A SCALE FOR MARKING NUTRITION

The work of the medical inspector and of the school nurse has not yet been accepted as a matter of full conscious responsibility on the part of the medical profession. Naturally those defects which are most readily defined and which have the interest of specialists have thus far received most attention. None of the conditions into which inquiry has been made offers, on the one hand, greater difficulty of exact statement, or, on the other, a more fundamental and comprehensive record than that of nutrition. This term comes nearer possibly to designating the state of an individual's health than does any other. It is not merely a matter of food, although that source of growth and energy is the central problem. Nutrition serves as an index of the results of the many strains and stresses that come from adenoids, enlarged tonsils, defective eyesight, and the other effects of native disability and unhygienic living.

Usually the inspector, already overcrowded by more records of defects than the special dispensaries can care for, notes under "malnutrition" or "defective nutrition" or "anemia" those extreme cases which force themselves upon his attention. The treatment, if any is given, is usually a throw in the dark—at one dispensary cod-liver oil, at another iron, or it may be a "tonic" from the corner drug store.

The whole matter deserves a thorough overhauling by experts but in the meantime some work is being done which offers an advance
over the usual state. It is clear that we need to know not only those cases which are most urgent but also that larger number of borderline cases which need to be under observation. A skilful teacher seeks to find in a new class of pupils the small groups at the two extremes who need most and least direct care and then studies the undistributed middle until he is able to determine those who are substantially normal from those who because of certain tendencies and weaknesses are more susceptible of loss and failure and require special training and experience.

In looking about for a nutrition scale which would accomplish the same end in physical grading, the one used by Dr. Alister Mackenzie at Dunfermline, Scotland, Carnegie Dunfermline Trust, offered a number of advantages. The four groups are distinguished as follows:

1. "Excellent" means the nutrition of a healthy child of good social standing.
2. Children whose nutrition just falls short of this standard are "good."
3. Children "requiring supervision" are on the borderland of serious impairment.
4. Children "requiring medical treatment" are those whose nutrition is seriously impaired.

Any test based upon observation and inspection has obvious limitations but this one, in addition to the classification of lesser and greater state of defect in terms of something to be done to the child, meets one serious difficulty by placing more definitely than is usually the case the standard of the highest group. Often one finds that a child who is marked "good" in nutrition, if removed to a school of more favorable environment, would fall into a lower grade. "Excellent" in this case means not only a very favorable condition in general but a state of nutrition that would be considered excellent in the most satisfactory circumstances. Those who have had experi-
ence with various forms of classification will appreciate the advantage that comes from having four groups. The usual "good," "fair," "poor" headings cause the hurried classifier to place the doubtful cases in the middle section, while a fourfold division calls for more thought and generally receives it.

After experimenting with this scale in several of the more important current investigations of pre-school and school children, it was adopted for use December 1, 1915, by the Bureau of Child Hygiene for the examinations of all children in New York City public and parochial schools.

To aid in diagnosis the following statements accompany the scale—the first is from the Dunfermline Report and the second from the 1914 Report of Sir George Newman, chief medical officer of the board of education, England and Wales:

The general appearance of the child, the condition of the skin and subcutaneous tissues, the muscular tone and development, the state of the mucous membranes, the vigor or listlessness which may appear in the child's facial expression, carriage, movements, voice, interest, attention—all contribute to our decision.

Sound nutrition is a general physiological condition which connotes a healthy body in all respects and the good tone and health of its various constituent parts, its brain and nervous system, its muscular, digestive, circulatory and lymphatic systems. All this means that we must take a wide and comprehensive view of nutrition, which is a state revealing itself in a variety of signs and symptoms. Thus, in endeavoring to estimate a child's nutrition or its opposite (viz., malnutrition), we must think not only of bulk and weight of body but of ratio of stature to weight; of the general balance and "substance" of the body and of its carriage and bearing; of the firmness of the

1 The scale used by the English medical officers is much the same in effect as the one given although it is less definitely formulated.
tissues; of the presence of subcutaneous fat; of the condition and process of the development of the muscular system; of the condition of the skin and the redness of the mucous membranes; of the nervous and muscular system as expressed in listlessness or alertness, in apathy or keenness; of the condition of the various systems of the body, and, speaking generally, of the relative balance and coordination of the functions of digestion, absorption and assimilation of food as well as of the excretion of waste products. It is obvious that these are data which are likely to lead to a much more reliable opinion than the consideration of any one factor or ratio, however expeditiously obtained or convenient in form or practise, and these data will demand a wider as well as a more careful and accurate observation of the whole physique of the child. Nor can an ultimate opinion always be formed at one inspection at any given moment. For nutrition, like its reverse, malnutrition, is a process and not an event. In regard to diagnosis therefore, the school medical officer has as yet neither an absolute standard of nutrition nor a single criterion to guide him. He must form a considered and careful opinion on all the facts before him.

The adoption of this scale is a part of a program which is being worked out in a study of nutrition carried on cooperatively by the Bureau of Child Hygiene of the Department of Health and the Bureau of the Welfare of School Children of the Association for Improving the Condition of the Poor.

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