of the intravenous injection of 200 mg hydrocortisone ranged from 30 sec. to 1 min. and the duration of the reactions from 1-5 min. The sites affected were the upper and lower limbs, the perineal area, and the face. A second dose of hydrocortisone, when necessary, did not give any of the above reactions.

Some of the above symptoms (nausea, transient itching, localized muscular weakness, bronchospasm, and vertigo) have been described after a local injection of hydrocortisone acetate.² Though the cause of the above reactions has not been identified,³ the role of idiosyncrasy should not be overlooked.

I am most grateful to Dr. D. Pearson for permission to report the results of this study.

—I am, etc.,

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¹ Bartrop, D., and Diba, Y. T., *Lancet*, 1969, 1, 529.

² Kendall, P. H., *Annals of Physical Medicine*, 1958, 4, 170.

³ Martindale, *Extra Pharmacopoeia*, 26th edn., p. 529. London, The Pharmaceutical Press, 1972.

Actinomycosis

SIR,—I was interested in your epidemiology report on actinomycosis (10 February, p. 365). The report does not mention intra-abdominal actinomycosis, and I felt that the accompanying photograph of an actinomycotic appendix might be of interest to your readers.

The patient was a 28-year-old single girl who had a four-day history only and her symptoms and signs were quite subacute, apart from a white cell count of 17,900/mm³ with 85% neutrophils. There was no history of actinomycosis in other sites. At operation

the appendix was seen to be very large and thickened and surrounded by the omentum. No free pus was present, but on separating the omentum two or three small sinuses were seen in the greatly thickened mesoappendix. These excluded a very small amount of pus which was cultured. Removal of the appendix was straightforward apart from the fact that the stump could not be buried and was merely ligated and cauterized. Apart from the induration around the stump of the appendix the caecum appeared to be normal. Pus from the appendix showed no growth after 48 hours. The histology report was as follows: "Acute suppurative appendicitis and peritonitis. Actinomycoses organisms are noted in the lumen of the appendix and surrounded by polymorph infiltrate. These are considered to be the probable etiological agent."

The patient had no postoperative complications and was not treated with any antibiotics. Two and a half months after operation she is asymptomatic.—I am, etc.,

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Research Investigations in Adults

SIR,—I must take exception to a generalization by Professor L. J. Witts in the tape-recorded discussion (28 April, p. 220). In response to the question "Do they have ethical committees in, say, university physiology laboratories?" he replied, "Not yet, but sooner or later they will have to."

Such observations may have relevance to Professor Witts's immediate parish, but are certainly out-dated so far as world-wide physiological opinion is concerned. In most North American universities prior approval by a committee on human experimentation has for many years been a requirement of grant support, experimentation, and publication. The views of the applied physiologist have in fact led those of the clinicians by several years, and a detailed discussion of the issues raised by Professor Witts and his associates will be found in at least one undergraduate textbook. (*Alive, Man! The Physiology of Physical Activity*. Springfield, Illinois: C. C. Thomas, 1972.)

This underlines rather forcibly Dr. Roger Williams's point on the need to check what is going on elsewhere in the world—whether pontificating or experimenting.—I am, etc.,

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Medical Staff Dining-rooms

SIR,—With reference to recent correspondence on medical staff dining-rooms, surely Dr. R. C. Redman's (26 May, p. 485) reasons for an exclusive dining-room are negated by the last few words in his letter, "improved interdepartmental relations and co-operation—something that cannot be valued in strictly economic terms."

Dr. M. W. Rout (28 April, p. 244) and Dr. Redman must appreciate that there are other departments in hospitals which deal with patients and hospital staff and which

also benefit from "improved inter-departmental relations."—I am, etc.,

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Lead in Drinking Water

SIR,—In a recent article (7 April, p. 21) Dr. M. D. Crawford and Mr. D. G. Clayton report differences in the mass of lead present in human rib bone between individuals residing for more than 10 years in towns supplied with hard drinking water and those living in soft water areas. Comment is also made concerning the mass of lead in domestic drinking water sampled from taps first thing in the morning, which will contain any residues accumulated in the pipes overnight. The data presented in table I of their paper are not accompanied by any indication of the statistical spread of the results but would appear to illustrate that the burden of lead in rib from soft water areas is greater than that found for hard water areas. As part of a large study relating the chemical composition of man with his environment, published recently,¹ data were presented for the same groups of towns for human rib and are given together with the data of Dr. Crawford and Mr. Clayton in the table.

Dr. Crawford's paper gives no information concerning the method of sample preparation, which could be of some importance to the following discussion. My work was specifically concerned with the lead present in inorganic bone and not the system bone + cartilage + marrow + blood. Unless rather unusual precautions are taken, the significance of the lead content of bone can be open to doubt; some contributory factors are as follows: (1)—Differences exist in the mass of lead in cortical and trabecular bone; in particular there appears to be a significant increase in the level of lead on trabecular surfaces. Papers describing a means of studying this phenomenon have been published.^{2,3} (2)—In many rib samples, particularly those taken from individuals more than about 35 years of age, the extent of trabeculation and open cavities can vary considerably, hence also the mass of occluded bone marrow which will contain lead. (3)—Any study concerning elements in bone must consider features of the age distribution. For subjects between about 40 and 50 years old, most of the bone surface will be resting bone with some areas resorbed and only a little depositing. For samples of rib from individuals greater than the age of 50 years, bone is undergoing drastic processes of resorption which will have a profound effect upon the level of chemical elements.

Dr. Crawford and Mr. Clayton provide data in their fig. 2 for lead in dried (not ashed) samples of rib from London and Glasgow which quite clearly will give exceptionally high values for the lead content of ashed rib, even for a hard water area such as London—44 p.p.m. dry weight, which exceeds the lead values for ashed rib from soft water areas in the more recent study.

In my opinion, though current studies describing the mass of lead in bone from soft and hard water areas are of interest, present sampling combined with adequate