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THE PENNSYLVANIA STATE COLLEGE

THE GRADUATE SCHOOL

DEPARTMENT OF HOME ECONOMICS

NURSERY SCHOOL STUDY NUMBER 3

NUTRITIONAL STATUS OF NURSERY SCHOOL CHILDREN
OF FAMILIES OF MEDIUM AND HIGH INCOME LEVELS.

A THESIS

by

ANNE THERESA O'BRIEN

Submitted in partial fulfillment of
the requirements for the degree of

MASTER OF SCIENCE

FEBRUARY, 1937

APPROVED Pauline Beery Mack
Director of Home Economics Research

DATE January 15, 1937

ACCEPTED Edith Pitt Chase
Director of Home Economics

DATE January 21, 1937

THE PENNSYLVANIA
STATE
COLLEGE

ACKNOWLEDGMENT

I wish to express my appreciation to Dr. Pauline Beery Mack for her guidance in the selection of this problem and for her active participation in collecting and evaluating data.

I am also indebted to Dr. Leita Davy, Instructor in Nutrition, for teaching me the Todd method of evaluating roentgenograms.

To the following fellow-graduate students I am also grateful for helpful cooperation in this work: A. Pauline Sanders, Portia Bricker Harvey, Catherine Logan and Mary Malley.

I N T R O D U C T I O N

This is the third in a series of studies conducted at The Pennsylvania State College on the nutritional status of children of pre-school age. The first of this series was begun in February, 1936, by Providencia Urgell (M. S. The Pennsylvania State College, June, 1936), who studied the status of children enrolled in The Lytle Addition Federal Emergency Nursery School, together with a control group from other families of low income levels. The second study was a continuation of the first, this being carried on during the Summer and early Fall of 1936, by Mary Leonie Malley, who used some of the same children, and other children from the same type of family.

In the present study, 22 children from the nursery school at The Pennsylvania State College, coming from families of medium and high incomes, were measured in the Spring and Summer of 1936 for the purpose of comparing these school children with the children in the Federal Emergency Nursery School and control groups of low income status.

The following measurements were made on the group of children included in this report:

Weights; anthropometric observations; X-rays of hand, foot, elbow, knee, shoulder, and femur; percentage of haemoglobin (grams per 100 C. C.) in the blood; capillary wall strength; and footprints.

In writing the section of this report on "Experimental Procedure", the author collaborated with Mary Leonie Malley who was presenting a Master's thesis at the same time on a study in which the experimental techniques were the same. Therefore, some of the material from pages 2 to 29 are identical in these two theses. The data on home care of the child were obtained by personal interviews of the mother at her home.

EXPERIMENTAL PROCEDURE

FAMILY RATINGS AND CHILD'S HOME CARE

As mentioned in the introduction, the family income, the education of the parents, the physical home, and the home care of the children in this study were determined by a personal call on the mothers at their homes. A questionnaire was used so that a uniform type of report was possible. The questionnaire was as follows:

FAMILY

ADULTS:

CHILDREN:

MOTHER'S NATIONALITY:

FATHER'S NATIONALITY:

FAMILY INCOME

NUMBER OF WAGE EARNERS IN FAMILY:

OCCUPATIONS OF WAGE EARNERS:

MONEY INCOME:

SOURCES OF MONEY INCOME:

ADDITIONAL INCOME (Gifts, Charity, etc):

FAMILY RATING ON BASIS OF INCOME:

FAMILY EDUCATION

FATHER'S EDUCATION:

MOTHER'S EDUCATION:

FAMILY RATING ON BASIS OF EDUCATION OF PARENTS:

FAMILY HOME

SIZE OF HOUSE: (Number of rooms _____)

1 point for each room up to 12 _____.

(Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition _____.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader _____.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points _____.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points _____.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points _____.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points _____.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points _____.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points _____.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children _____.

Sleeps with three other children _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points _____.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points _____.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points _____.

POSSESSION OF GARDEN: - Maximum 5 points _____.

TOTAL POINTS ON FAMILY HOME: _____.

FAMILY RATING ON BASIS OF HOME: _____.

CHILD'S HOME CARE

Case Number:

Sleeping Arrangements:

Hours of Sleep at Home:

Time of Arising in Morning:

Hours of Rest at Home:

Number of Windows in Child's Bedroom:

Number of Windows Open When Child Sleeps:

Number of Times Child is Bathed a Week:

Comments on Child's Clothing:

Self-Help in Dressing, Washing, Toileting:

Child's Diet at Home:

Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET

Flour, meal, and other cereals:

Potatoes:

Dried peas, beans, and nuts:

Tomatoes and citrus fruits:

Leafy, green, and yellow vegetables:

Dried fruits:

Other vegetables and fruits:

Fats:

Sugars:

Lean meat, poultry and fish:

Eggs:

Milk:

COMMENTS:

Family Rating on Basis of Income

An arbitrary rating scale of income levels devised jointly by A.

Pauline Sanders and Portia Bricker Harvey for human nutrition studies of their own which were begun at The Pennsylvania State College before the present work was started, was used in this study. This scale is as follows:

Class A-1 --	\$ 10,000 or above
A-2 --	7,500 to 10,000
A-3 --	5,000 to 7,500
Class B-1 --	4,000 to 5,000
B-2 --	3,000 to 4,000
B-3 --	2,500 to 3,000
Class C-1 --	2,000 to 2,500
C-2 --	1,500 to 2,000
C-3 --	1,000 to 1,500
Class D --	Incomes of below \$1,000.00, exclusive of families on direct relief.
Class E --	Incomes of families on direct relief alone.

