Surely the classical process is from the general to the particular, and by going from the particular to the general they have got the process upside down. Either disease is a "unified concept" or it is not a concept at all.

To end with I will ask two questions. How do they define the corresponding concept health? Is it possible that we are all, lay and professional alike, pursuing a mirage in our National Health Service?

F S A DORAN

Hereford Postgraduate Medical Centre,
County Hospital,
Hereford

¹ Collingwood, R G, *Philosophical Method*. London, Oxford University Press, 1933.

² Dampier-Whetham, W C, *A History of Science*. London, Cambridge University Press, 1929.

³ Russell, B, *History of Western Philosophy*. London, Allen and Unwin, 1946.

⁴ Zeller, E, *Outlines of the History of Greek Philosophy*. London, Kegan Paul, 1931.

SIR,—Interesting though the results of Dr E J M Campbell and others (29 September, p 757) are, their final definition still seems far from adequate, since it begs the question of what is a biological disadvantage. For example, if with Kendell¹ one regards decreased reproductive ability as a biological disadvantage, and therefore considers homosexuality to be a disease, one is equally compelled, as I have argued previously,² so to regard celibacy.

Desirable though it may be, a value-free concept of disease seems to be an impossibility. The purpose of defining a phenomenon as a disease is not merely to study it but to seek to effect a change—to cure it or alleviate its symptoms. This requires a value judgment by the patient, the doctor, or both that the disease state is a bad thing and should if possible be altered.

To attempt to define disease independently of the possibility of its treatment can lead only to "sterile semantic disputes."

P D TOON

Merton College,
Oxford

¹ Kendell, R E, *British Journal of Psychiatry*, 1975 **127**, 305.

² Toon, P D, *British Journal of Psychiatry*, 1976, **128**, 99.

SIR,—In Western medicine we have become far too dogmatic in our approach to the concept of disease. As the article by Dr E J M Campbell and others (29 September, p 757) states, doctors tend to look on disease as always being scientifically explicable, whether they have an essentialist approach (we know what causes it) or a nominalist approach (we can name the syndrome and we are going to find out what causes it). Furthermore, disease has become "doctor orientated" and if the ill person does not feel the doctor can help then the patient may feel he has not got a real disease.

Perhaps we could draw from the Chinese ideas of disease. This philosophy does not fit into the rigid categories of scientific medicine but it is much more flexible and sensitive. When the body's energy is not balanced, the patient feels unwell and this condition of imbalance is disease. This does not necessarily mean that all disease must be treated but the emphasis is directed towards the patient rather than towards the doctor's ability to treat the patient.

I feel that an over-analytical approach to problems such as disease is blinding us to

the task of solving the problems which we face in day-to-day medicine.

G T LEWIS

Lymington, Hants SO4 0BA

Iatrogenic collapse

SIR,—I would like to support Dr P K Schutte's recommendation to give atropine before fitting an intrauterine contraceptive device to prevent a vasovagal attack (8 September, p 608).

For the last seven or eight years I have used Pamergan AP100/25 prior to fitting an IUCD for between 80 and 100 patients—those who have been very nervous or where the procedure has been likely to be prolonged—that is, removing a tail-less device before replacing it with another one. Pamergan contains atropine sulphate 0.6 mg, pethidine hydrochloride 100 mg, and promethazine hydrochloride 25 mg. Patients who have had this injection once nearly always ask to have Pamergan again for the next IUCD refit.

Pamergan AP100/25 is listed for pre-anaesthetic medication, either 1 ml intramuscularly or after dilution to 10 ml for intravenous injection. I withdraw blood into the syringe to mix Pamergan before giving it by slow intravenous injection. This is effective as soon as the injection is completed and patients are quite able to dress themselves afterwards and wait in an examination or side room until collected by a friend. No patient has had a vasovagal attack when I have used this method.

K M HUNTINGTON

London SW3 6PX

Reproductive mortality

SIR,—Dr Valerie Beral is right to point to the inadequacies of using maternal mortality as an effective measure of reproductive health (15 September, p 632). May I suggest, however, that oral contraceptive use is not the only important added risk factor in reproductive health?

