SIR,—In the leading article (30 October, p. 251) you state that it is an interesting hypothesis that general hypermobility of the joints may be the cause of some cases of backache. It is not merely an interesting hypothesis but has long been a well recognized syndrome among manipulators and physical medicine consultants. You omit to state that the type of pain in this syndrome is of considerable diagnostic importance. You also omit treatment. The type of pain with lax ligaments is usually associated with standing for a long period of time, such as at cocktail parties or standing ironing, and is relieved by sitting down or walking. There is also usually a long history of low back pain on walking or on a long car journey. Another type is the patient with backache who after manipulation is pain free, but on walking only as far as the door of the consulting room or on the train on the way home gets recurrence of pain.

The treatment of this condition falls into three categories. Firstly as the ligaments are lax we usually have an associated sacroiliac or lumbar 4-5 facet lock derangement. This must be manipulated before the second stage is attempted. This is a sclerosant injection of either phenol or ethanolamine oleate which is injected with xylocaine into the ligamentoperiosteal attachments of all the affected ligament. These are usually the supraspinous, interspinous, iliolumbar, postsacroiliac, and interosseous sacroiliac ligaments. Even with one-sided pain both sides of the spine are injected, as it is found in practice that injecting only one side is usually followed by pain on the other side. One month following the sclerosant injection the third stage—rehabilitation—is instituted, and is a very important part of the treatment. This consists of spinal exercises and encouraging the patient to use his spine by walking, swimming, and playing golf.—I am, etc.,

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SIR,—For some time, even before the hypermobility syndrome was described, physicians interested in locomotor disorders have been aware of the "loose back" as an occasional cause of persistent backache. They recognized that conventional forms of treatment such as rest, physiotherapy, and manipulation, etc., often did not help patients with this form of backache, who continued to complain of diffuse lumbosacral aching without any of the acute episodes of pain characteristic of the disc syndrome.

This condition is readily recognized in the course of examination of the back, when lumbar extension particularly is found to be greater than normal. Sometimes hypermobility at one or two intervertebral joints, rather than generalized hypermobility, can be recognized. The examination is then directed towards the peripheral joints, the patient questioned about double-jointedness, and other features of hypermobility and Marfan's syndrome are sought. However, a moderately hyperextensible spine may occur even in the absence of peripheral joint laxity.

The patient should be given a trial of graded exercises together with postural advice, and many benefit from this form of treatment. Howes and Isdale¹ advise a programme of isometric back exercises and claim good results. Stoddard² emphasizes exercises

to strengthen the erector spinae. If there is no improvement it is useless to prolong physiotherapy, and sclerosing injections into the supraspinous ligaments may then be tried. Unfortunately some regard these injections as a panacea for practically all forms of backache, which of course is indefensible, but there is little doubt that sclerosants can help a proportion of patients with the "loose back" syndrome.

First described by Hackett in 1957 (who used a phenol/dextrose mixture),³ a satisfactory technique is as follows. The joints at fault are identified by hypermobility and tenderness of the interspinous ligaments. One ml of ethanolamine oleate mixed with 1 ml 2% procaine is injected into the ligaments at intervals of 2 weeks, three or four injections usually being sufficient. Concurrently exercises are prescribed, and a temporary corset is usually advised for a few months to allow fibrosis to occur in the ligaments. Good results are often obtained with this method when backache is in fact due to hypermobility and in the absence of disc disease or apophyseal osteoarthritis.—We are, etc.,

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¹ Hackett, G. S., *Joint Ligament Relaxation*, Springfield, Ill., Thomas, 1957.

² Howes, R. G., and Isdale, I. C., *Rheumatology and Physical Medicine*, 1971, 11, 72.

³ Stoddard, A., *Manual of Osteopathic Practice*, London, Hutchinson, 1969.

