istic vaginal bleeding associated with cervical cancer.[1] In our experience substantial antepartum haemorrhage rather than a bloody cervical smear is the usual presenting symptom when cervical cancer complicates pregnancy.

In the National Maternity Hospital in Dublin between 1984 and 1990, 1479 women presented after 24 weeks' gestation with substantial antepartum haemorrhage. In four cases a histologically proved carcinoma of the cervix was found. The patients presented at 40 weeks, 34 weeks, 32 weeks, and 26 weeks of gestation, all with substantial haemorrhage. We believe that major antepartum haemorrhage is a common presenting symptom of cervical cancer in the second half of pregnancy.

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1 Chamberlain G. Antepartum haemorrhage. *BMJ* 1991;**302**: 1526-30. (22 June.)

Decompression sickness

SIR,—The problem of decompression sickness in fish farm workers after multiple dives[1] has implications for diving practice. Dive profiles—that is, the curves relating depth and time—are normally planned so that the diver attains the maximum depth at the beginning of the dive and maintains this for a predetermined period before ascending at a rate determined by the appropriate dive table. Such profiles are therefore rectangular as opposed to the "saw tooth" configuration associated with multiple ascents. Dives entailing a single descent and ascent are governed by decompression tables, which have undergone progressive review and refinement.[2-4]

Formerly, multiple dives were planned on the assumption that the "bottom times" could be simply summated and the final ascent determined accordingly. This implied that the intermediate ascents could be disregarded. This approach, however, is no longer regarded as acceptable.[5-8] Thus separate tables that take account of previous dives and surface intervals are now available.[4] Applying these tables to the dive sequences described by Drs J D M Douglas and A H Milne suggests that decompression stops in the water would have been appropriate by the third dive to 18 m and the fourth dive to 15 m.

Although diving can never be entirely free of risk, decompression sickness should be avoidable in both recreational and occupational diving.

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1 Douglas JDM, Milne AH. Decompression sickness in fish farm workers: a new occupational hazard. *BMJ* 1991;**302**:1244-5. (25 May.)
2 Zanelli L, ed. *The British Sub Aqua Club diving manual.* 7th ed. London: British Sub Aqua Club, 1972:488-500.
3 British Sub Aqua Club. *The British Sub Aqua Club diving manual.* 10th ed. London: British Sub Aqua Club, 1978:546.
4 British Sub Aqua Club. *The BS-AC '88 decompression tables.* London: British Sub Aqua Club, 1988.
5 Cairns G. The navy's plan for safety. *Diver* 1989;**34**(9):29-30.
6 Busutilli M. Focus on the new tables. *Diver* 1988;**33** (10):25-8.
7 Shaw D. Plan to survive. *Diver* 1988;**33**(1):17-8.
8 Ellerby D, Holbrook M, Longworth G, eds. *Advanced sport diving, British Sub-Aqua Club.* London: Stanley Paul, 1990: 27-31.

What determines the age at the menopause?

SIR,—In reply to Dr Jean Ginsberg's editorial on what determines the age at the menopause[1] Mr John McGarry writes that left handed women have an earlier menopause than right handed women.[2] The study he cites, by Leidy, examined two groups, Hispanic-American women and white and black American women.[3] No difference in age at the menopause and handedness was observed in the white and black women. Leidy stated that in the Hispanic-American group 316 women aged 35-74 were selected as having had a natural menopause. Fourteen of 20 left handed women were then excluded, however, because they had had a hysterectomy, leaving only six in the sample. Almost half the right handed women had had a hysterectomy; the paper does not cite the number of right handed women who had undergone a true natural menopause in the final sample.

Mean age at menopause, menarche, and visit for screening and body mass index and smoking habit in 157 women who had had natural menopause according to handedness

	Right handed (n=139)	Left handed (n=18)
Mean (range) age at menopause (years)	49·5 (39-56)	49·1 (39-55)
Mean age at menarche (years)	13·0	13·2
Mean age at visit (years)	53·5	53·8
Mean body mass index	24·3	24·3
Smoking habit (%):		
Non-smokers	56·4	55·6
Ex-smokers	32·1	22·2
Current smokers	11·4	22·2

We have examined data from white women attending for health screening. Of 157 women who had had a natural menopause (none had had a hysterectomy), 139 were right handed and 18 left handed. The table shows their mean ages at menarche, menopause, and the visit for screening; mean body mass index; and smoking habit. Mean values were compared by *t* tests and smoking habit by a χ^2 test. There were no significant differences between the groups in any of the factors examined. In particular, the age at the menopause and the range of ages at the menopause were not significantly different between the left handed and right handed groups.