A measure of reproductive mortality would be more comprehensive if it also included an assessment of the effects of cigarette smoking, which are known—especially in combination with the pill—to increase the risk of both subarachnoid haemorrhage and myocardial infarction 22-fold and 10-fold respectively compared with non-smoking women not on the pill. Furthermore, any accurate assessment of the relative contribution of oral contraceptives to the risk of cardiovascular disease must take into account the fact that women taking the pill tend to smoke more, on average, than those not taking it, and more again than pregnant women.

BOBBIE JACOBSON

Middlesex Hospital Medical School,
London W1

SIR,—The article by Dr Valerie Beral on reproductive mortality (15 September, p 632) has introduced an interesting and possibly useful new term into mortality statistics, but her claim that there were more deaths for women of 25-44 years in England and Wales from the adverse effects of oral contraceptives than from all the complications of pregnancy, delivery, and the puerperium combined is dependent on so many questionable assumptions, inconsistencies, and omissions that its truth must be doubted.

The whole of Dr Beral's argument rests on estimates for the adverse effects of contraception, the figures being derived from "prevalence of pill and IUCD use and from reports of the mortality related to their use," for which the two quoted sources were the Royal College of General Practitioners' study¹ and a study by Kahn and Tyler.² Dr Beral admits to seven major assumptions; there are at least four others in the text of the paper, and she also relies on assumptions which other authors may have made. Clearly, the more assumptions that are made and the more significant they are, the less reliance one can place on the conclusions.

One of her assumptions, derived from the RCGP study, is that "the excess mortality among pill users was confined to circulatory disease." By using this assumption uncritically, Dr Beral has not calculated the *overall* mortality rate reported by the RCGP Study. Inspection of table II of that study shows that there were 23 deaths in ever-users and five in controls for hypertension, infarction, cerebrovascular disease, etc—an excess of 18. Yet for malignant disease there were six more deaths in the control group than in the ever-users, and for infections two more. If the term reproductive mortality is to be used properly, then the protective effect as well as the (alleged) adverse effect must be taken into account. By including only the negative side of the equation in her estimates Dr Beral has introduced a strong bias in favour of her hypothesis.

A second major assumption is that the findings of the RCGP study on excess mortality from circulatory disease in ever-users of the pill are applicable to current users of the pill. The RCGP study began in 1968 and the publication included data up to June 1976; since pills containing 30 µg of oestrogen were introduced only in early 1974, it is clear that the majority of women for the major part of the RCGP survey were taking pills of 50 µg or above. Yet the latest available figures show that in 1978 60% of pill users took a 30 µg pill and only 32.8% took 50 µg or above. It is thus apparent that the RCGP results cannot be extrapolated to pill-users in 1979.

If I may turn now to the second source of estimates,² Dr Beral states that "40% of the deaths on which the mortality estimate was based were due to sepsis complicating an accidental pregnancy..."; but she omits to mention that this figure of 40% was based solely on two women during a postal survey conducted in the USA. I mention this particular aspect not because an increase or decrease in the estimate for mortality from intrauterine contraceptive devices will significantly alter the results, but in order to show the trivial numbers which are used in some parts of this paper to assist the argument.

Lastly, Dr Beral has not tackled the central problem of the mortality statistics arising out of the RCGP study on which her current paper mainly relies, which is this: if there is *any* increased risk of mortality in pill takers, how is it that since the introduction of the pill in the USA (where pill use over the last decade in women of reproductive age has averaged approximately 25%) deaths from cardiovascular disease in women have declined—even more steeply than death rates for men of comparable age?³ Indeed, with those data, together with the results of another recent analysis of mortality data (from 21 countries), which failed to find any association between the pill and cardiovascular disease but actually showed some interesting negative correlations,⁴ a good case can be made out for the pill's *protecting* against cardiovascular disease. These trends in the USA are not inconsistent with those in the UK, as shown by a recent publication from the Office of Population Censuses and Surveys,⁵ which stated, "Taking circulatory deaths as a whole the number of male deaths rose by 12% over the (last) 20 years... for women circulatory deaths fell by 24%." The fall in female mortality cannot be ascribed to improvements in medical care, since this would affect male mortality equally; and yet this fall has occurred in the two decades during which women, and women alone, have been exposed in large numbers to the supposedly unique danger of the pill.

