many believe to be already too heavily dependent on the Government payroll. To say that the public submit "blindly" to an "arbitrary code of ethics" is sheer nonsense. There is nothing arbitrary about our ethical standards: they have been built up over centuries, and they, rather than that tottering edifice they support, are the "envy of the world."

Finally, let it be remembered that there is nothing new in therapeutic trials, though, thanks to people like Sir Austin Bradford Hill, there is a much more earnest endeavour to make them accurate and effective. If any patient really is genuinely frightened about being "experimented upon" then let him seek the advice of his family doctor. Most general practitioners have a pretty shrewd idea of those few units where therapeutic enthusiasm tends to overshadow ethics. Alternatively, if he has the initiative and can spare a few pounds per annum, the patient can join one of the excellent provident associations and purchase himself a little private medical care.—I am, etc.,

London W.1.

REGINALD S. MURLEY.

Married Quarters in Hospital

SIR,—Dr. William R. Hain's letter (May 18, p. 1344) and the information that "when further information is available, action will be taken to bring this need [for married quarters] to the notice of the Ministry" (May 11, p. 177, Annual Report of Council, paragraph 50) prompted me to add up the number of my student contemporaries who are married. There are 24 students from my hospital who take the final Cambridge M.B. next month. Eleven of us (46%) are married, one with three children, one with two, two with one, and two whose wives are pregnant. Thus over half of those who are married will have families during the pre-registration year. The number of married students in my year may be slightly higher than in other years, but these facts point to the inescapable conclusion that soon, if not already, over half those doctors completing their pre-registration year will be married.

The reasons for this increase are many, but, of the various warnings against student marriage, that of work suffering has been shown to be quite wrong. The pass rate for the first part of finals for my year was higher among the married students than among the bachelors, and all but one of the major clinical prizes were awarded to a married student.

However well married students may do in their finals they are faced with considerable hardship during the pre-registration year, both financially and in the imposition of relative chastity due to the paucity of married quarters. A houseman at a London hospital earning £675 per annum (pre Review-Body award figures) has to pay a residence charge of £155 per annum. He is unlikely in London to be paying less than £250 per annum for his flat where his wife waits patiently for the precious half-day and the two week-ends in five which should bring her husband home. She only hopes that of the £4 a week remaining from her husband's salary after tax, insurance, superannuation, residence charge, and rent for the flat have been deducted, she will have enough left to feed him, provide some form of heating and lighting, and perhaps allow them a night out in the form of the cheapest seats at the local cinema. It is barely possible they could afford some form of contraception without which their financial difficulties might become much worse. The 14% award may raise thin hopes of a better life to come,

but I fear that a substantial increase in the charges for hospital residence will leave the situation little better.

The outlook of many hospital management committees that it is immoral for any houseman to have sexual relations in the hospital, be he married or no, persists in spite of Ministry circulars to the contrary. The attitude that the houseman must accept "a reversion to a life of collegiate monasticism" is, as Dr. Hain so ably points out, indefensible. I realize that it takes time and money to establish married quarters, but it would be a step forward if hospital management committees were to install now the double beds which will inevitably be required for the married quarters of the future, and with them provide more liberal meal arrangements for the wives, both for supper and breakfast.—I am, etc.,

St. Bartholomew's Hospital,
London E.C.1.

MICHAEL HESSION.

Berylliosis

SIR,—In their interesting description of two cases of berylliosis in this journal¹ recently Drs. G. F. Norris and Mary C. Peard included the results of certain respiratory-function tests that had been performed at intervals over the course of two years. The tests were repeated by me in March, 1962, and I would be grateful for an opportunity to give these further results and to add a few comments.