We conclude that there is no evidence of a relation between handedness and age at the menopause in a white population.

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1 Ginsberg J. What determines the age at the menopause? *BMJ* 1991;**302**:1288-9. (1 June.)
2 McGarry J. What determines the age at the menopause? *BMJ* 1991;**302**:1540. (22 June.)
3 Leidy LE. Early age at menopause among left handed women. *Obstet Gynecol* 1990;**76**:1111-4.

Care of women with postnatal mental illness

SIR,—Drs R J Prettyman and T Friedman's survey of facilities for mentally ill mothers and their babies in England and Wales[1] draws attention to the lack of research regarding the various patterns of care and organisation of services for postnatal mental illness.

Our smaller survey looked at some of these issues in greater depth; we also found that some districts had no designated mother and baby units.[2] A dilemma faces those planning services with regard to smaller local versus larger regional units. Smaller units offer easier access for the patients and their families and for those referring patients, but several suffered problems over funding and staffing. The availability of other resources—for example, rooms for clinical family interviews, staff trained in infant care, and opportunities for some privacy during family visits—varied greatly. Some units concentrated on puerperal psychosis whereas others admitted mothers with a wider variety of diagnoses.

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1 Prettyman RJ, Friedman T. Care of women with puerperal psychiatric disorders in England and Wales. *BMJ* 1991;**302**: 1245-6. (25 May.)
2 Cassell DMC, Coleman RM. Mother and baby admissions: survey of resources. *Psychiatric Bulletin* 1990;**14**:654-7.

Zidovudine after occupational exposure to HIV

SIR,—In his editorial on giving zidovudine after occupational exposure to HIV Professor D J Jeffries makes several interesting points.[1] He does not, however, mention recent relevant results in two animal models.

One of these reports assessed the effect of zidovudine given to SCID-hu mice that had previously been infected with HIV.[2] As Professor Jeffries mentioned, such mice (immunodeficient mice engrafted with human fetal thymus and lymph node) can be infected with HIV.[2,3] After intravenous inoculation with HIV the implanted human lymph nodes show signs of replication of HIV within two weeks.[3] This reproducible model has been used to assess the effect of antiviral compounds alone and in combinations on HIV.[4]

To address the problem of treatment with zidovudine after exposure mice infected with HIV were given a parenteral bolus of zidovudine followed by oral treatment for two weeks.[2] Zidovudine was started at various times after intravenous inoculation of HIV; two weeks later the human lymph node implants were analysed for signs of HIV infection by DNA polymerase chain reaction. If zidovudine was given within two hours after inoculation no animals had detectable HIV at two weeks. If treatment was delayed until 48 hours after inoculation none of the mice were protected. The study also showed that 20% of animals were protected when zidovudine was given 36 hours after exposure, which suggests that even late treatment may be useful. The route of administration of the drug could be important as the first dose was given parenterally; in contrast, in the two cases reported in which zidovudine given after exposure failed to prevent HIV infection the drug was first given orally.[5,6]

The advantage of this small animal model is that it uses human tissue and HIV as the retrovirus, and the timing, dose, and route of inoculation of HIV and of administration of drugs can be controlled. The effect of 2′,3′-didexoyinosine on HIV infection has also been assessed in this model.[4]

In the second animal model the combination of zidovudine and interferon alfa prevented infection with Rauscher murine leukaemia virus in mice if given within four hours after exposure.[7]

Combination antiviral treatment may be essential in protecting against HIV infection, as described for the Rauscher murine leukaemia virus model. In vitro studies have shown synergistic inhibition of replication of HIV when the combination of zidovudine and 3′-fluoro-3′-deoxythymidine was used.[8] In addition, such combination treatment may help overcome problems of resistance to zidovudine. The authors of one of the case reports in which treatment after exposure failed to prevent HIV infection suggest that the failure may have been due to virus resistant to zidovudine having been transmitted from the index patient, who had been receiving long term treatment with zidovudine.[6]

Although the exact concordance between the data from these mouse models and infected humans is unknown, the results strongly support the