A NOMOGRAM FOR USE IN INFANT FEEDING

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Exactness is the key-note of modern infant feeding. The neglect of this desideratum is the cause of much 'marasmus' through inanition. Graham Lusk¹ wrote in 1921 'The so-called scientific feeding of infants is unworthy of the name unless the caloric requirement is carefully considered. From lack of this knowledge babies are frequently systematically starved.'

The only objection to the adoption of such a method is that it necessitates the knowledge of certain facts; for example, the weight and the rate of increase in weight of the infant, the caloric needs of the infant according to the state of its nutrition and age, and the caloric values of various foods. The estimation of the proper feed for any individual child thus requires a calculation, and it is towards the elimination of this labour that the following nomogram has been devised. From this nomogram it is not only possible to tell what the weight of a child at any individual age should be, the relative state of its nutrition, the caloric requirements, but also the amount of undiluted milk necessary to supply these.

The chart is constructed, as already said, on the principle of the nomogram. All the scales are divided logarithmically. It is to be noted that scales A and B increase from above downwards, while scales D and E decrease from above downwards.

It is suggested that the chart be mounted on a board and covered by a sheet of transparent celluloid. All the calculations are made by drawing straight lines across the chart. This can be done by means of a ruler or better by means of a thread stretched across the chart. It is recommended that the instructions be typed and pasted on the back of the chart so that it may be readily available for routine work.

Applications.

1. TO FIND THE EXPECTED WEIGHT IN KILOGRAMMES.—If scale B_2 is read off opposite the age in months on scale B_1 the figure so obtained is the expected weight in kilogrammes.

2. TO FIND THE PERCENTAGE OF THE EXPECTED WEIGHT.—Join on scale B_1 the age of the child to the actual weight in kilogrammes on scale E_1 . The point of intersection of the thread with scale D_1 will be the percentage of the expected weight.

3. TO FIND THE TOTAL DAILY CALORIC REQUIREMENTS.—Join on scale B_1 the age in months to the appropriate number of calories per kgrm. of expected weight on scale D_2 . The point of intersection of the thread with scale E_2 will be the total daily requirements.

4. TO FIND THE CALORIES SUPPLIED PER KILOGRAMME OF EXPECTED WEIGHT, GIVEN THE CALORIC VALUE OF THE DIET.—Join the number of calories supplied on scale E_2 to the age on scale B_1 . The point of intersection of the thread with scale D_2 gives the required value.

5. TO FIND THE CALORIES SUPPLIED PER KILOGRAMME OF ACTUAL WEIGHT.—Join the number of calories supplied on scale E_2 to the actual weight on scale B_2 . The intersection with scale D_2 gives the required value.

6. TO FIND THE VOLUME OF WHOLE MILK TO BE SUPPLIED.—Join the total daily caloric requirements as found under 3 to the intersection of the horizontal line marked 'Whole Milk' with the short vertical line (Scale C). The point at which the thread intersects scale A_1 or A_2 gives the amount of whole milk required in ounces or cubic centimetres respectively.

NOTES.—If sugar is added to the milk, the daily caloric value of the sugar must be subtracted from the total daily requirements before calculating the volume to be supplied. Similarly the volume of peptonised milk or butter-curd mixture (B.C.M.) can be obtained by using the intersections marked 'Pept. Milk' or 'B.C.M.'

Butter-curd mixture (B.C.M.) is similar to Eiweiss milch of Finkelstein.

REFERENCE.

1. Lusk, G., *Elements of the Science of Nutrition*, Philadelphia, 1921, 3rd Ed., 404.

NOMOGRAM OF INFANT FEEDING.