

there is usually some increase of pressure. Should there be need to distinguish poliomyelitis from tuberculous meningitis the chlorides will be found unreduced. If the clinical and cerebrospinal fluid pictures agree about 10 or 20 c.cm. of serum at body temperature is slowly injected intrathecally, the main dose being given intramuscularly or intravenously. The dose is related to the size of the patient. In 12-year-olds I have used 50 to 100 c.cm., but I now feel that 200 c.cm., or even more if the illness is severe, may be advisable.—I am, etc.,

Oxford, Sept. 19.

G. R. GIRDLESTONE.

Human Oil from the Omentum

SIR,—Mr. Cecil P. G. Wakeley's method of treating adherent scars with human oil (*Journal*, September 17, p. 618) has given such good results in his hands that it is likely to become a standard method. I am therefore alarmed at the abuse to which the omentum may be subjected as a result of this article.

At the present time our knowledge of what can be done with the omentum is scanty. I have now seen sufficient tragedies from interference with the omentum during operations for acute appendicitis, etc., to convince me that it is an organ which must be given the greatest respect. The devitalized fatty stump which must be left distal to the ligatures when it is amputated is a source of the greatest danger. It is an ideal culture medium for the bacteria which are present in many unperforated abdominal inflammations. Suppuration with abscess formation, or more generalized peritonitis, is likely to follow. If the omentum must be amputated in an operation for acute appendicitis then all the conditions which indicate drainage are produced even though the appendix has not perforated. In addition to this immediate danger to life there is the remote danger from adhesions which so frequently form about omental stumps. In making a necropsy on subjects who have had an abdominal operation I always open away from the scars and make a preliminary survey of the operation area. At present I share the dilemma of Dr. Hugh Auchincloss: Should the omentum be pulled down over the operation site because of its "policeman" role, or should it be rolled well away from the region because of its habit of forming adhesions? Careful case records will eventually solve these problems, but the omentum will always be a structure which requires the greatest care in handling.

It is difficult to believe that oil from the omentum should be any more valuable than oil from the many other fat deposits of the body which can be tapped without any risk to life or health. If, however, there is some special value in omental oil, then it seems to me that the only justifiable source of supply is the hypertrophied omentum found in hernial sacs. Because of its bulk this must frequently be amputated. The stump even here may be a source of danger. Last week I made a necropsy on the body of a middle-aged man who hanged himself about a month after such an operation for a right inguinal hernia. The operation had been technically perfect, the wound was very neat and well-healed. The omentum reached down to the pelvis, and its stump was an ugly mass of dark necrotic fat and fibrous shreds about which neighbouring structures were becoming adherent. If one of Mr. Wakeley's omental donors should hang himself during convalescence I should like to see the necropsy. I am sure Mr. Wakeley would sooner have adherent scars of the skin than the condition we would see.—I am, etc.,

G. R. OSBORN,

Derby, Sept. 17.

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A Strict Vegetarian Diet

SIR,—Sir Leonard Hill's interesting article under this title gives a single day's food consumption of a 9-year-old boy as follows: one fairly thick slice of pineapple weighing about 6 oz.; baked spinach and onion pie with a very thin crust made of wholemeal flour, cheese, and milk, about 10 oz. in all; two apples, one orange, and two small tomatoes, in all about 12 oz., including the skin of the orange; one small ice. This regimen was said by the subject's father to be typical. It was noted that the boy weighed 59 lb. and was fifty-two inches in height; a measurement of the twenty-four-hour urinary output of nitrogen gave 4.43 grammes, corresponding to 28 grammes protein consumption; a basal metabolism test showed an oxygen consumption of 215 c.cm. per minute, corresponding to 1,486 calories per day. (This was considered, due to the circumstances, to be a somewhat high figure. It may be noted that the mean value for a normal subject of age, sex, weight, and height given is found to be 1,224 calories per day, calculating from Fig. 20 and Fig. 25 of the latest edition of *Basal Metabolism in Health and Disease* by E. F. DuBois.)

To facilitate the calculation of the calorie value and protein content of the foods listed above these have been considered to be equivalent to 6 oz. pineapple, 4 oz. spinach, 4 oz. onion, 2 oz. wholemeal flour, 4 oz. apple, 4 oz. orange, 2 oz. tomato, and 2 oz. ice-cream. Taking calorie values and protein contents of these articles of diet from any standard textbook on nutrition it is found that the calorie value of the whole day's diet is about 650 and the protein content 18 grammes. These are maximal figures, obtained by assuming the fruits to contain no inedible portion and accepting the upper figure where a range is given for any item.

As the diet yields only half enough energy to maintain the basal metabolism and two-thirds of the protein necessary to account for the very small observed urinary nitrogen output, it is impossible to escape the conclusion that the regimen described to Sir Leonard was incorrectly described. The subject could not long survive upon the given quantities of the foods described, and the observation that he was in good health leads to the conclusion that he must ordinarily consume much more food than that which is claimed to be "typical of a day's diet."—I am, etc.,

Durham, N. Carolina, U.S.A., Sept. 7.

W. J. DANN.

SIR,—This letter is apropos the paper on a strict vegetarian diet by Sir Leonard Hill (*Journal*, August 20, p. 417). It is very difficult to reconcile the small number of calories which this boy's diet is alleged to contain with his activities, his excellent state of health, and certain well-known facts of physiology. In the past, after subjecting all of the data of such reports to careful analysis, the verdict has invariably been "not proven," and, as I shall presently show, this appears to be the verdict in this case.

There is no doubt that our food requirements are less than the generally accepted standards indicate. From my experiences with over 6,000 diabetics I have been convinced for a number of years that our dietary standards reflect habits rather than actual caloric needs. Diabetics seem to do very well year in and year out with diets of 2,000 calories a day and less, and their occupations, in general, differ very little from those of non-diabetics. None of these diets, however, contains the small number of calories (800) reported in the above-mentioned case. That this boy's intake of food is appreciably different,