% of the estimated 802 230 pregnancies (from projections of births in the United Kingdom,³ increased by 2% to allow for late miscarriages). If it is assumed that the laboratories that did not respond to the questionnaire had similar screening activity to those that did respond, 51% of pregnancies will have been screened.

The total reported laboratory throughput was 423 072 specimens (table), nearly all of which were tested for multiple markers; this figure is one fifth greater than the number of pregnancies reported as screened. While part of the excess is accounted for by repeat testing, most will be due to throughput

Laboratories' annual throughput of specimens according to combination of markers used

Combination of markers	No of laboratories	Annual throughput
AFP alone	1	4 316
AFP and intact hCG	35	208 728
AFP and free β hCG	22	121 160
AFP, unconjugated oestriol, and intact hCG	6	54 184
AFP, unconjugated oestriol, and free β hCG	4	34 684
All	68	423 072

AFP = α fetoprotein; hCG = human chorionic gonadotrophin.

being a better reflection of recent increases in screening activity. On this basis the proportion of pregnancies screened may have increased to almost 60%.

Not all laboratories were able to give the number of pregnancies in their geographical area, but those that could reported a total of 485 022, with 321 069 (66%) being screened. This proportion is an estimate of the rate of uptake in areas where screening is offered, but it is a minimal estimate since the offer may be restricted, for example, to older women.

Provision of maternal serum screening for Down's syndrome has changed considerably in recent years: it has become extensive, and more markers are being used. Our survey shows that the information needed to assess current practice can be readily obtained from the United Kingdom national external quality assessment scheme. We suggest that this source be used to monitor any future changes.

H S CUCKLE
Professor of reproductive epidemiology

Institute of Epidemiology and Health Services Research,
University of Leeds,
Leeds LS2 9LN

A R ELLIS
Scheme manager
J SETH
Scheme organiser

Department of Clinical Biochemistry,
Royal Infirmary of Edinburgh,
Edinburgh EH3 9YW

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Ongoing electronic conference is available for general practitioners

EDITOR,—The importance of the Internet has already been recognised in public health,¹ and Coiera points to the potential of the Internet as an enormous information resource, to which the *BMJ* now contributes.² Tony Delamothe suggests that the *BMJ's* presence on the Internet may also change the one to many relationship that the journal has with its readers.³ As well as reading web pages, "net surfers" with shared interests can correspond by joining a listserver, which is an ongoing electronic conference.

Mailbase is the main electronic mailing list service in the United Kingdom, and it enables groups to manage their own discussion topics (Mailbase lists) and associated files. The service is run by a dedicated team based at Newcastle University and is funded by the Joint Information Systems Committee of the Higher Education Funding Councils for England, Scotland, and Wales. A Mailbase list specifically discusses