Assimilation of Inorganic Salts

"S. M. W." (Manchester) asks for references to experimental work, or any reliable statement based on such work, which shows to what extent inorganic iron, calcium, phosphorus, etc., and their salts are assimilated when administered by mouth to human beings.

*** A very large amount of research has been done on the absorption of iron, and also on the absorption of calcium and phosphates from the foods. The older work is vitiated by ignorance (1) of the importance of liver and stomach extracts in regulating the formation of blood, and (2) the control of calcium absorption by vitamin D. Sherman, *Chemistry of Food and Nutrition* (New York, third edition, 1927), and Lusk, *Science of Nutrition* (Saunders, fourth edition, 1928) give general accounts of these problems. The absorption of iron was dealt with in a long series of papers by Whipple in the *American Journal of Physiology* (1920, liii, 151; 1925, lxxii, 395). A recent article on calcium metabolism, by Percival and Stewart, appeared in *Physiological Reviews* (1928, viii, 283). The absorption of calcium and of phosphates is a peculiarly difficult problem; it is controlled by several factors, such as the relative quantities of calcium and of phosphates, the reaction of the gut, and the supply of vitamin D.

The Heart after Artificial Respiration

"ENIGMA" writes: An apparently strong, healthy man died under an anaesthetic given for a small groin operation just as the clips were being fixed. Artificial respiration was continued for fifty minutes, but without avail. At the post-mortem examination the heart was somewhat "ballooned" in shape, being dilated and emptied of blood, while the muscles were normally firm. Is such a condition sufficient to justify one concluding that the heart was at fault, or was the condition due to the effects of a good heart making a terrific struggle and eventually collapsing? After exercise we all know that as the result of increased exudation the lymphatics are fuller and help to make the heart larger and heavier, while, as Starling pointed out, an extra exertion is accompanied by greater dilatation. Personally it seems to me far more reasonable to think that the anaesthetic had disturbed the surface tension of the blood corpuscles beyond its capacity for recovery, so that a toxaemic condition ensued due to abnormal metabolic products introduced into the blood. A toxaemia of this sort would tend to raise the blood pressure and give rise to a greatly added strain to the heart. Deaths of this sort seem to emphasize the necessity for a very full and systematic examination of the heart in every patient before an operation, and for the recording of all the facts found.

Income Tax

Motor Car Allowance

"W. S." bought a 14-h.p. car in 1925 for £575; he has had no allowance for depreciation, because "the income tax inspector always replied that I should be allowed in full on replacement." In February, 1931, he bought a second-hand car for £350. What can he deduct?

*** The appropriate deduction on the replacement basis is restricted to the actual out-of-pocket expenditure—namely, £350 less the allowance for the old car. As this amount is less than the original cost to "W. S." of the old car, it would have paid him better if he had persisted in his depreciation claims in the past. In all the circumstances, and particularly if there was any dissuasion from that claim by the inspector, we suggest that "W. S." should point out the fact that he is losing on the basis which he was advised to take, and ask for such modification of the present assessment as will put him into the position he would have been in if he had received the depreciation-cum-obsolescence allowance.

Temporary Lectureship—Expenses

"RETIRED" was asked by a friend to deliver a course of lectures for him in a town a considerable distance from that in which he resided. He received a sum of £125 "in compensation for the extra expense involved," to cover the special expenses of board and lodging, travelling, etc. Is he liable on the full amount of £125?

*** This is a difficult case, because so much turns on the precise arrangement made with regard to remuneration, and, between friends, it was probably informal. If the terms arranged were simply that "Retired" was to receive £125 for the service rendered and was to pay the special expenses thereout, then we fear that he is, under legal decisions dealing with "expenses" incurred in connexion with appointments, liable on the full sum. If, on the other hand, the agreement was, for example, that he should receive £75 as remuneration and £50 as an allowance towards his expenses, he would be liable on the £75 only. In either case, of course, "Retired" would receive £125 and pay his expenses, but there is a definite legal distinction, and in the second case the £50 would not come within the scope of the income tax Acts. The onus of proof is on "Retired," but perhaps some assistance can be derived from correspondence that may have passed before the work was accepted.

LETTERS, NOTES, ETC.

Treatment of Tetanus

Colonel C. C. MURISON, I.M.S. (ret.), writes: Dr. J. H. Grove-White's memorandum on the treatment of tetanus in the *Journal* (November 15th, 1930, p. 821) has encouraged me to publish my experience of the treatment of tetanus in India. The method stated below, with necessary modifications in certain cases, has usually been adopted and found to be most effective. The failures have been almost *nil*; these have invariably occurred in cases which have come under treatment very late. Serum treatment is given as soon as possible after admission—3,000 units intravenously and 1,500 units subcutaneously. On the second day 1,500 units intravenously and 1,500 units subcutaneously, and on the third and subsequent days for about four, five, or six days, till the spasms cease, 1,500 units subcutaneously are given. Additional treatment consists of subcutaneous injections of 1/4 grain of morphine and 1/100 grain of hyoscine hydrobromide (morning and evening for five or six days till there is complete relaxation of the muscles), and, orally, 15 grains of chloretone dissolved in liquid paraffin thrice daily till the spasms have ceased.

Treatment of Hyperthyroidism

Dr. K. L. S. WARD (Brasted) writes: In October last year I had a patient suffering from hyperthyroidism, with the usual symptoms of rapid pulse, exophthalmos, etc.—a true Graves's disease. In the treatment, *x* rays, Lugol's solution, quinine, digitalis, bromides, rest, and vitamins, were prescribed without benefit, but when oedema supervened and the condition was approaching that of heart failure, something fresh had to be tried. The patient craved for and took large quantities of starches, but there was no glycosuria. Assuming that this patient was unable to use his carbohydrate at some point in his metabolism, I instituted the following routine: first he was given 5 minims adrenaline (1 in 1,000) hypodermically, followed by 6 c.cm. glucose intravenously, and then by 20 units of insulin. In addition to this I gave him, on alternate days, a diet of excessive starch, with half an ounce of dextrose, four times daily. Under this treatment he is much improved. I have never before found any drug of much use in similar cases.

The Common Moustache Brush

Sir HARRY BALDWIN writes: Cannot something be done to cause barbers to amend some of their habits? The particular offence I am now alluding to is that of brushing the moustache of one customer after another with a small moustache brush. Yesterday I was subjected to this treatment, and now, within twenty-eight hours, I am suffering from one of the most acute "colds in the head" I have ever had. I fully believe the infection was propagated to me in this way. The brush had a most foul smell. At a time like this of epidemics of influenza and acute rhinitis it seems a certain way of spreading infection.

Vacancies

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 42, 43, 44, 45, 46, 47, and 50 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 67.