administration. It is certain that in addition to such primary effects of salicylate many disturbances of cellular chemistry will result from the induced secondary alkalosis. In this respect it is interesting to recall that Haldane (1924) found a reduced glucose tolerance and glycosuria in states of alkalosis produced experimentally by either voluntary hyperventilation or bicarbonate ingestion. It is thus conceivable that the diabetic type of glucose tolerance curve found by Cochran *et al.* in their patient on salicylate therapy was the result of the respiratory alkalosis produced by the drug. A state of relative starvation resulting from anorexia might more readily explain both the negative nitrogen balance and the reduced glucose tolerance.—I am, etc.,

Manchester. S. W. STANBURY.

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Cushing's Syndrome and Aspirin

SIR,—In their interesting paper (December 23, 1950, p. 1411) J. B. Cochran, R. D. Watson, and J. Reid refer to the occurrence of a reducing material in the urine. It may be that this material is a conjugate of acetylsalicylic acid and glucuronic acid.

The appearance of increased amounts of glucuronic acid in the urine after salicylate therapy was first reported by C. Tollens[1] and C. Tollens and Stern.[2] Csonka[3] reported the conjugation of benzoic acid with glucuronic acid in pigs, and later Quick[4] did a good deal of work on glucuronic acid conjugation with benzoic acid and its derivatives, including salicylic acid (*ortho*-hydroxybenzoic acid) in dogs and man. Wagreich, Abrams, and Harrow[5] estimated that 5% of benzoic acid was conjugated as a glucuronide in humans, while Kapp and Coburn[6] estimated that 25% of sodium salicylate was excreted in humans in combination with glucuronic acid. These compounds have not been isolated from human urine. However, it seems likely that salicylic acid glucuronide is a diglucuronide in which there is an ether linkage between one molecule of glucuronic acid and the hydroxyl group of salicylic acid while the other molecule of glucuronic acid is conjugated by an ester linkage with the carboxyl group of salicylic acid. In each case the aldehyde-reducing group of glucuronic acid is involved in the linkage and hence the glucuronides are primarily non-reducing. However, while the ether linkage is alkali-stable the ester linkage is very readily hydrolysed by alkali, and consequently ester glucuronides reduce Benedict's solution directly. In the case of acetylsalicylic acid, of course, the only possible linkage with glucuronic acid is an alkali-labile ester linkage. Since reduction of Benedict's solution in these cases is due to glucuronic acid, naturally the phenomenon is not reproduced by the addition of salicylates themselves to the urine.

It is, of course, obvious that although the excretion of glucuronides of this type may account for the appearance of reducing material in the urine it does not exclude the possibility of simultaneous true glycosuria.—I am, etc.,

Glasgow. JOHN PAUL.

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Lung Abscess and Shock Therapy

SIR,—I have read with interest your annotation (December 16, 1950, p. 1377) discussing the relationship of lung abscess to electro-convulsive therapy. During the last four years I have worked at a large mental hospital where extensive use of E.C.T. is made in the treatment of depressive syndromes. Despite the fact that several thousand electro-shocks have been administered during this period, I am aware of only one case of lung abscess which might have arisen from the shock therapy. Even in this case a true bill could not be returned against the E.C.T., since the patient had been both spoon- and tube-fed on innumerable occasions during the three years before her death from coronary thrombosis and lung abscess.

Two other cases of lung abscess and one case of purulent bronchopneumonia occurred during the four-year period under discussion, but two of the patients thus affected had not at any time been given E.C.T. The third patient had received a single shock at least seven months prior to the appearance of the lung abscess. An *x*-ray picture taken four months before the development of the abscess had shown clear lung fields. It may well be significant that three of these four cases had been tube-fed at various times, and in two the time interval between tube-feeding and the development of pulmonary sepsis was very close (days or weeks). Furthermore, in one of these cases large numbers of *Bact. coli* were present in the sputum, a fact which suggests that a small quantity of milk may have entered the trachea.

It is interesting to record that, to the best of my knowledge, no case of lung abscess has occurred during the last four years among patients attending the insulin-shock therapy clinic where glucose tube-feeding is a routine procedure.

