EDITOR.—D D Kerrigan and colleagues report that giving patients detailed information before hernia repair did not significantly increase their anxiety but say that it would help in subsequent litigation.¹ Although I accept the philosophy behind their conclusion, elective hernia repair is unlikely to give rise to many cases of litigation. Anxiety may be associated with practically every operation.

It is doctors' utmost duty to warn of the most serious and most common complications: the Sidaway case in the English courts is a precedent.² Lord Bridge stated that if a complication occurs in more than 10% of cases the patient must be told. In the case of specific risks, such as death, paralysis, and blindness, the patient must also be told even if the risk is less than 1%. This common law, also quoted by the NHS Management Executive's *Guide to Consent for Examination or Treatment*,³ is not applicable in Kerrigan and colleagues' study: complications do not occur in more than 10% of patients after elective hernia repair, nor are there specific risks of death, paralysis, or blindness. Thus the choice of this procedure for examining consent is not appropriate.

The information sheets given to both groups in the study were inadequate and did not satisfy the Department of Health's guidelines³ as they did not mention possible alternatives to elective hernia repair.

Doctors should make their own judgment as to how much information each patient needs. There is no point in loading patients with all possible information available. As long as the doctor has explained the procedure, its alternatives, and complications in broad terms no legal action will ensue. I disagree with the authors that unless all details are given litigation may ensue. The House of Lords applied the "broad nature" test in the case of *Chatterton v Gerson*.⁴

I accept that at times of stress many patients do not absorb oral information, and thus a combination of oral and written information is ideal. The Department of Health's guidelines suggest that a relative, friend, or nurse should be present during the explanation. This gives the patient another opportunity for obtaining procedural information, especially when a nurse is present. Most patients ask questions more freely of nurses than doctors.

Finally, all doctors should remember the landmark of the "Bolam test" with regard to the best interests of the patient.⁵ The doctor must be honest and must explain in simple terms, understandable to the patient, what is best for the patient. If the patient is unsure, ideally a friend or relative should be present when consent is obtained.

K C MOHANTY

St Luke's Hospital,
Bradford BD5 0NA

1 Kerrigan DD, Thevasagayam RS, Woods TO, McWelch I, Thomas WEG, Shorthouse AJ, et al. Who's afraid of informed consent? *BMJ* 1993;306:298-300. (30 January.)

2 Sidaway v Bethlam Royal Hospital Governors [1985] 1 All ER 545.

3 NHS Management Executive. *A guide to consent for examination or treatment*. London: Department of Health, 1990. (HC(90)22.)

4 Chatterton v Gerson [1981] 1 All ER 257.

5 Blyth v Bloomsbury Health Authority [1989] 5 PN 167.

EDITOR.—D D Kerrigan and colleagues report that patients' anxiety is not increased by detailed preoperative discussions of possible surgical complications.¹ They highlight a potential deficiency in the way consent may be obtained. Other imperfections exist, including the legibility of consent forms.

We prospectively investigated the ability of elderly patients to read the surgical consent form before they underwent extracapsular cataract extraction. Patients undergoing urological surgery served as controls matched for age. In both groups patients' corrected near acuity was measured with a near vision chart whose print is graded in fractions of an inch.² The smallest print (N5)

comprises letters 5/72 inches high, while the largest text (N48) has letters 48/72 inches high. Consent forms from various major teaching hospitals were obtained for comparison.

Sixty of 102 ophthalmic patients and 18 of 50 urological patients were unable to read the consent form, which consists of N6 print. Principally patients over 55 years old found the consent form illegible. Even the NHS Management Executive's model consent form,³ typeset in N10 print, has print smaller than the near acuity of 48 of our ophthalmic patients and 15 of our urological patients.

Our prospective study shows that small typefaces limit the legibility of consent forms for elderly patients. As more than a third of our control patients were unable to read the form, poor legibility clearly affects not only ophthalmic patients but also other elderly surgical patients. Comparable consent forms are used at other teaching centres, indicating that poor legibility may be a nationwide problem for this age group. Changing to a larger typeface (for example, N24) would have enabled 89% of our ophthalmic patients and 96% of our urological patients to read the form.

It is unreasonable to ask patients to sign documents that their vision prevents them from reading. We recommend a rapid transition to the use of larger print and, specifically, that patients aged over 55 should be presented with a consent form with minimum print size N24 (letters 24/72 inches high).

