there will still remain many sources of the disease which will escape our net, and to meet these the only measure that can be used are those forms of general sanitary reform which have already in England brought about so large a diminution in the extent of the scourge—two-thirds at least in the last 66 years. Since Professor Koch's recent pronouncement we may hope that these also will receive their due proportion of attention.

I am, Sirs, yours faithfully,
Bournemouth, June 3rd, 1906. ARTHUR RANSOME.

CARBOHYDRATE METABOLISM AND DIABETES.

To the Editors of THE LANCET.

SIRS,—Whilst appreciating the tone in which your reviewer has dealt with my recently published work on "Carbohydrate Metabolism and Diabetes," I feel that I ought to direct attention to a misinterpretation that occurs with reference to a fundamental physiological point. "Normally," the review runs, "such material [absorbed carbohydrate] is taken up by the cells of the intestinal villi and then disappears from view. The mechanism by which this phenomenon occurs is as follows. The epithelium of the villi assimilates the sugar present in the intestine and converts it into its own protoplasm. We have here not a passive process of osmosis but a vital assimilative action. The epithelial cells then re-excrete the carbohydrate material into the cavity of the villi and there it is taken up by the lymphocytes which abound in this position and is again assimilated, that is to say, it becomes an integral part of the living substance of the lymphocytes just as it did of the epithelial cells." Nowhere do I suggest that the epithelial cells perform the function that is here assigned to them. I speak of them as assimilative agents of carbohydrate into fat and give photomicrographs in support of the view. This may have started the idea of their being concerned in the assimilation of carbohydrate into proteid but no mention is anywhere made of such being the case. The view advocated, and in several places expressed, is that both peptone and sugar, diffusible products of digestion, are appropriated by the bioplasm of the lymphocytes and thus conveyed in a combined state under the form of living matter into the blood. At p. 60, for instance, after speaking of the appropriation of peptone by the growing lymphocytes, I proceed: "I have to suggest that the action should be extended and made to embrace carbohydrate—that carbohydrate and peptone stand upon the same footing as regards the manner in which they are dealt with by the growing bioplasm of the intestinal lymphocytes—that both become linked on to the biogenic molecules of the lymphocytes and thus made to enter into the constitution of living matter." Again, at p. 73, I state: "To the lymphoid cells, then, of the villi I assign the office of metabolising carbohydrate into proteid, and to the epithelial cells that of metabolising it into fat."

I am, Sirs, yours faithfully,
Grosvenor-street, W., June 12th, 1906. F. W. PAVY.

THE TREATMENT OF INFANTILE DIARRHOEA.

To the Editors of THE LANCET.

SIRS,—Dr. William Ayres of Brierley Hill writes on this subject in your issue of June 2nd, p. 1567. I should like to ask if he adopts the preliminary saline or other purge as a routine practice? So many infants are at "death's door" when first seen that I always make it a point to stop the diarrhoea before it stops the patient. Of course it was the late Sir George Johnson who originated the purgative line of treatment in diarrhoea and one does not care to challenge so high an authority. I think castor oil was his favourite. I am glad to say the oil has fallen into desuetude, but "I ha'e my doots" about any kind of purge, if purging has been going on for a day or two. "Arsenite of copper" seems a powerful remedy for an infant. Sodium bicarbonate, bismuth, and opium with peppermint water are safer and equally efficacious. But the remedy *par excellence* is hydrargyrum cum cretâ and Dover's powder, as the liver in all these cases is grievously affected and the absence of bile causes the foetid, putrid stools. The sulphocarbolates and salicylates are useful as disinfectants but nothing further. Dr. Ayres does not mention stimulants. I

consider brandy in bowel complaint a *sine quâ non*—infants take it well and water arrowroot is the food of foods. No milk, of course, as the disease is known across the herring pond as milk fever. I have never used the hypodermic syringe in the case of an infant and seldom lose a case of diarrhoea unless it is complicated with tuberculosis.

I am, Sirs, yours faithfully,
Liverpool, June 4th, 1906. A. MCC. WEIR, M.D. R.U.I.

THE KINEMATOGRAPH IN MEDICINE.

To the Editors of THE LANCET.

SIRS,—In connexion with the report of Dr. W. G. Chase's demonstration before the Edinburgh Medico-Chirurgical Society (see THE LANCET, May 26th, p. 1472) of the use of the kinematograph in medicine it may be of interest to note that so far back as 1897 a demonstration of similar character was given to the Glasgow Medico-Chirurgical Society by Dr. Donald Mackintosh, the medical superintendent of the Glasgow Western Infirmary. Whether this was reported in the medical press or not I cannot say but a brief account of it appears in Volume I. of the Society's Transactions.