Family Rating on Basis of Education of Parents

The families of the children included in this study were rated as follows on the basis of the education of parents:

- Class A - Both parents college graduates;
- Class B - One parent a college graduate;
- Class C - Both parents high school graduates;
- Class D - One parent a high school graduate;
- Class E - Neither parent a high school graduate;

Family Rating on Basis of Physical Home

The rating scheme used to evaluate the physical homes of the children is that given on page 3. This rating scheme was devised by Providencia Urgell for use in studies of this series.

The scheme was planned to include those points about the physical home which were believed to have a direct bearing on the well-being of a young child.

In evaluating homes by means of the point system just mentioned, the following arbitrary classes were set up:

- Class A - 100 to 86 points;
- Class B - 85 to 71 points;
- Class C - 70 to 51 points;
- Class D - 50 to 26 points;
- Class E - 25 points or below.

Home Care

In finding out details of a child's home care by personal visits at the home and interviews with the mother, particular emphasis was laid upon the family diet, the child's sleeping accommodations, and other points having to do with the well-being of the child, as was mentioned previously. Clothing ratings were made by the method of Urgell.

MEASUREMENTS TO DETERMINE

NUTRITIONAL STATUS

Anthropometric Studies

The following anthropometric instruments, purchased from the Anatomical Shop at Western Reserve University, and recommended by Dr. T. Wingate Todd, were used:

- (1) An anthropometer, used either as a stadiometer or as a large-size sliding caliper;
- (2) Small sliding calipers;
- (3) Spreading calipers;
- (4) Flower's craniometer;
- (5) Reserve head-spanner.

Twenty-six body measurements were taken with these instruments as follows:

- (1) Weight
- (2) Standing Height
- (3) Horizontal Height
- (4) Sitting Height
- (5) Stem End
- (6) Suprasternal Height
- (7) Symphision Height (Omitted)
- (8) Tip of acromium Height
- (9) Cristal Height
- (10) Anterior Iliac
- (11) Knee Height
- (12) Tibial Length
- (13) Acromial Breadth
- (14) Cristal Breadth
- (15) Trochanteric Breadth
- (16) Transverse Chest
- (17) Entire Arm Length
- (18) Upper Arm Length
- (19) Forearm Length

- (20) Hand Length
- (21) Chest Girth
- (22) Head Length
- (23) Head Breadth
- (24) Head Height
- (25) Interpupillary Distance
- (26) Suprasternum to Head Top.
- (27) Head Circumference.

Roentgenographic Appraisalment of Skeletal Status

The following roentgenographic negatives were made of each child by the use of a General Electric Model F portable shock-proof X-ray unit. The anterior-posterior and lateral aspects of the hand, foot, elbow, and knee were taken, as well as the anterior-posterior position of the shoulder and of the femur. Films 8 X 10 inches enveloped in cardboard holders were used for making the first four negatives, while the last two were made by the use of films placed in 14 X 17-inch Rayspeed cassettes, these being lined with high-speed luminescent screens. The exposure times were selected according to previous trials which showed the time required to give a standard density of the blacks, greys, and whites of the films as shown by the use of an aluminum density gauge number 20, prepared under the supervision of Todd at Western Reserve University. This was calibrated to show a density ladder identical with that on roentgenograms number 8592 in the Western Reserve files.

In making the anterior-posterior hand picture, the child was seated at a convenient height facing the X-ray table, it having been found by various trials that a seated position for the first film tended to dispel fear from the mind of the person being studied. The hand was then placed,