Case	Vital Capacity	Residual Volume (R.V.)	Total Lung Capacity (T.L.C.)	R.V.% T.L.C.	F.E.V. ₁ %	Exp. Peak Flow Rate	M.V.V.	Diffusing Capacity
1	3.14	2.47	5.62	44	52	262	70	19.7
2	3.15	1.05	4.20	25	75	455	127	17.1

The subdivisions of the lung volume and the results of the tests of mechanical function were essentially similar to those obtained on previous occasions except that there was no further diminution in the residual volume and total lung capacity in Case 2. In fact, all the subdivisions of the lung volume had increased, so that there was no evidence of progressive pulmonary restriction at that time. The breath-holding method for the determination of the diffusing capacity of the lung for carbon monoxide gave a higher result in both patients. Both men were still on steroid therapy. The airway resistance, mentioned in the paper, had not been measured directly in either patient at any time.

It may not be clear from the table in the paper that where two figures are quoted in the column headed "predicted value" the figures do not represent a range, but the first figure gives the predicted normal, while the second figure represents the outer limit of normal, which was taken two standard deviations from the control group regression of the respective parameter on age.

The respiratory-function tests over the period of observation showed that Case 1, who had developed increasing breathlessness over one year, had evidence of pulmonary restriction as shown by a reduced vital capacity and total lung capacity, but with a residual volume within normal limits. He had a reduced M.V.V., F.E.V.₁ %, and peak flow rate that did not improve following the inhalation of a bronchodilator aerosol, giving evidence of moderate, irreversible ventilatory obstruction. Arterial oxygen saturation was normal at rest, but decreased on exercise (minimum 82.5%); arterial carbon-dioxide tension was normal and the carbon-monoxide diffusing capacity was reduced. He thus showed the functional pattern of impaired diffusion, although uneven ventilation may have been a contribu-

tory factor. Case 2, who developed breathlessness over five weeks, had evidence of pulmonary restriction as shown by reduced vital capacity, residual volume, and total lung capacity. He had a normal arterial oxygen saturation at rest, but reduced on exercise (minimum 82%); normal arterial carbon-dioxide tension, and a low diffusing capacity, thus showing the functional pattern of impaired diffusion, but without ventilatory obstruction, in contrast to Case 1.

I would like to point out that in September, 1959, the tests were kindly performed by Dr. B. H. Bass in the lung-function laboratory of the London Hospital, and he used different techniques to mine for some of the tests. He employed the method described by Meneely and Kaltreider² for the estimation of functional residual capacity, and the M.V.V. was performed at 80 breaths per minute, and not 70 breaths per minute, as on subsequent occasions. However, as can be seen from the table already quoted, the results on this latter test were similar at the two respiratory rates, and testing at both respiratory rates on a subsequent occasion revealed no significant difference in performance.—I am, etc.,

M.R.C. Air Pollution Research Unit, G. KAZANTZIS.
St. Bartholomew's Hospital Medical College.

REFERENCES

- ¹ Norris, G. F., and Peard, M. C., *Brit. med. J.*, 1963, **1**, 378.
² Meneely, G. R., and Kaltreider, N. L., *J. clin. Invest.*, 1949, **28**, 129.

Oral Contraception and Coagulability

SIR,—I read with interest Professor P. A. Owren's letter (May 11, p. 1283). I am pleased to see that he is now in agreement with the view which I have held for some time¹⁻⁴—namely, that tissue "thromboplastin" does not participate in intravascular thrombosis.

Recent experiments⁵ on human veins and investigations on tissue extracts have established this point and demonstrated the separate existence during life of the tissue-clotting factors. On the other hand, certain changes in blood factor IX appear to be responsible for accelerating the coagulation of blood both *in vivo* and *in vitro*.

These findings denote that an increase in the concentration of factor VIII may be of significance, but the results of cephalin time and prothrombin time (giving the combined activity of several factors in relation to the reagent used) bear no definite relation to the *in vivo* coagulability of blood. May I add that "hypercoagulability" may not be produced by high levels of factor VIII *per se*, but rather by disturbing the balance between the various clotting factors or upsetting the complex mechanism (including vascular wall) responsible for the intravascular continuity of normal blood fluidity?—I am, etc.,

Department of Pathology, F. NOUR-ELDIN.
Southmead Hospital,
Bristol.