I am, Sirs, yours faithfully,
Harley-street, W., May 30th, 1906. C. O. HAWTHORNE.

THE USE OF RUBBER GLOVES IN MEDICAL WARDS.

To the Editors of THE LANCET.

SIRS,—From the general drift of the excellent paper by Dr. T. W. Clarke in your issue of June 2nd it would appear that he regards the use of rubber gloves in medical wards as an innovation, at all events in this country. I should like, therefore, to point out that they were in routine use by the nurses of this hospital in the year 1903. In the wards for enteric fever they are worn whenever the bedclothes or utensils of the patient are handled, as well as during the treatment of the mouths. Similarly they are employed during the irrigation of the throats in the scarlet fever and diphtheria wards and for the manipulations attending the treatment of those suffering from puerperal fever and erysipelas.

I do not, of course, wish to raise any question of priority in this matter as the credit must in any case rest with the surgeons who had previously invented them but I may mention that I alluded to the use of these gloves by the nurses in my annual report for 1903, which is incorporated with that of the medical officer of health of this city.

I am, Sirs, yours faithfully,
A. KNYVETT GORDON, M.B. Cantab.,
Medical Superintendent of the Monsall Hospital, Manchester.
June 9th, 1906.

MANUFACTURE AND SUPPLY OF ELECTROLYTIC DISINFECTANT BY THE PUBLIC HEALTH AUTHORITY.

To the Editors of THE LANCET.

SIRS,—I have read with considerable interest the article on the above subject in THE LANCET of March 24th, p. 852, and also Mr. F. W. Alexander's letter in your issue of April 14th, p. 1070, on the cost of production of the solution. I regret that you have treated this question from the chemical standpoint only, as to my mind information of great value would have been obtained by bacteriological methods which would have shown the value of the "hermite" in the absence and presence of organic matter. Chlorine and the hypochlorites have a very high germicidal value under the first-mentioned conditions but they are rendered valueless by the presence of even moderate amounts of organic matter. Sommerville and Walker¹ have demonstrated this in the case of hermite, the addition of an equal volume of urine to the solution destroying its bactericidal power absolutely.

I have been recently working with a well-known hypochlorite solution containing ten parts of available chlorine and as the composition of the fluid is so nearly allied to

¹ Public Health, February, 1906.

hermite my results may be of interest. They are as under:—

TABLE I.

Sample.	Dilu- tion.	Time culture exposed to action of disinfectant. Minutes.						Subcultures.	
								Period of incuba- tion.	Tempe- rature.
		2½	5	7½	10	12½	15		
Hypochlorite	1 : 2340	—	—	—	—	—	—	72 hours.	37·5° C.
„	1 : 2470	—	—	—	—	—	—		
„	1 : 2600	×	—	—	—	—	—		
„	1 : 2730	×	×	—	—	—	—		
Carbolic acid...	1 : 130	×	×	—	—	—	—		

× means growth. — means no growth.

Table I. shows the effect of dilution when compared with carbolic acid in the absence of organic matter. The co-efficient is 21, the test organism used was bacillus typhosus, and the method that of Rideal and Walker.

TABLE II.

Sample.	Dilu- tion.	Time culture exposed to action of disinfectant. Minutes.						Subcultures.	
								Period of incuba- tion.	Tempe- rature.
		2½	5	7½	10	12½	15		
1% hypochlorite } solution	1 : 2	×	—	—	—	—	—	72 hours.	37·5° C.
„	1 : 3	×	×	×	×	×	×		
„	1 : 4	×	×	×	×	×	×		
„	1 : 5	×	×	×	×	×	×		
Carbolic acid ...	1 : 110	×	×	—	—	—	—		

It will be seen by Table II. that a 1 per cent. solution of the hypochlorite when mixed with even two parts of urine has no disinfecting power, the co-efficient having dropped from 21 to nil. The results are very striking and show that in practice disinfection with chlorine and hypochlorites is not safe owing to the liability of breakdown even in the presence of a comparatively small volume of organic matter. The cost of production of the hermite, though apparently small, gives it no advantage (even assuming its efficiency) over some of the more powerful germicides now on the market, as they can be used for general disinfection in comparatively high dilutions. This is a point which deserves consideration at the hands of public health authorities, as at a first glance the cost of hermite appears to be really very trifling.

I am, Sirs, yours faithfully,
T. H. LLOYD, F.C.S.

Member of the Society of Public Analysts, &c.
Newark, June 9th, 1906.