1 3 11 18 36 9



1 3

1 3 11 18 36 9

Figures



0 1 2

0 0 1 2

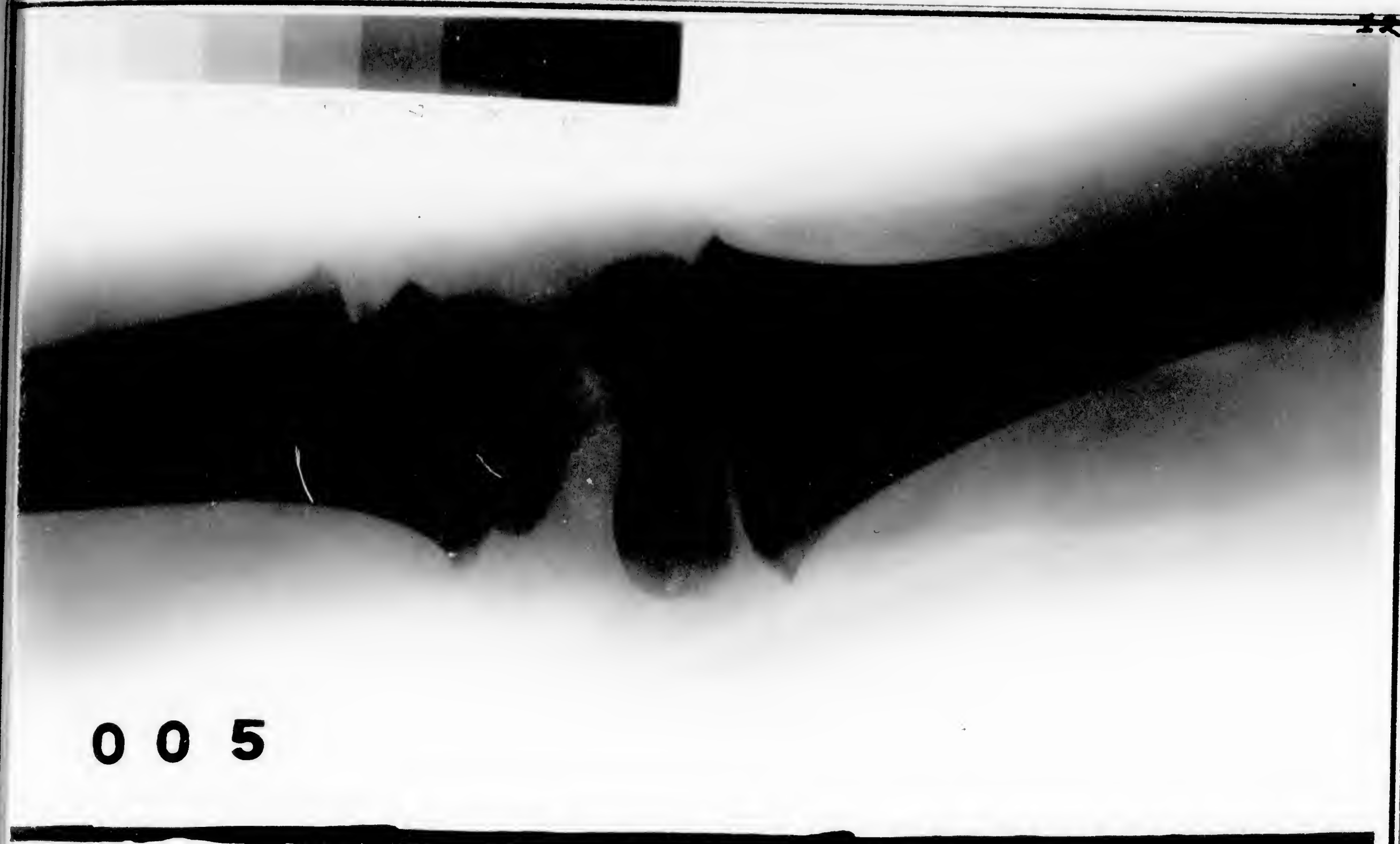
Figure 2

0013

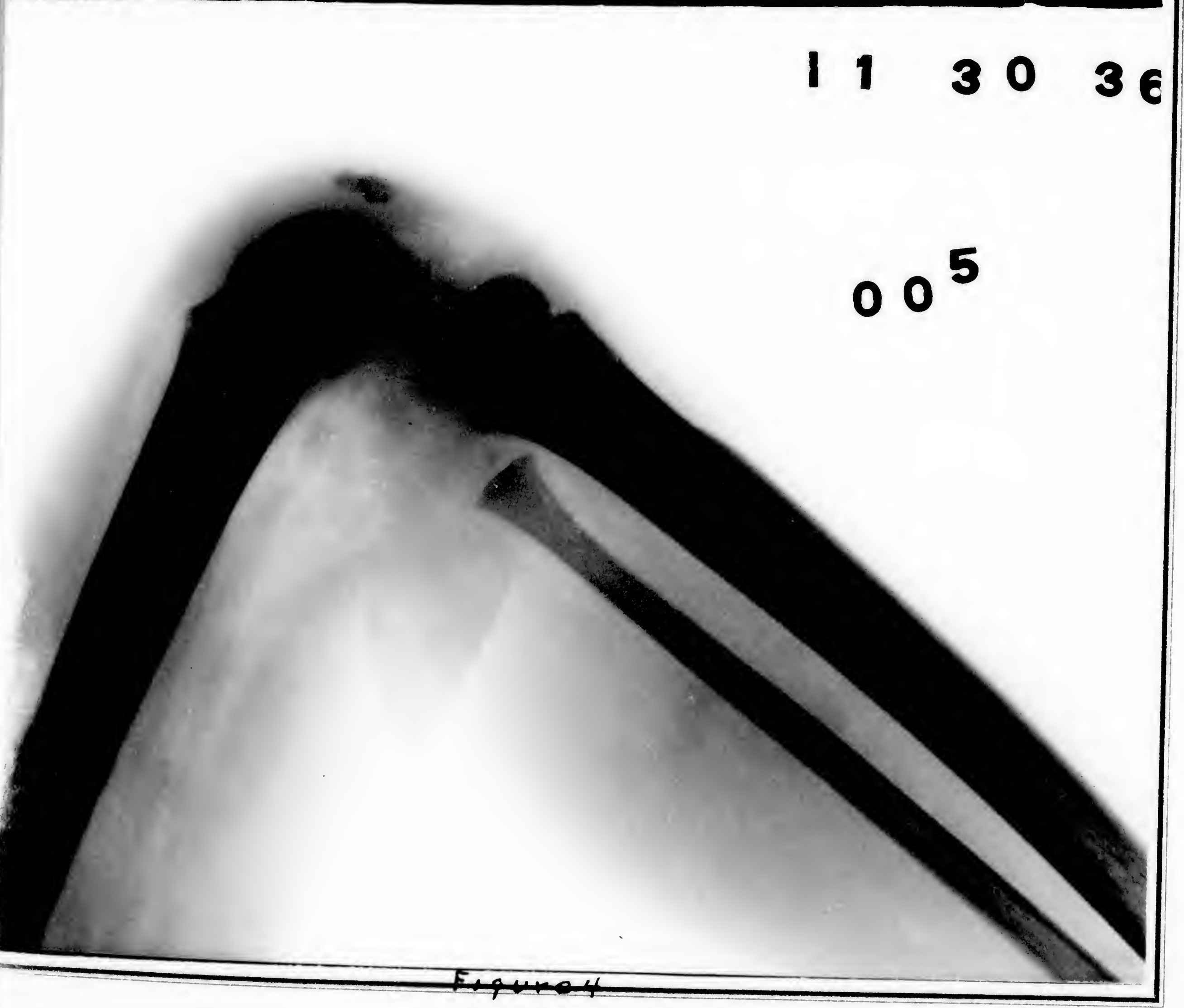
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Figura 3