These facts suggest that in psychiatric practice a much greater risk of lung abscess is involved in tube-feeding debilitated and resistant patients *with milk* than in the routine use of E.C.T. It would seem wise, however, to refrain from giving E.C.T. in the presence of infected gums and loose teeth.

A study of the incidence of lung abscess in epileptics might throw further light on the role of post-convulsive inspiration in the aetiology of pulmonary sepsis.—I am, etc.,

Basingstoke. J. TODD.

Thiouracil or Vertigo Epidemica?

SIR,—I was interested in Dr. E. Meulengracht's suggestion (December 30, 1950, p. 1493) that the symptoms which developed in a case under treatment with thiouracil, and which were attributed by me to the drug, were in fact caused by an attack of "vertigo epidemica" or "neurolabyrinthitis epidemica." I cannot agree.

Vertigo epidemica is not, so far as I know, a common complaint in this country, and I myself am not familiar with it under this name; but, if its symptoms are similar to those that I have described, they are those of labyrinthine disturbance and therefore common to any disease affecting that organ, whatever the cause. In the case recorded I felt justified in attributing the symptoms to thiouracil because they came on at a time when other toxic manifestations usually appear during the course of treatment with this drug. Moreover, they receded when it was withdrawn. Another important feature is that nystagmus persisted and still persists two years later. This, I imagine, does not happen in vertigo epidemica; it certainly has not done so in those cases of acute labyrinthitis, unassociated with haemorrhage and progressive deafness and presumably infective in origin, that I have observed.—I am, etc.,

Brighton. C. BARRINGTON PROWSE.

Sweat and Adrenal Function

SIR,—In your annotation (September 16, 1950, p. 667) you suggest that a test for use in the clinical laboratory for determining the chloride content of sweat might be useful, as certain observers believe that the concentration of salt in the sweat bears a close relationship to the salt-active steroid production of the adrenal cortex. For some time I have been investigating the sweat excreted on the hands of normal and rheumatoid arthritic patients, many of whom usually have clammy palms. A detailed account will be prepared for publication, but meanwhile the following points may be of interest.

1. The technique, though simple, is reliable, and, the estimation being restricted to a small, easily accessible area of the skin, is suitable for routine clinical use.

2. Separate estimations are made of total water, chloride, and urea.

3. It is suggested that as the salt content may be supposed to be related to the production of salt-active steroids the urea estimation may similarly be indicative of the production of sugar-active steroids, which also control protein catabolism.—I am, etc.,

Harrogate. A. WOODMANSEY.

Doctors for Boys' Clubs

SIR,—May I through your columns issue an appeal? The London Federation of Boys' Clubs is about to launch a medical scheme. This is in effect encouragement for regular routine medical inspections of the members of the clubs. It has been found in practice that much good comes of these examinations. Some clubs already have such a practice in operation, but it is hoped to extend it widely. That such a scheme should work it is necessary for doctors to take part voluntarily in the club life for a minimum of approximately two hours in an evening every three weeks. There are many added ways in which such a doctor can be of great help to the many clubs in London, and these, together with details of the scheme, are contained in a short booklet which will be sent to any doctor asking for one. It is hoped that this letter may recruit those interested or willing to help.

One detail will be mentioned here: It is hoped to issue a standard card for recording the results of such inspections, and it is felt that in time these might be of great medical and statistical value. If the experience of such work (applying more to the younger doctor) is added to this factor, it will be seen that the ultimate good of the scheme is not entirely one-sided. Younger practitioners on the house-staffs of London hospitals are just as welcome as the more permanent local practitioners who may live near a particular club.

It is wished to make two things abundantly clear. First, the scheme is to be in no sense a sick parade, but a series of routine medical inspections. Second, that the boys' own doctors under the N.H.S. are never to be by-passed or made redundant. No one expects these busy practitioners to carry out routine inspections on apparently healthy adolescents, and when any disorder is detected they will always be approached.