O J LEHMANN

D MCLEOD

C DOWLING

R N P CARROLL

Manchester Royal Eye Hospital,
Manchester M13 9WL

Department of Urological Surgery,
Manchester Royal Infirmary,
Manchester M13 9WL

1 Kerrigan DD, Thevasagayam RS, Woods TO, McWelch I, Thomas WEG, Shorthouse AJ, et al. Who's afraid of informed consent? *BMJ* 1993;306:298-300. (30 January.)

2 Law FW. Reading types. *Br J Ophthalmol* 1952;36:689-90.

3 NHS Management Executive. *A guide to consent for examination or treatment*. Appendix A (1). London: NHSME, 1992.

EDITOR.—D D Kerrigan and colleagues measured preoperative anxiety before and after they gave either simple or detailed information to two randomised groups.¹ They calculated the confidence intervals and significance for the mean change in anxiety score for each group separately. In the group given detailed information the confidence interval included zero and the mean change in anxiety was not significant ($p=0.2$), which the authors interpreted incorrectly as "no change." In the other group the confidence interval did not include zero and the reduction in anxiety was significant ($p=0.01$).

The authors concluded incorrectly that there was a difference between the two groups because the change was significant in one group but not in the other. There might, for example, be a difference in one group which just fails to reach the (arbitrary) significance level and a difference in the other which just exceeds it, the differences in the two groups being similar. Furthermore, anxiety may change with time, repetition of the questionnaire, or discussions between patient and doctor, and we cannot conclude that a significant fall in anxiety was caused by the simple information. This is one reason for having a control group. The two groups should be compared directly.

Use of multiple regression or analysis of covariance is the best way to adjust the anxiety after treatment for the anxiety before.² This analysis gives an estimate that anxiety in the group given detailed information will exceed that in the group given simple information by 3.0 (95% confidence interval 0.8 to 5.2, $p=0.009$), using data digitised from their graphs. The authors' conclusion that

detailed information does not increase anxiety was based on an analysis which excluded the control group. Our analysis shows that giving detailed information leads to greater anxiety than giving simple information.

Kerrigan and colleagues concluded that subjects given simple information had a greater reduction in anxiety if they had scored highly on the baseline anxiety assessment. They state that they followed us in plotting difference against mean and calculating the correlation between these,³ but they actually plotted change against initial value, which gives a negative correlation whether change and initial value are related or not.^{4,5} They do, however, seem to give correlation coefficients between change and mean, although the correlation coefficient for their figure 1 should be $r=-0.27$, not $r=0.27$.

Our paper was concerned with comparing two methods of measurement, not with relating change to initial value.⁶ To apply Blomqvist's method for this⁷ we need an estimate of the correlation between test and retest, denoted by G . Spielberger *et al* give several estimates of this value for the scale used, but the largest for men from the general population is $G=0.54$.⁸ To estimate the true relation between change and initial value one estimates the regression in the usual way then adjusts for the inevitable downward bias in slope to get $b_{adj}=(b_{obs}+1-G)/G$, which has approximate standard error $SE(b_{adj})=SE(b_{obs})/G$. For the group given simple information in Kerrigan and colleagues' study we get $b_{adj}=0.32$, $SE(b_{adj})=0.13$, and for the group given complex information $b_{adj}=0.66$, $SE(b_{adj})=0.19$. The significant positive slope in each group shows that subjects with high baseline anxiety are expected to increase their anxiety more, or decrease it by less, than those with low baseline anxiety. There is no evidence that this tendency is different between the groups ($p=0.1$).

This calculation depends on the estimate of G . The test-retest correlation in the present data is $G=0.79$. Analysis with this larger value shows no relation between change and initial value in either group and no difference in relation between groups. Whichever value of G is used, the conclusion is different from that drawn by Kerrigan and colleagues.

Thus subjects given detailed information had greater anxiety than those given simple information. Having read the detailed information, we are not surprised.

J MARTIN BLAND

Department of Public Health Sciences,
St George's Hospital Medical School,
London SW17 0RE

DOUGLAS G ALTMAN

Medical Statistics Laboratory,
Imperial Cancer Research Fund,
PO Box 123, London WC2A 3PX

1 Kerrigan DD, Thevasagayam RS, Woods TO, McWelch I, Thomas WEG, Shorthouse AJ, et al. Who's afraid of informed consent? *BMJ* 1993;306:298-300. (30 January.)

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EDITOR.—D D Kerrigan and colleagues' methods can be questioned on the grounds that all of the patients had already consented implicitly to the operation as shown by their turning up on the