pregnancy the pains are usually absent, but often reappear after the next confinement. Recent research has shown that under hormonal influence the pelvic joints become movable during pregnancy and stretched during labour, which is a natural process to facilitate labour. These pelvic changes usually disappear after delivery, but in some cases a residual instability persists. If a woman gets up too early after a confinement and has to do her usual housework, these joints have no chance to consolidate, and lead to postural changes and consequent backache.

I have designed a simple girdle (made for me by F. C. Gould, 12, Wimpole Street, London, W.1) to keep these joints firmly together. This girdle consists of a band about 3 in. (7.6 cm.) wide with a small pad over the symphysis pubis, and another over the lower part of the sacrum. The girdle keeps the pelvic bones firmly together, and should be worn from the first day of getting out of bed for four to six weeks. All patients using this girdle like wearing it and appear to have no backache after the confinement.—I am, etc.,

London, W.1. E. SCHLEYER-SAUNDERS.

SIR,—It was of interest to read the views of Dr. James Cyriax (*Journal*, January 15, p. 140) and Mr. John Charnley (p. 163) on certain aspects of back pain. On the one hand, an orthopaedic surgeon makes a plea for the accurate diagnosis of back pain and the application of rational treatment. He stresses the fact that this is only possible in a small proportion of the total number of cases and suggests further research by all concerned to shed light on the subject. On the other hand, a physical medicine specialist claims to relieve a large proportion of cases of "lumbago and fibrositis" by manipulation, the rationale for his treatment being that a displaced disk is responsible for the painful condition and that it is reduced by the manipulator's efforts. Where does the truth lie? Many orthopaedic surgeons, I think, feel that Dr. Cyriax is rather optimistic in his claims. While it is true to say that some patients suffering from back pain are relieved by manipulation, a great many are not, and indeed there are cases where manipulation can be positively dangerous, especially in the cervical region.

All concerned, however, must realize how inconclusive the administration of physiotherapy can be to patients suffering from back pain. In many cases it is simply a means of getting rid of a troublesome and sometimes an undiagnosed patient. During the recent wintry spell in the north-east of England out-patients could be seen passing through the portals of the physiotherapy department from the cold outer atmosphere. They were chilled and shivering. Half an hour later they emerged partially thawed, and prepared to face the elements on their homeward journey. How much good their treatment did can be well imagined.—I am, etc.,

Newcastle-upon-Tyne, 2. ALAN E. BREMNER.

Pancreatitis following Pregnancy

SIR,—I have been interested in these two conditions for some time. In his interesting discussion on the association between pancreatitis and pregnancy (*Journal*, January 15, p. 124) Dr. R. A. Joske attempted to explain the aetiology of the pancreatitis in terms of an exacerbation of an underlying chronic relapsing pancreatitis. This possibility cannot be outruled, but its importance and, indeed, its probability can only be evaluated in light of the following observations which I have made (in over 90 estimations of both amylase and lipase in 50 cases) in the course of the past year. I was stimulated to this by the observation in a jaundiced pregnant woman of an almost complete absence of serum amylase and lipase. This observation was confirmed in that patient, who, incidentally, was not suffering from obstructive jaundice apparently but from infective hepatitis. From this isolated observation we were led to the study of the levels of serum amylase and lipase in pregnancy, and we confirmed on many occasions that these levels (especially of serum amylase) were often extremely low. Figures of below 15 units were quite frequent, the mean normal being 100 units. However, these low figures do not occur all through pregnancy but are most frequent between the 8th and 16th week. Apparently, for we have only limited observations on this point, they have fallen from the mean normal range at the beginning of pregnancy but they rise steadily in the later months, reaching the normal range at full term. On occasions figures quite definitely above the normal have been reached at term and in the puerperium, though no patient exhibited clinical evidence of pancreatitis. The curve of serum activity might be described as eccentrically concave, the point of maximal depression being early and that of maximal rise being late. The patients studied were attending the antenatal clinics of two of the Dublin maternity hospitals. Duodenal intubation was considered but decided against owing to the danger of affecting the pregnancy.

How may these observations be related to the paper of Dr. Joske? Pancreatitis following pregnancy might be due to an exaggeration of the physiological rebound of pancreatic enzyme rather than to a preceding pathological inflammation of the gland. Such a deduction assumes that the serum amylase and lipase are altogether of pancreatic origin, and that their level is an index of the activity of the gland. The former deduction is hardly correct, but the second is a moderately fair deduction, though by no means entirely true. It would hardly be pushing the argument too far, however, if we held that a steady rise in the level of serum amylase and lipase to above the normal range could be mentioned. When we sought for previous observations on the pancreas in pregnancy we found no relevant information on the histology, physiology, and biochemistry of the pancreas of the pregnant animal. The relationship also of pancreatic insufficiency (or physiological hypofunction) to a fatty liver in pregnancy is worthy of consideration. Finally, in association with Dr. A. P. Barry, master of the National Maternity Hospital, we have had hopeful results from pancreatic replacement therapy in the dyspepsias of early pregnancy. The observations referred to in the first paragraph are in course of preparation for publication. I wish to acknowledge receipt of grant for laboratory expenses from the Medical Research Council of Ireland.—I am, etc.,

Dublin. OLIVER FITZGERALD.

SIR,—I was much interested in Dr. R. A. Joske's very complete article (*Journal*, January 15, p. 124), where he discusses six cases of post-partum pancreatitis in young women. In his summary he states that the aetiology of the pancreatitis is considered to be related to the preceding pregnancy, although the mechanism of this is unknown. In spite of the fact that he agrees with Hughes and Kernutt[1] that in his experience the relationship of biliary reflux to pancreatitis in man is thought to be slight, I would suggest that there is a considerable case for suggesting that the pancreatitis was in the main due to a rise in the abdominal pressure. I have had two cases of pancreatitis, one with gall-stones and one without, where the only factor in common was that the patients suffered badly from hay-fever and that they dreaded the incessant attacks of sneezing, as it brought on the epigastric pain.

I myself experienced nine attacks of pancreatitis. In my first operation the head of the pancreas was found to be stony hard, blocking the common duct. Six large stones were found in the gall-bladder, which was anastomosed to the stomach. A year later, because I was still having the severe pain with vomiting and slight jaundice, the surgeon operated again. He opened and cleaned the common bile duct, put a probe down through the ampulla, and inserted a drainage tube. This tube remained *in situ* for 16 weeks. I have remained well since and managed to play 52 rounds of golf last year. In the *British Medical Journal* of December 5, 1953, there was an article on pancreatitis[2] where the authors stated categorically: "It is our opinion that the findings of biliary calculi are coincidental, and that the