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- ¹ Nour-Eldin, F., *Symposium on Blood Clotting Factors, 4th International Congress of Biochemistry*, Vienna, 1958.
² — *Acta. haemat. (Basel)*, 1962, **28**, 265.
³ — *Brit. med. J.*, 1962, **2**, 411.
⁴ — *J. clin. Path.*, 1963, **16**, 94.
⁵ — *Ann. N.Y. Acad. Sci.* (in press).

Side-effect of Guanethidine

SIR,—We have recently encountered an untoward side-effect of guanethidine in three of our patients being treated for essential hypertension. Until a recent article in the *B.M.J.* ("To-day's Drugs," April 20, p. 1073) we

were unaware of it, and feel further emphasis might be of value.

In each case the onset of a febrile illness, diagnosed as influenza in one case and as severe colds in the others, was accompanied by a change in their response to guanethidine.

The first, a 47-year-old lady, was diagnosed as having essential hypertension and started treatment with guanethidine in June, 1960. Her blood-pressure before treatment was 260/160, but on gradually increasing doses of guanethidine through the years had been kept in the region of 260/120. Her present dose is 50 mg. t.d.s. On March 7, 1963, a visit was requested as she had collapsed. She was found to have lost consciousness, on attempting to rise, having spent the day in bed with malaise and generalized myalgia. Her temperature was 100° F. (37.8° C.) and influenza was diagnosed. Her blood-pressure on examination at that time was 175/90. Two days later her blood-pressure was 105/70, although since she had remained in bed no further faints had occurred. Her dose of guanethidine was halved, after stopping it for a day, and three days later her blood-pressure was 250/140. She returned to her dose of 50 mg. t.d.s., and her blood-pressure is now at its usual level.

Unfortunately neither of the other patients was seen until after their episodes of presumed postural hypotension.

The second patient, a man aged 54 with a blood-pressure of 240/130 before treatment, had been on guanethidine since January, 1963, and had reached a stable dose of 30 mg. b.d. by mid-February. He remained well until mid-March, when he said he had a severe cold. He had not limited his activities but noticed three episodes of dizziness whilst walking, and on three mornings when rising after sleep. He reduced his dose of guanethidine on his own initiative, and although on only 15 mg. b.d. when next seen towards the end of his illness his blood-pressure was well controlled. It subsequently rose and was fully controlled again on the original 30 mg. b.d.

The third patient, a woman aged 62, had been on guanethidine since November, 1962, with a blood-pressure before treatment of 230/140. She has been on a stable dose of 10 mg. t.d.s. since December with good control. She had a severe cold in March and suffered attacks of giddiness on a number of occasions while it lasted. It seems likely that this was a result of potentiation of the guanethidine by a virus infection, as appeared to occur with the other two cases, although in her case her blood-pressure is now normal, and no recording was taken during her illness.

—We are, etc.,

D. A. CHANDLER.
R. S. TERRY.

Hereford.

Meclozine and Foetal Abnormalities

SIR,—The recent preliminary report by the Epidemic Observation Unit of the College of General Practitioners (December 1, 1962, p. 1446) drawing attention to the association of a number of congenital abnormalities with the administration of meclozine in early pregnancy is of considerable interest.

In 1961¹ I recorded the occurrence of congenital diaphragmatic hernia in consecutive siblings, and speculated on the relevancy of this to the fact that the mother had been treated by an antihistamine in both pregnancies. Although not stated in the text, the product used was meclozine. Two later pregnancies in which antihistamines have not been prescribed have resulted in the birth of normal infants.—I am, etc.,

Princess Alexandra Hospital, A. F. BURRY.
Brisbane, Queensland.

REFERENCE

- ¹ Burry, A. F., *N.Z. med. J.*, 1961, **60**, 110.