* * Mr. Lloyd will find quoted in the article referred to the following excerpt taken from the report of THE LANCET Analytical Sanitary Commission on the Hermite Process of Sewage Treatment by Electricity, published in THE LANCET of May 26th, 1894, p. 1321: "The electrolysed sea water or our 'artificial' Hermite solution appears, indeed, while exerting a specific action on the organisms, at the same time to be used up and destroyed to a much less extent by the organic matter present than any other disinfectant with which we are at present acquainted."—ED. L.

THE TREATMENT OF ASCITES.

To the Editors of THE LANCET.

SIRS,—I have read with interest Dr. Robert Knox's letter on the above subject in your issue of June 9th, p. 1639, and have to thank him for his courteous reference to my practice in the cases discussed. His own ingenious method of maintaining pressure over the abdomen by inflating a large india-rubber pad under a resisting surface is a distinct advance on any previous appliance. That this method should replace all the more "heroic" measures of the surgeon other than paracentesis in these cases may, I think, be reasonably expected. We must, of course, bear in mind all the factors in each case treated. The ascites may be one of the least important,

though an aggravating incident in the clinical history and if exalted to the leading rôle while the real key to the situation is neglected or injudiciously treated the result may be disastrous. My object, however, in writing these few lines is less to dwell upon these points than to disclaim the implied originality which Dr. Knox very kindly ascribes to me. I have merely called attention afresh to a valuable procedure long known and practised.

To Richard Mead, of learned and graceful memory, so far as I know, we are indebted for having first used abdominal pressure efficiently during and after paracentesis ("Medical Works," 1762, p. 518). Mead, as we know, was one of the physicians to St. Thomas's Hospital, and Cheselden, too, also one of the glories of that school, dealt instructively with the subject. By a coincidence interesting to myself it was also a surgeon of St. Thomas's—the late Mr. John Croft—whom I first saw use with success the method of continuous and efficient strapping after tapping in a case of ascites which had repeatedly recurred after tapping without any further subsequent abdominal pressure being employed than the usual perfunctory bandaging.

I am, Sirs, yours faithfully,
ALEXANDER MORISON.

Upper Berkeley-street, W., June 9th, 1906.

VOYAGES D'ÉTUDES MÉDICALES.

To the Editors of THE LANCET.

SIRS,—As the full details of this year's trip to the French health resorts are now available will you allow me to point out in your columns that the conditions of these voyages have undergone a change. The number of those taking part in last year's visit to the Pyrenees was 150—that is, nearly 50 more than on any previous occasion. This number taxed the resources of the management very severely. A sudden invasion by 150 people of a small station like St. Sauveur or of such a place as Biarritz in the height of its flower carnival season is calculated to give rise to difficulties which could not have been foreseen. There was in consequence some not altogether unreasonable grumbling. To obviate this in the future the number of those taking part in these voyages is to be severely limited to 100. These 100 places have been divided up amongst the various countries and the number available for Great Britain is 20. Of these 20 places a great many are already bespoken, so that if any of your readers should contemplate taking part in this year's excursion I shall be much obliged if they will communicate with me as soon as possible.

I am, Sirs, yours faithfully,
LEONARD WILLIAMS.

8, York-street, Portman-square, W., June 13th, 1906.

THE GENERAL MEDICAL COUNCIL
ELECTION.

To the Editors of THE LANCET.

SIRS,—Will you permit me, as a nominated candidate for election as a Direct Representative upon the General Medical Council, to reply to several correspondents who wish to know my views on three points which being of general interest I may claim the wide publicity of your columns.

1. As to whether I have any suggestions concerning the education of the medical student before registration? My answer is that as the education of all classes in the country has advanced so rapidly during recent years and no proportionate demands have been made on students before registering I am of opinion that we must demand that at the very least they shall possess a degree in arts or science. I give this option for the present in order that those who will eventually become members of the profession shall not have been trained in a too fixed and cast iron groove, and so that both arts and science men may be attracted to its ranks. There are openings for both and it would serve to enrich the personnel of its membership and would help to stimulate a friendly rivalry between these two cultured classes. We should have the pure scientist who has taken the science degree and he, of course, would be the man to go in more fully for his own department. On the other hand, the arts graduate would not be debarred, of course, from developing the scientific element but would be more equipped to maintain the more general erudite element of the profession. By this means we should not only get a better class of men throughout the profession but it would be a very effectual means of eliminating undesirables from its ranks. Those who have no real taste for learning and culture for its own sake would have to seek occupation elsewhere. The teachers at the schools of medicine would have better material to deal with and we might expect a more elevated tone throughout. Another advantage would be that there would be fewer students registered each year, but this would be no great drawback. Enough would join for many years to come until the supply was more on a par with the demand than is the case at present or has been for many years. Rather than adopting the one-portal