In view of the inconsistencies and assumptions made in Dr Beral's paper, as well as the

weight of evidence against her from mortality trends in the USA and the UK, I find it very difficult to accept her conclusions.

R A WISEMAN

Schering Chemicals Limited,
Burgess Hill,
West Sussex RH15 9NE

¹ Royal College of General Practitioners, *Lancet*, 1977, 2, 727.

² Kahn, H S, and Tyler, C W, *Journal of the American Medical Association*, 1975, 235, 57.

³ Tietze, C, *Family Planning Perspectives*, 1979, 11, 80.

⁴ Belsey, M A, Russell, Y, and Kinnear, K, *Family Planning Perspectives*, 1979, 11, 84.

⁵ Office of Population Censuses and Surveys, *Trends in Mortality, England and Wales 1951-1975*, London, HMSO, 1978.

* * * We sent a copy of this letter to Dr Beral, whose reply is printed below.—ED, *BMJ*.

SIR,—Dr Wiseman's letter makes several points, which are best answered in the order in which they are raised.

(1) He suggests that had I used data on excess overall mortality in pill users, rather than excess circulatory disease mortality, my conclusions would have been different. He draws attention to the excess deaths from cancer and infections in the control group of the Royal College of General Practitioners' study, but fails to mention that they were balanced by excess deaths from accidents and suicides in the pill takers. Had I used figures for excess overall mortality my findings would not have been materially different.

(2) The RCGP findings may not be applicable to women taking pills containing 30 µg of oestrogen, but my estimates of reproductive mortality were made for the years 1950, 1960, 1970, and 1975. As Dr Wiseman points out, this was before widespread use of the 30 µg pill.

(3) That the number of deaths on which the IUCD-associated mortality was based is small is of little consequence for the calculation of reproductive mortality. As Dr Wiseman points out, the estimated IUCD-associated deaths were so few that they made a negligible contribution to the overall reproductive mortality. The only contraception-associated deaths that made a significant contribution are those related to oral contraceptives. The pill-related mortality rates were based on relatively small numbers as well; but, as I discussed in the original paper, even if the RCGP study overestimated mortality by up to twofold my general conclusions would not be altered.

(4) Whether trends in circulatory disease mortality in young women are compatible with the mortality rates found in the RCGP study is a complex question. The analyses he cites by Tietze and Belsey *et al* have limitations, which have been discussed elsewhere.^{1 2} Comparisons of male and female mortality trends can be useful, but must be made in the context of mortality trends before the pill was introduced. During the 1950s in almost all countries where reliable data exist the mortality rate from all non-rheumatic circulatory diseases fell dramatically in young women. The trends in young men were generally unrelated to the female pattern; the male mortality rates in fact increased in the majority of the countries.³ During the 1960s the rapid fall in female non-rheumatic circulatory-disease mortality was halted and even reversed in countries where pill use was widespread. Where pill use was infrequent female mortality continued to decline. As before, male mortality trends after 1960 bore little relation to the female trends.

Why female circulatory disease mortality declined rapidly during the 1950s, whereas male mortality tended to increase is tantalising—and may well hold an important clue to the aetiology of cardiovascular disease—but this pattern must be recognised before the impact of the pill on mortality trends can be properly assessed.

The reproductive mortality rates estimated by me for England and Wales are necessarily approximate. As data accumulate in the RCGP and other prospective studies, more precise estimates of pill-associated and total reproductive mortality should ultimately be available.

VALERIE BERAL

Department of Medical Statistics
and Epidemiology,
London School of Hygiene and
Tropical Medicine,
London WC1E 7HT

¹ Beral, V, Kay, C, and Vessey, M, *Family Planning Perspectives*, 1979, 11, 205.

² Beral, V, *Family Planning Perspectives*, 1979, 11, 206.

³ Beral, V, *Lancet*, 1976, 2, 1047.

