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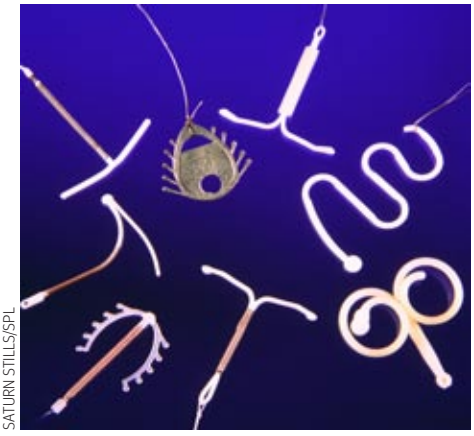
LETTERS

MIGRAINE AND RISK OF STROKE

For contraception try IUDs . . .



SATURN STILLS/SPL

In her editorial on migraine with aura and increased risk of ischaemic stroke, Loder suggests that a blanket ban on oestrogen-progestin is hard to justify because they are the most effective forms of birth control, including for women with migraine with aura.[1] Guidance from the UK Faculty of Sexual and Reproductive Health Care has advised that this method of contraception presents an unacceptable risk to a woman's health since 2006. Several other highly (and more) effective methods are available to women with a reduced risk of user failure—namely, the progesterone implant (Implanon), the levonorgestrel containing intrauterine system (Mirena), and copper containing intrauterine devices. These should be offered to women with migraine with aura, and combined hormonal contraceptives should be avoided.

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Competing interests: None declared.

1 Loder E. Migraine with aura and increased risk of ischaemic stroke. *BMJ* 2009;339:b4380. (27 October.)

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. . . or progestin-only pills

Progestin-only contraception is recommended as a safer alternative to combined oral contraceptives for migraine with aura[1] by the Society of Obstetricians and Gynaecologists of Canada and by the American College of Obstetricians and Gynecologists.[2 3]

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1 Loder E. Migraine with aura and increased risk of ischaemic stroke. *BMJ* 2009;339:b4380. (27 October.)
2 Black A, Francoeur D, Rowe T, Collins J, Miller D, Brown T, et al; Society of Obstetricians and Gynaecologists of Canada. SOGC clinical practice guidelines: Canadian contraception consensus. *J Obstet Gynaecol Can* 2004;26:219-96.
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Cite this as: *BMJ* 2009;339:b4842

Misleading relative risks?

The absolute risk of stroke in women with migraine is low: 17-19 per 100 000 woman years.[1] This roughly equates to one per 5000 women years. The risk increases twofold in migraine with aura, seemingly to two per 5000.

This seems low.

Is the use of relative risk misleading? Are we justified in treating patients with migraine "aggressively for modifiable cardiovascular risk factors"?[2]

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Competing interests: None declared.

1 Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. First prescription of combined oral contraception. London: FFPRHC, 2007. www.guideline.gov/summary/summary.aspx?doc_id=12217
2 Loder E. Migraine with aura and increased risk of ischaemic stroke. *BMJ* 2009;339:b4380. (27 October.)

Cite this as: *BMJ* 2009;339:b4844

Author's reply

Stephenson and Rivet are right to remind us that progestin-only methods are one of several alternatives to oestrogen containing contraceptives for women who have migraine with aura. Guidance from several authoritative groups does recommend against the use of oestrogen containing contraceptives in women who have aura.[1-3] For many of these women the potential harms probably do outweigh the benefits. I contend, however, that a blanket ban does not take adequate account of the range of risk in this group or of the need to individualise treatment according to each woman's situation and priorities. The International Classification of Headache Disorders assigns a diagnosis of migraine with aura to anyone who has had two episodes of aura.[4] Women with a remote history of aura on two occasions seem unlikely to face as great a risk of stroke as those for whom aura is a frequent occurrence.

Petrie is right that the absolute risk of stroke in women with aura is low, particularly in those who have no additional stroke risk factors. The cumulative lifetime incidence of migraine in women is, however, 43%, so even small reductions in the risk of stroke at the level of the individual may translate into large benefits at a population level.[5] This is especially likely to be true for stroke in young women, which may result in many years of impairment and disability.

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1 The use of hormonal contraception in women with coexisting medical conditions. ACOG Practice Bulletin No 18. *Int J Gynecol Obstet* 2001;75:93-106.
2 World Health Organization. *Improving access to quality care in family planning: medical eligibility criteria for contraceptive use*. 2nd ed. Geneva: WHO, 2000.
3 International Headache Society Task Force. Recommendations on the use of oral contraceptives in women with migraine. *Cephalalgia* 2000;20:155-6.
4 Headache Classification Committee of the International Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. *Cephalalgia* 1988;8(suppl 7):1-96.
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VITAMIN D AND FALLS

Calcium is the harmful agent

Meyer and Köpke urge us to consider the "side effects of vitamin D and its toxicity."[1] But the doses considered (400-1100 IU) in Bischoff-Ferrari and colleagues' meta-analysis and in the article Meyer and Köpke cite as evidence for side effects are certainly not toxic.[2 3] The tolerable upper intake level for vitamin D used to be 2000 IU, but newer evidence suggests that much higher doses, 10 000 IU daily, are safe.[4]

Furthermore, most of the side effects reported by Avenell et al were gastrointestinal symptoms and renal calculi and are clearly due to the added calcium or the use of calcitriol, not vitamin D.

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Competing interests: None declared.

