Walker, who point out that there is a much lower incidence of postmenopausal osteoporosis in black women despite a diet that is often poorer in calcium. Our published studies have shown that black women have thicker skin and a higher skin collagen content than white women. The well recognised increased incidence of keloid formation and uterine fibroids also indicates an excessive connective tissue response that may protect women of African origin from postmenopausal osteoporosis.

We are concerned by Mr A W Fowler's repeated condemnation of oestrogen treatment for the menopause. His belief that the menopause is a psychological condition that does not require treatment must be seen as an outdated spiritual comment rather than an informed medical view. Certainly lifestyle, exercise, and diet are important in this condition, but if women want to avoid postmenopausal osteoporosis they must rely on oestrogen treatment.

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HIV transmitted by kissing

SIR,—Public health policy on the acquired immune deficiency syndrome (AIDS) must depend on what is found to happen in practice. Arguments about the role of cell free or cell associated virus (14 March, p 705) have no bearing on the practical issue of transmission by semen or saliva. There is clear evidence that semen from men infected with the human immunodeficiency virus (HIV) transmits infection, in particular to the receptive partner in anal intercourse.¹⁻⁴ There would not be this difference between the risk of infection to receptive and insertive partners if transmission were by way of saliva or minor abrasions, as Dr Seale (p 705), Mr Monckton (p 706), and Dr Kay (p 706) suggest. There is also evidence, of considerable practical importance, that wearing a condom has a valuable protective effect.⁵⁻⁸

In spite of the many close and sometimes intimate contacts taking place in the home between those susceptible and those who are infected, there is no epidemiological evidence that HIV has been transmitted by saliva.¹⁻⁷

There is no reason to change the advice given to the government on how people should protect themselves from HIV infection.¹

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Psychiatric disorder and gynaecological symptoms in middle aged women

SIR,—In reporting their community survey of middle aged women (24 January, p 213) Dr Dennis Gath and colleagues ask the question "How many have... both psychiatric disorders and gynaecological symptoms?" The answer would be of great interest to researchers and doctors, yet, regrettably, the proportion of psychiatric "cases" in the various symptom categories was not reported.

Instead, we are given an array of threshold significance levels for the tests of the relation between psychiatric state and the various definitions of the symptoms. To make matters worse, the authors seem to mistake these significance levels for a measure of strength of association. To consider just the χ^2 test (though analogous reasoning may be applied to the other tests used): it is a test only of whether any association exists. As with many tests, with increasing sample sizes weaker and weaker associations may result in a confident rejection of independence. Thus with small sample sizes a "highly significant" association is likely to be a strong one, but in large samples this is not necessarily the case. For 2×2 tables the strength of association can be measured by ϕ ($\sqrt{\chi^2/n}$), which takes values between 0 (no association) and 1 (perfect association). For such tables a χ^2 value of 10.9 is significant ($p < 0.001$), regardless of the sample size n . On the other hand, the strength of association ϕ would be 0.52 if the sample size was 40 but only 0.15 if n was 504. In the paper by Dr Gath and coauthors the significance quoted for the relation between dysmenorrhoea "interfering with life" and present state examination state indicates a χ^2 value of at most 10.8. This is reported as "associated strongly," whereas with n of 265 ϕ is at most 0.20. Indeed, over three quarters of the women reporting such dysmenorrhoea were probably not psychiatric cases, as classified by the present state examination. The significance thresholds reported are thus not a useful way to present such data.

Considering only the severest subjective ratings for each symptom, the survey found a moderate relation between psychiatric state and all gynaecological symptoms. There are, however, two important considerations: one, which the authors acknowledge, is that any woman suffering premenstrual psychological symptoms has an increased likelihood of scoring as a "case" on account of symptom overlap alone, and the second is that the other gynaecological symptoms often occur in conjunction with premenstrual symptoms (in the case of dysmenorrhoea particularly this can be ascertained from the numbers reported). Dr Gath and colleagues did not control for psychological symptoms of the premenstrual syndrome, and thus associations for other symptoms may have arisen purely as a result of a small cluster of women suffering severely from the premenstrual syndrome who are cases and who also report dysmenorrhoea, and so on. To avoid this possibility, the other relation should be assessed separately for women with and without severe symptoms of the premenstrual syndrome.

The consultation pattern, not the community picture, is directly relevant to general practice. Again, actual case rates among women consulting doctors about gynaecological problems would have been preferable to the significance thresholds that were reported. The gynaecological symptoms and case

rates of the many women consulting for psychiatric symptoms would also have been interesting.

For general practice consultations, no relation was reported between psychiatric state and vasomotor symptoms or heavy periods; the positive relation with the premenstrual syndrome is not unexpected, though it would be interesting to ascertain the relation for women with physical symptoms alone, and the relation with dysmenorrhoea may not persist after controlling for premenstrual tension. General practice consultations comprise only half of all gynaecological consultations, and there is no information on the remainder, nor much on the 24% of all women who consult with psychological problems. On the basis of what is reported, on what is in fact a small number of consultations, the implications for general practice hardly seem clear.

It is clear, however, that we urgently need a measurement strategy for psychiatric state in women that can take account of the striking within cycle variation in psychological wellbeing that many women experience.

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AUTHORS' REPLY—Ms Warner comments that significance thresholds are not a useful way to present data and that we should have reported strengths of association as measured by ϕ .

We investigated a very large number of possible associations, first differentiating between those associations that could be attributed to chance and those that could less plausibly be attributed to chance. For this reason we performed significance tests and reported on a selection of them in our paper. We agree that when associations seem to be significant the next interesting question concerns the strength of their association. In our view, this can be assessed properly only by inspection of individual tabulations. To report such tabulations would have overloaded a paper that was already long and detailed. We assumed that anyone seeking further information would write to us directly, and we would have been pleased to supply the tabulations. As a typical example, we can cite the following findings about proportions of present state examination cases among patients who had dysmenorrhoea: any dysmenorrhoea, 11.8%; at least half periods painful, 13.8%; dysmenorrhoea interfering with life, 22.0%; medication for dysmenorrhoea, 13.4%. The corresponding figures for patients without these symptoms were 6.3%, 5.0%, 6.8%, and 6.7%. In short, about twice as many women with dysmenorrhoea were classed as psychiatric cases as those without dysmenorrhoea.

How the strength of association should be assessed is a matter of judgment. In some circumstances odds ratios might be appropriate, while in others the difference in proportions might be better. ϕ is a generalised measure of association, which has advantages as well as disadvantages. In any case, it is doubtful whether ϕ values could sensibly be reported in a general medical journal, as most readers would not be familiar with their meaning.

In discussing confounding with the premenstrual syndrome Ms Warner argues that some patients with gynaecological symptoms may falsely be diagnosed as psychiatric cases if they also have the premenstrual syndrome. She bases this argument on the premise that patients with psychological symptoms of the syndrome are likely to be diagnosed as psychiatric cases. We would disagree with this premise. When using the present state examination our interviewers rated psychiatric symptoms according to their intensity and duration in the four weeks before the interview; by definition, they did not rate psychological symptoms occurring