Obstetric anaesthetic and analgesic services in Wales

SIR,—While we support most of the conclusions drawn by Professor Bryan M Hibbard and others (22 September, p 698) on the provision of obstetric anaesthetic services, we were dismayed by the suggestion that "it would help if resources for epidural analgesia were concentrated in centres that could offer a 24-hour service."

Epidural analgesia is now an integral part of modern obstetric practice and should be available in every consultant maternity unit. The assertion that in only a few cases are there potential medical benefits from epidural analgesia is puzzling when one considers the role of epidural analgesia in the obstetric management of twin pregnancies, breech deliveries, pre-eclamptic toxæmia, forceps deliveries, etc. However, the main medical benefit is surely that the risk of death is less with epidural analgesia than with general anaesthesia.

Rather than concentrate facilities for epidural analgesia in fewer centres, more emphasis must be placed on the provision of fully comprehensive anaesthetic services in every consultant maternity unit. Until we achieve 24-hour cover by skilled anaesthetists in every such unit there will be little decrease in the number of maternal deaths associated with anaesthesia.

D J BOWEN
A T LETCHWORTH
A D NOBLE

Royal Hampshire County Hospital,
Winchester, Hants

Nutritional standards and saving money on school meals

SIR,—The nutritional content of the school meal received by schoolchildren has been well documented by Professor A E Bender and others (22 September, p 732). It is apparent that some children may be put at nutritional risk if current trends continue. Poor breakfast habits are increasingly common, many children leaving home with no breakfast at all.¹ Thus the midday meal is obviously important to these children and is likely to make a significant contribution to nutrient intake for the majority. For this reason alone we should not compro-

mise on nutritional standards. Suggestions about the abolition of school meals or substitution of snack meals which achieve a nutritional input reflecting current practice should also be questioned.

We would agree with Professor Bender that a snack meal can be as nutritious as a cooked meal. But if children are to select snack meals then more time must be devoted to the nutrition education of the child to help him make appropriate choices. The nutritional quality of the snacks must also be closely defined, supervised, and monitored; and the mistake of matching nutrient content to the standards currently in use rather than those approved by the DHSS should not be condoned. Further, there is a real danger that school snacks will be based on economic tenets instead of nutritional ones. This again reflects the need for close monitoring.

If we, as health professionals, are really concerned with the growth, health, and performance of our schoolchildren, we should strongly resist all attempts to remove school meals or accept lower standards.

ANNE E DE LOOY
PAUL FIELDHOUSE

School of Health and Applied Sciences,
Leeds Polytechnic,
Leeds LS1 3HE

¹ Bender, A E, in *Breakfast and the Changing British Lifestyle*. Manchester, Kellogg's (Great Britain), 1977.

Abnormal smears in pregnancy

SIR,—What are the justifications for interfering with a uterine cervix during pregnancy? In your leading article (29 September, p 753), you deal with the finding of an abnormal smear during pregnancy, not with seeing an established cervical carcinoma. The progression from cervical intraepithelial neoplasia through microinvasion to invasion takes years, so if the cervix appears non-malignant any cytological abnormality can wait at least till the postnatal period before requiring any surgical intervention—whether colposcopy or conisation.

The vast majority of women developing cervical intraepithelial neoplasia have had at least one pregnancy. Those women most at risk of developing cervical cancer are those who are least likely to present themselves for routine screening. They are also those who do not attend for routine postnatal examinations. They must be detected at a time when they present themselves. This is often only at time of pregnancy or on subsequent referral for contraceptive advice. It is the only way they will ever be screened.

The finding of an abnormal smear during pregnancy requires most careful follow-up. A smear is not usually truly positive during pregnancy and then normal in the postpartum period. The conservative regimen has been followed in this region for many years and no case of clinical cervical cancer has developed because of it.

Resources may be limited, but it is customary to take a smear at the time of postnatal examination and it is nonsense to suggest that it costs more to do it antenatally—unless, as only about 60% of women attend for postnatal examination, the economy is in this reduced number; unfortunately it is the 40% who get away who are more likely to have the disease. If economics are of prime importance, let us cease to screen the 60% who attend postnatally