1 Meyer G, Köpke S. Information on harm is missing. *BMJ* 2009;339:b4395. (28 October.)
2 Bischoff-Ferrari HA, Dawson-Hughes B, Staehelin HB, Orav JE, Stuck AE, Theiler R, et al. Fall prevention with supplemental and active forms of vitamin D: a meta-analysis of randomised controlled trials. *BMJ* 2009;339:b3692. (1 October.)

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Cite this as: *BMJ* 2009;339:b4819

HYPERKALAEMIA

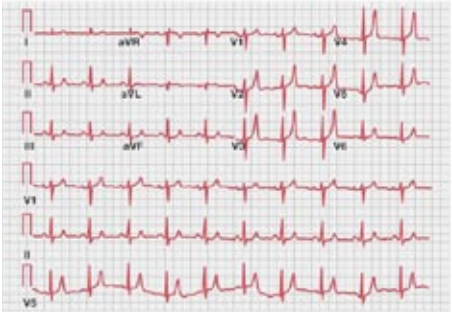
Avoiding spurious hyperkalaemia

A common but often unrecognised cause of spurious hyperkalaemia[1] is sample contamination with potassium ethylenediaminetetraacetic acid (kEDTA), a widely used sample tube anticoagulant for laboratory assays. kEDTA contamination may account for 25% of samples with unexpected hyperkalaemia from patients in both primary and secondary care,[2 3] and if unrecognised may adversely affect patient care and waste healthcare resources.[4 5]

In vitro EDTA contamination may occur through backflow, when blood is collected using vacutainer style systems into EDTA tubes before other sample tubes; decanting blood from EDTA tubes into other tubes; and needles contaminated by delivering blood into EDTA sample tubes before other sample tubes.

Knowing the correct blood collection technique is essential to avoid contamination. Draw blood samples in the correct order and avoid transferring blood between sample tubes. In general, the recommended order of drawing blood samples is blood culture/sterile tubes, plain tubes, gel tubes, sodium citrate tubes, lithium heparin tubes, EDTA tubes, and fluoride/EDTA tubes. But order may vary with sample tube manufacturers, and clinicians should check requirements with their local laboratory departments.

Continuing education, in isolation, is unlikely to abolish EDTA contamination.[3] Laboratory staff may easily identify gross potassium EDTA contamination of blood samples by unexpected marked hyperkalaemia and hypocalcaemia. Spurious hyperkalaemia due to low degree kEDTA contamination, however, is detected confidently only by measuring serum EDTA concentrations.[2 3] Such assay is inexpensive and easily automated.[2] We therefore routinely measure EDTA in all samples suggesting hyperkalaemia.



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1 Nyirenda MJ, Tang JI, Padfield PL, Seckl JR. Hyperkalaemia. *BMJ* 2009;339:b4114. (23 October.)
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Benzylpenicillin potassium

Benzylpenicillin (penicillin G) may be given in a dose of up to 24 million units daily, the common potassium salt contributing a potassium load of 40.8 mmol/day.[1 2] Administration of large amounts of semi-synthetic penicillin derivatives may cause dangerous hyperkalaemia, which has resulted in cardiac arrest.[3-5]

Doctors must be aware of potassium load with penicillin and monitor electrolytes closely when prescribing large doses, particularly to patients with renal impairment.

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1 Nyirenda MJ, Tang JI, Padfield PL, Seckl JR. Hyperkalaemia. *BMJ* 2009;339:b4114. (23 October.)
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Cite this as: *BMJ* 2009;339:b4822

Time to flag up "detox" drinks?

Hyperkalaemia caused by increased potassium intake should be added to Nyirenda and colleagues' comprehensive review on hyperkalaemia.[1]

I have noticed an alarming recent trend, in both shops and on patients' tables, of various "sports" and "detox" drinks with very high concentrations of potassium. A quick internet search showed several drinks with over 80 mg/100 ml (21 mmol/l) potassium, and one with a heart stopping boast of over 200 mg/100 ml. The National Kidney Foundation flags up foods which contain more than 200 mg per portion on its website,[2] but it does not mention these drinks, although they may have much greater concentrations.

In the UK the Food Standards Agency is interested solely in accurate labelling of these products and is not concerned with potentially dangerous concentrations of physiological anions. Given that products containing phenylalanine must be labelled to help those with a condition that affects around one in 10 000, it is time to include warnings for a condition that affects substantially more people.

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Competing interests: None declared.

1 Nyirenda MJ, Tang JI, Padfield PL, Seckl JR. Hyperkalaemia. *BMJ* 2009;339:b4114. (23 October.)
2 National Kidney Foundation. Potassium in your CKD diet. www.kidney.org/news/newsroom/fs_new/potassiumckd.cfm
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CELEBRITY PATIENTS

The third way

The media events surrounding celebrity patients described by Patel suggest a modern way to make money out of the concept of celebrity for everyone.[1]

Let every healthcare institution of a certain size open a radio-TV-blog-twitter studio, annexe, or media department with local, regional, national, or even international exposure and instant news breaking opportunities. These might include daily talk shows with experts (professionals or patients) providing details and comments, discussing medical policies, and, of course, exploring the emotional impact on patients and their families and friends (or enemies). They could be instant pictures of blood, sweat, tears, joy, and misery, and perhaps advice on the best undertaker service.

There will be enough advertising opportunities from shops selling flowers, baby food, nappies, etc, as well as trauma psychologists, undertakers, and the like, to make this sufficiently profitable to pay for all the extra resources needed to provide top quality services—for everybody. Media services could work for the NHS at large—the true third way of attaining communist ideals with capitalist methods.

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Competing interests: None declared.

1 Patel K. I'm a celebrity, get me the best treatment here. *BMJ* 2009;339:b4426. (28 October 2009.)
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