Digoxin and A-V Block

SIR,—We should like to take exception to the conclusions drawn regarding the effect of digoxin on A-V conduction in the article by Dr. R. A. J. Spurrell, Dr. A. M. Harris, and Mr. M. R. Howard (4 September, p. 563) and offer the following comments:

(1) Terminology.^{1,3}—The criteria for the diagnosis of "complete heart block" are not stated. If these were the criteria of "complete A-V dissociation" a serious and notorious error may have occurred, since A-V dissociation in acute inferior wall infarction is frequently caused by an accelerated junctional pacemaker in the absence of any A-V block or in the presence of only lesser degrees of A-V block. Neither atrial nor ventricular rates during "complete" A-V block are listed, nor is the site of the subsidiary pacemaker mentioned.

(2) Type of block (site of lesion) and digitalis effect.^{2,4,5}—No distinction is made between second degree A-V block of type I (Wenckebach) and type II (Mobitz). Since digitalis depresses mainly A-V nodal transmission it has little or no effect on subnodal conduction, and the type of second degree block should be indicated in an evaluation of digitalis effect on A-V conduction.—We are, etc.,

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¹ Pick, A., *American Heart Journal*, 1963, 66, 147.

² Langendorf, R., and Pick, A., *Circulation*, 1968, 38, 819.

³ Langendorf, R., *Bulletin of the New York Academy of Medicine*, 1971, 47, 877.

⁴ Rosen, K. M., et al., *Circulation*, 1970, 42, 925.

⁵ Sutton, R., and Davies, M., *Circulation*, 1968, 38, 987.

Antibiotic Sensitivity Testing

SIR,—Editorial comment (22 May, p. 416) highlighted once again the need for a technique of antibiotic sensitivity testing which will allow meaningful comparisons to be made between different countries, and the need for a statement of policy in the United Kingdom on the method to be used.

The work of H. M. Ericsson, presented at St. Thomas's Medical School in 1966,¹ persuaded me to study this type of method. Using commercially available materials (Oxoid Ltd., London) thirteen antimicrobial agents were studied, regression curves calculated, and reported in 1969.² Controversy on interpretation of such methods still continues—six years later.

While adoption of the Bauer-Kirby method³ proceeds in some areas, others adopt that of Ericsson. Automated zone analysers are now commercially available and will reduce the laboratory problems to some extent. If some standardization of method is to be adopted before international differences become too entrenched some policy statement should be made and be seen to be adopted in the United Kingdom. Many overseas workers observe and are influenced by the opinions expressed and actions of those in Great Britain.—I am, etc.,

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¹ Ridley, M., and Phillips, I., eds., *Therapeutic Use of Antibiotics in Hospital Practice*. Edinburgh, Livingstone, 1966.

² Neal, J. D., and Kite, P., *Journal of Medical Laboratory Technology*, 1969, 26, 15.

³ Bauer, A. W., Kirby, W., Sherris, J. C., and Turck, M., *American Journal of Clinical Pathology*, 1966, 45, 493.

** We have made some inquiries about the point raised by Mr. Neal, and are asked to print the following letter.—Ed., B.M.J.

SIR,—We have seen the letter addressed to you by Mr. John Neal, and are glad to be able to assure him that steps are already being taken to define a British policy in this matter. An informal meeting of a few interested persons took place shortly after the publication to which Mr. Neal refers, at which it was decided that a comparative study of different methods for sensitivity testing ought to be undertaken. A working party has been set up with the co-operation of the Laboratory Advisory Subgroup on Standards and Quality Control of the Department of Health. Its task will be not only to compare the merits of different methods, but to organize their practical trial in hospital laboratories and in those of the Public Health Laboratory Service. It is hoped that firm decisions on methods to be recommended for routine use will emerge from this investigation.—We are, etc.,

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Epidemic Keratoconjunctivitis

SIR,—We wish to support the timely warning given by Mr. J. D. C. Hart and his colleagues (23 October, p. 229) that outbreaks of epidemic keratoconjunctivitis are occurring in the United Kingdom at present. Since