0 0 5



1 1 3 0 3 6

0 0 5

Figure 4



Figura 5

0 0 1 3



Figure 6



0013

Figure 7

825

palm downward, on one-half of the cardboard film holder, as is shown in Figure 1, the other half of the film being covered with a lead plate. The fingers and thumb were placed in a manner shown in the figure. In the lateral aspect of the hand, the ulnar border was made to rest on the film holder, with the palm inclined toward the envelope, and the fingers and thumb extended as is shown in the figure. The hand pictures were made with the long axis of the hand extending the longer dimension of the film, thus enabling the lower end of the radius and ulna to be included in the picture.

The child was next seated on the X-ray table, with the sole of the foot placed on the one-half of the cardboard film holder, the long axis of the foot being in the longer dimension of the 8 X 10-inch film, as is shown in Figure 2. In the lateral roentgenogram of the foot, the dorsi-flexed foot was so placed that its fibular side lay directly on the plate, giving the picture shown in figure 2. Whereas the calcaneus is not visible in the anterior-posterior view, it is plain in the lateral aspect.

The child was then laid on his back on the X-ray table in such a position that the elbow could be placed transversely on the film holder, about one-third of the film being used for the anterior-posterior, and two-thirds for lateral view. In the former picture, the elbow was extended and its dorsal aspect laid next to the film envelope. In the latter, the elbow was flexed to an angle of approximately 60 degrees, as is shown in Figure 3.

In progressing from the elbow to the knee, the child's position was adjusted slightly, while he was still on his back, so that the lateral aspect of the flexed knee was placed on about two-thirds of

the film in the transverse direction, the film being centered just above the tibial tubercle. The child was then rolled over onto the stomach so that the patella could be placed directly in contact with the film holder for the anterior-posterior picture. A typical knee roentgenogram is shown in Figure 4.

As mentioned above a 14 X 17-inch cassette was used instead of cardboard holders for the shoulder and femur, in order to shorten exposure time, the film being divided between these two pictures. In taking the shoulder the child was placed prone with the left shoulder on the cassette and the face turned away from this shoulder, with the arm parallel with the body, and palm downward. The femur was taken with the child lying on his back on the cassette, with the patella upward. The iliac crest was completely included in this roentgenogram. A typical shoulder is shown in Figure 5, and a femur in Figure 6.

The roentgenograms were evaluated for the following purposes:

- (1) to determine the bone age of the child on the basis of ossific centers or epiphyses;
- (2) to determine bone age from bone penetration, by comparison with standards;
- (3) to note the presence and positions of scorings and scars.

Study of Ossific Centers

The ossific centers were located and recorded in order to find out the child's bony developmental state as far as this factor is concerned. As a result of an intensive study of roentgenograms of normal children covering a period of many years, Todd and his co-workers have determined the time of appearance in young white American males

and females of the more important ossific centers. In each case, the presence or absence of the centers ordinarily present in a child of the age in question was noted and recorded. The ossific centers which were considered in the study were as follows:

	(Hamate)	
	(Capitate)	
	(Lunate)	
	(Triquetrum)	Carpals
	(Navicular)	
	(Multangular Majus)	
Hand	(Multangular Minus)	
	(Metacarpals 1, 2, 3, 4, 5.		
	(1st phalanges 1, 2, 3, 4, 5)		
	(2nd phalanges 1, 2, 3, 4, 5)	Fingers	
	(3rd phalanges 1, 2, 3, 4, 5)		
	(Distal radius		
	(Distal ulna		
	(Talus)	
	(Calcaneus)	
	(Navicular)	
	(Cuboid)	Tarsals
	(Medial cuneiform)	
	(Middle cuneiform)	
Foot	(Lateral cuneiform)	
	(Metatarsals 1, 2, 3, 4, 5.		