It is entirely unnecessary to state what worth-while bodies the London Boys' Clubs are, especially in these days. Any doctor helping in the smallest way would give much pleasure and might give invaluable help, which would be most deeply appreciated.—I am, etc.,

FRANK FALKNER,
Hon. Medical Adviser for the
London Federation of Boys' Clubs.

London, S.E.1

POINTS FROM LETTERS

Psychology in the D.P.M.

Dr. A. FOLKSON (London, N.15) writes: I have frequently heard it expressed as an individual opinion by various consultant psychiatrists that psychology as a subject for the D.P.M. (Diploma in Psychological Medicine) examination is academic to an unnecessary degree. . . . A recently published book, written by a past examiner as a guide to the examination, shows the academic trend to a distressing degree. The greater part of the volume deals with the older systematic psychology of the philosophers, more usefully relegated to a history of psychology as in the excellent volume by Professor Flugel. . . . May I invite, through your columns, collective action by those who have reached senior status to end this archaic situation?

Dead Bodies in Water

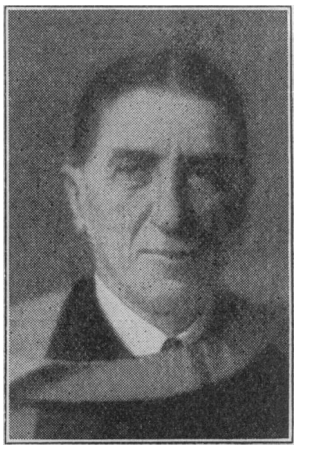
Dr. A. GARVIE (Halifax) writes: I have been on holiday this New Year, near the banks of the Tay. A farmer friend called, and in the course of conversation happened to mention the name of an old Dundee boatman, and added: "Once when we were rowing past the mouth of a tidal creek, old Davy pointed to it and said, 'Mony a body I've pu'ed oot o' there, the men face doon and the women face up.'"

Obituary

Sir ARTHUR HALL, M.D., F.R.C.P.

Sir Arthur Hall died at his home in Sheffield on January 3 at the age of 84. For many years he was the leader of the profession in Sheffield, not only by the accident of seniority but much more because he was a natural leader and commanded the complete confidence of his colleagues.

Arthur John Hall was educated at Rugby School, Caius College, Cambridge, and St. Bartholomew's Hospital, graduating M.B., B.Ch. in 1889. He worked for a year in general practice with his father in Sheffield, but after his appointment as assistant demonstrator in physiology in the old medical school in Surrey Street he decided to devote himself to hospital and consulting work, and in 1890 was appointed to the honorary staff of the Sheffield Royal Hospital. At that time the medical school in Sheffield had been in existence for 60 years; but its life had been precarious, and its future was uncertain. Hall threw himself with enthusiasm into teaching and organization, and through good days and bad—always an optimist—struggled on, confident that the school would one day come into its own. In 1897 the school was incorporated along with the Firth College and Sheffield Technical School as the Sheffield University College. At that time he was lecturer in physiology and secretary of the clinical committee and was very actively engaged in the negotiations which culminated in the incorporation.



Before long, overtures were begun with a view to obtaining a university charter, and he planned, and very largely directed, the transformation of a small local medical school into a university department. There were ups and downs, and there were times when the whole scheme of advance threatened to collapse; but he never lost heart. He not only planned but did much of the work himself. He occupied various teaching posts until someone else could be found to do the work. He resigned the chair of physiology in 1898 in favour of Professor C. F. Myers-Ward. In the same year he became professor of pathology and resigned in 1905 in order that Professor Louis Cobbett could be appointed. He was largely instrumental at this period in obtaining for the growing medical school generous benefactions, notably the Arthur Jackson Chair of Anatomy in 1896, which was first occupied by Dr. Addison, now Lord Addison, and the Favell Physiological Laboratory in 1897. A charter was granted to the University of Sheffield in 1905, which was opened in that year by King Edward VII. In 1928 the university, in recognition of Hall's services, conferred on him an honorary doctorate of science.

Hall was dean of the medical faculty from 1911 to 1916 and professor of medicine from 1916 until his retirement in 1931. In that year a gift of over £500 subscribed by his colleagues and medical friends was