(1st phalanges 1, 2, 3, 4, 5)

(2nd phalanges 1, 2, 3, 4, 5) Toes

(3rd phalanges 1, 2, 3, 4, 5)

(Distal fibula

(Distal tibia

(Capitulum

Elbow (Medial epicondyle

(Proximal radius

(Patella

Knee (Proximal tibia

(Proximal fibula

Hip (Head of the femur

(Femur) (Greater tuberosity of the femur

Shoulder (Head of the humerus

(Greater tuberosity of the femur

Following is a copy of Todd's Chart called "Time of Appearance of Ossification Centers", which provided the key to the various epiphysial ratings reported below. It will be noted that males and females differ in the order of appearance of centers of ossification, according to this chart.

TIME OF APPEARANCE OF OSSIFICATION CENTERS

Brush Foundations, Inc.

September, 1934

(Dr. T. Wingate Todd)

Male - White

<u>Birth</u>	<u>13 mos.</u>
(6) 1 calcaneus	(3) 22.3 T _ 1 phal.
2 talus	30.2 metacarpal
3 femur, distal	40. medial cuneiform
tibia, prox.	
5 humerus, head	<u>14 mos.</u>
6 cuboid	(3) 23.4 T _ 1 phal.
	24.2 T _ 1 phal.
<u>2 mos.</u>	25.3 T _ 2 phal.
(3) 7. capitafe	<u>15 mos.</u>
8. hamate	(3) 28.3 metacarpal
11. lat. cuneiform	45.2 T _ 2 phal.
	27.5 F _ 1 phal.
<u>3 mos.</u>	<u>16 mos.</u>
(3) 13. femur, head	(2) 26.4 T _ 2 phal.
12. capitulum	29.4 metacarpal
9. tibia, distal	<u>18 mos.</u>
<u>6 mos.</u>	(4) 44.2 F _ 2 phal.
(1) 10. fibula, distal	32.3 F _ 2 phal.
	33.4 F _ 2 phal.
<u>7 mos.</u>	31.5 metacarpal
(2) 14. gt. tuber. humerus	<u>20 mos.</u>
15. radius, distal	(2) 46.1 T _ 1 phal.
	41. middle cuneiform
<u>10 mos.</u>	<u>21 mos.</u>
(1) 16. triquetrum	(4) 35.3 F _ 3 phal.
	36.4 F _ 3 phal.
<u>11 mos.</u>	42. navicular of foot
(2) 17.3 F _ 1 phal.	34.5 T _ 1 phal.
21.1 T _ 2 phal.	
<u>12 mos.</u>	
(3) 19.2 F _ 1 phal.	
18.4 F _ 1 phal.	
20.1 F _ 2 phal.	

TIME OF APPEARANCE OF OSSIFICATION CENTERS

Brush Foundations, Inc.

September, 1934

(Dr. T. Wingate Todd)

Male - White

22 mos.

(2) 43.1 metacarpal
39.1 metatarsal

23 mos.

(1) 37.1 F _ 1 phal.

2 yrs.

(2) 51.5 F _ phal.

2 yrs. - 2 mos.

(1) 38.2 metatarsal

2 yrs. - 5 mos.

(2) 49.2 F _ 3 phal.
50.5 F _ 3 phal.

2 yrs. - 11 mos.

(2) 54.3 metatarsal
47. fibula, prox.

3 yrs. - 1 mo.

(2) 63. gt. trochanter femur
48. patella

3 yrs. - 3 mos.

(1) 59.4 metatarsal

3 yrs. - 4 mos.

(1) 53.5 T _ 3 phal.

3 yrs. - 7 mos.

(2) 57.3 T _ 3 phal.
58.4 T _ 3 phal.

3 yrs. - 8 mos.

(2) 60.5 metatarsal
55.2 T _ phal.

3 yrs. - 10 mos.

(1) 62. radius, prox.

4 yrs. - 2 mos.

(1) 56. mult. majus

4 yrs. - 4 mos.

(1) 64. navic, hand

4 yrs. - 8 mos.

(1) 65. mult. minus

5 yrs.

(3) 66. med. epicondyle
humerus
67. ulna, distal
61.5 T _ 2 phal.

TIME OF APPEARANCE OF OSSIFICATION CENTERS

Brush Foundations, Inc.

September, 1934

(Dr. T. Wingate Todd)

Female - White

Birth

- (6) 1 calcaneus
 2 talus
 3 femur, distal
 4 tibia, prox.
 5 humerus, head
 6 cuboid

2 mos.

- (3) 7. capitate
 8. hamate
 11. lat. cuneiform

3 mos.

- (3) 13. femur head
 12. capitulum
 9. tibia, distal

4 mos.

- (1) 14. gt. tut. humerus

6 mos.

- (2) 10. fibula, distal
 15. radius, distal

7 mos.

- (3) 21.1 T _ 2 phal.
 17.3 F _ 1 phal.
 18.4 F _ 1 phal.

8 mos.

- (3) 19.2 F _ 1 phal.
 20.1 F _ 2 phal.
 22.3 T _ 1 phal.

9 mos.

- (3) 25.3 T _ 2 phal.
 23.4 T _ 1 phal.
 40 medial cuneiform

10 mos.

- (6) 30.2 metacarpal
 45.2 T _ 2 phal.
 26.4 T _ 2 phal.
 28.3 metacarpal
 24.2 T _ 1 phal.
 16. triquetrium

11 mos.

- (2) 29.4 metacarpal
 27.5 F _ 1 Phal.

12 mos.

- (2) 33.4 F _ 2 phal.
 32.3 F _ 2 phal.

13 mos.

- (2) 31.5 metacarpal
 44.2 F _ 2 phal.

14 mos.

- (8) 43.1 metacarpal
 46.1 T _ 1 phal.
 34.5 T _ 1 phal.
 35.3 F _ 3 phal.
 36.4 F _ 3 phal.
 42. navicular of foot
 41. middle cuneiform
 39.1 metatarsal

TIME OF APPEARANCE OF OSSIFICATION CENTERS

Brush Foundations, Inc.

September, 1934

(Dr. T. Wingate Todd)

Female - White

15 mos.

- (2) 37.1 F _ 1 phal.
51.5 F _ 2 phal.

17 mos.

- (2) 49.2 F _ 3 phal.
50.5 F _ 3 phal.

19 mos.

- (1) 38.2 metatarsal _

21 mos.

- (1) 53.5 T _ 3 phal.

22 mos.

- (1) 54.3 metatarsal

23 mos.

- (1) 48 patella

2 yrs.

- (5) 52. lunate
57.3 T _ 3 phal.
58.4 T _ 3 phal.
47. fibula, prox.
63. gt. trochanter femur

2 yrs. - 2 mos.

- (2) 55.2 T _ 3 phal.
59.4 metatarsal

2 yrs. - 5 mos.

- (1) 60.5 metatarsal

2 yrs. - 8 mos.

- (1) 56. mult. majus

2 yrs. - 9 mos.

- (1) 66. med. Epicondyle
humerus

3 yrs.

- (2) 62. radius, prox.
65. mult. minus

3 yrs. - 2 mos.

- (1) 64. Navc. hand

4 yrs. - 6 mos.

- (1) 67. ulna, distal

5 yrs.

- (1) 61.5 T _ 2 phal.

A Study of Bone Penetration.

A set of 40 standards for hand (male), 35 for hand (female), 38 for knee (male), and 35 for knee (female) were purchased from the Anatomical Laboratory at Western Reserve University for purposes of assaying the ages of the children in the study on the basis of bony penetration. In preparing these sets of standards, Todd and his co-workers have selected from a large group of normal children roentgenograms for various ages of white American males and females, these believed to represent the standard degree of progress for the age in question.

Standards for hand and knee were selected at three month intervals through one year and three months, then at six-month intervals through to sixteen years and 3 months for female (hand and knee); male (knee) through 17 years and 9 months and male (hand) through 18 years and 9 months.

The hand and knee of each child in the study were evaluated as to bone age based on penetration, by comparison with the Todd standards. When standards for elbow, foot, shoulder and hip later become available, the roentgenograms of these members will then be evaluated on this basis also.

In assaying an X-ray negative for bony penetration by the Todd technique, such points as the following are considered in comparing the case films with the standards: Contours of the bone ends and epiphyses, length and breadth of bones, and cartilagenous interosseous intervals.

In studying the hand, the shafts and epiphyses of the long bones, the bony maturation of the carpals, and the appearance of the distal end of the radius are among the points considered in matching the films under consideration with the standards.

In the knee, one depends to a considerable extent upon studying the bony differentiation of the epiphyses of the femur and upon the contours of the ends of the femur and tibia, and to a lesser degree upon the ossification of the patella.

Aside from comparing the hand and knee with the standard series of films, the radius and ulna were studied for change in bone ends. A concave bone end was taken to indicate that the bone was not growing, a healthy growing bone being convex in contour. Billowing was assumed to show that the bone was taking on beginning convexity. A dense band at the end of the bone denoted growth interference.

Scars and Scorings.

An attack of disease, a severe, gastro-intestinal upset, colds, fevers, and other disturbing influences may produce temporary cessations in bone growth, calcium being deposited more thickly at the ends of the bones at these times than normally. When normal growth is resumed, the thickened mineral deposit remains for a time as a scar or a scoring. These two marks of nutritional disaster differ from each other in that the term "scar" is generally applied to a dense marking which extends entirely across the bone, and is more particularly observable on the larger long bones. The term "scoring", on the other hand, is applied to bands, somewhat less dense, these being the relics

of minor nutritional disturbances. Scorings are less pronounced than scars usually not extending across the full width of a bone.

Since the tibia and radius normally grow at about the rate of 10 millimeters, and the femur at the rate of 15 millimeters a year, it was found to be possible to determine the approximate time when disturbances in bone growth had occurred, by studying roentgenograms of representative parts of the bony skeleton.

A roentgenogram showing typical scars and scorings is shown in Figure 7.

DETERMINATION OF THE PERCENTAGE OF HAEMOGLOBIN

To determine the amount of haemoglobin in the blood in terms of grams of haemoglobin per 100 c.c. of blood, the Newcomer method was used. In this method approximately 0.05 c.c. of blood was obtained by pricking the finger with a sharp scalpel. This was measured by means of a calibrated micropipette into 10 c.c. of approximately 0.1N hydrochloric acid. The blood was rinsed out of the pipette thoroughly by sucking up the acid and blowing it out several times. The combination of blood and hydrochloric acid was allowed to stand for 25 minutes, at the end of which time it was matched in a colorimeter of the so-called haemoglobinometer type. Against a standard Newcomer plate with a factor of 0.252. The following formula was used in computing the grams of haemoglobin per 100 c.c. of blood: Per cent

$$\text{haemoglobin (gm. per 100 c.c.)} = 0.252 \times 501 \text{ (dilution)}$$

$$\text{Reading of Unknown.} \quad \text{(factor)}$$

MEASURING CAPILLARY WALL STRENGTH

A Dalldorf Capillary Resistometer was used on the skin of the inner part of the upper arm, in order to determine capillary wall strength. This was found by establishing the least negative pressure needed to produce, in one minute, a sufficient number of petechiae to give a standard red color which the operator learned through experience to recognize.

Vaseline was rubbed onto the area of the arm to which the vacuum cup of the instrument was applied. A vacuum of 15 centimeters as registered on the gauge was used for the initial trial, the vacuum being increased by gradual stages until the standard break was obtained. A skin area about mid-way between the forward part of the arm pit and the anterior part of the elbow joint. Adjoining areas of the skin were subjected to the test until an end-point was reached.

Evaluating Muscle Tone by Footprints

Footprints were used to secure an arbitrary rating for muscle tone by comparing sitting and standing prints with standards. Four arbitrary standards, shown in Figure 8, were used for evaluating these footprints. Standard number A is classed as good, B as medium, C as poor, and D as very poor. These were numbered 1, 2, 3, and 4 in the order named.

The following footprint solution was used in making these footprints:

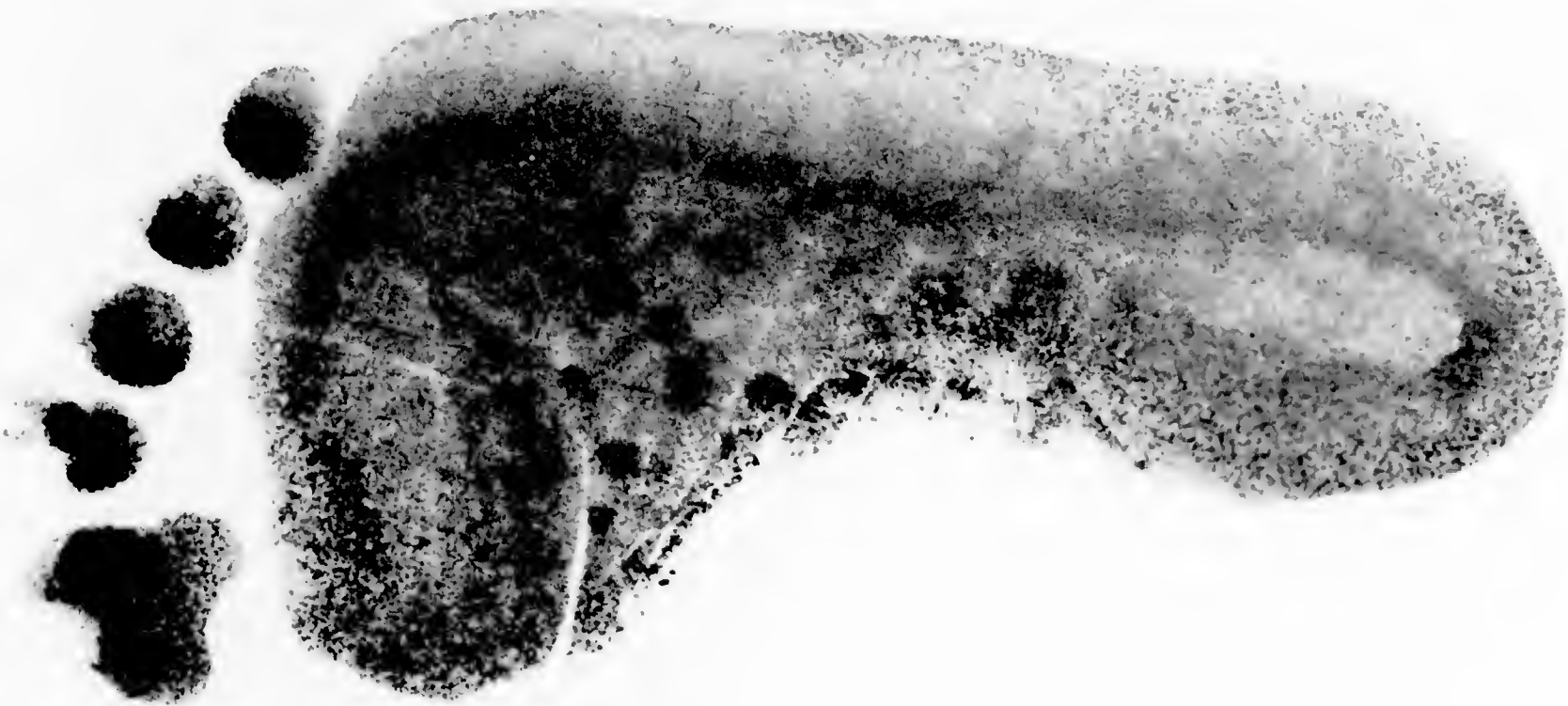
Tincture of Ferric chloride (US.R)	55 c.c.
Ethyl alcohol (95 per cent)	----- 45 c.c.
Glycerine	----- 10 c.c.



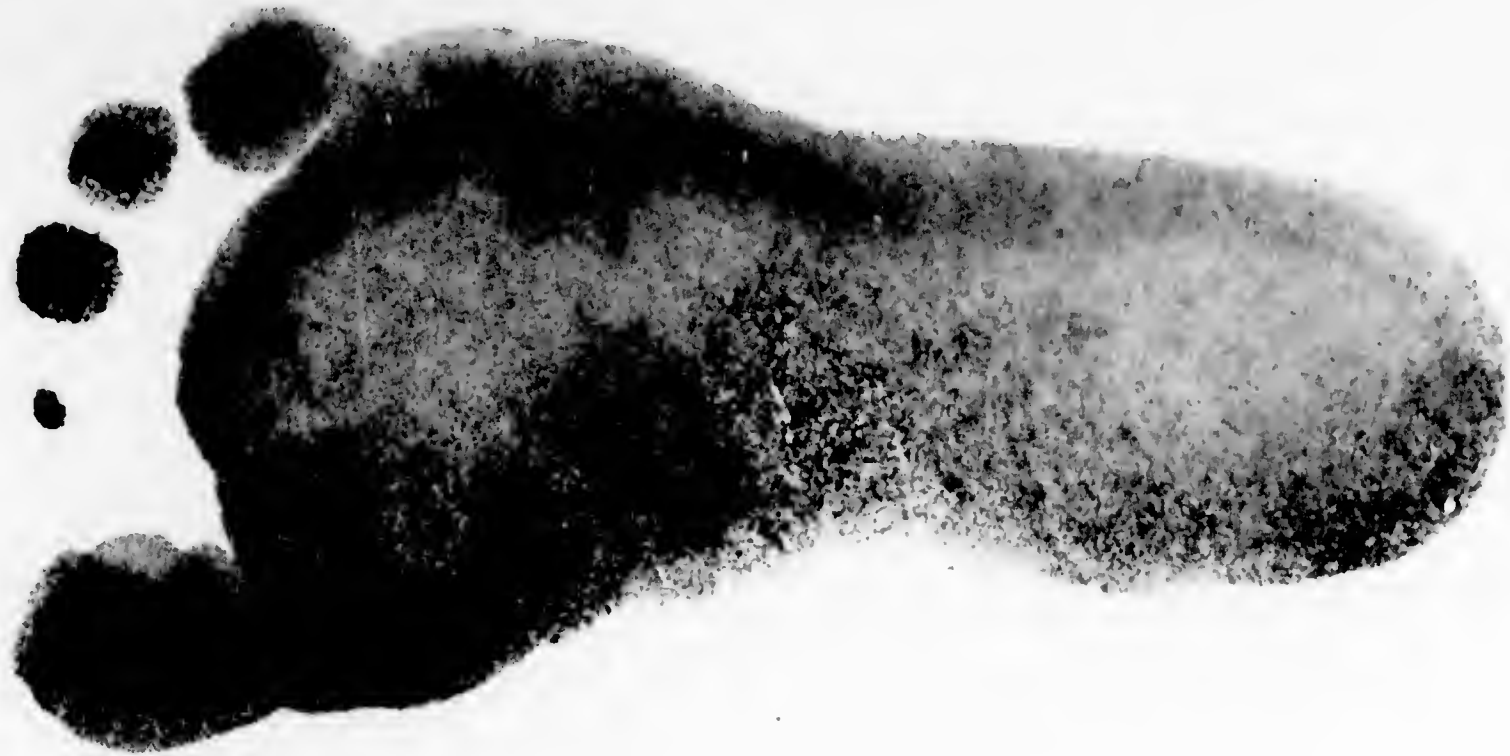
Good
Class 1



Medium
Class 2



Poor
Class 3



Very Poor
Class 4

P R E S E N T A T I O N O F D A T A

A composite statement of the findings concerning each of the children in the study is given from pages 30 to 205. From a review of these pages of data it will be found that all of the children come from families of medium and high income level, and that all have high ratings on the basis of the education of the parents and the physical home. These ratings may be summarized as follows:

Income Level Ratings.

Class A - 1, 2, 3	--	2
B - 1, 2, 3	--	14
C - 1	--	3
C - 2	--	3

Family Ratings on the Basis of Education of Parents.

Class A	--	18
B	--	3
C	--	1
D	--	none
E	--	none

Rating on Basis of Physical Homes.

Class A	--	19
B	--	2
C	--	1
D	--	none

Case Number: 01

Sex: Female

Birthday of Child: May 13, 1932

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 4 years, 0 months, 22 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₁ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width. Very small child.

Bone Status. - See page 36

Haemoglobin - 14.85 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 25 cms.

Muscle Tone as Shown by Footprints - Very poor.

Details of this case are given on pages 31 to 37.

F A M I L Y (Case 01)ADULTS: TwoCHILDREN: OneMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$4000SOURCES OF MONEY INCOME: College TeachingADDITIONAL INCOME (Gifts, Charity, etc.): Mother owns property and has small investments which pay the taxes on the property.FAMILY RATING ON BASIS OF INCOME: B₁

FAMILY EDUCATION (Case 01)FATHER'S EDUCATION: M.S.MOTHERS'S EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOMESIZE OF HOUSE: (Number of rooms 8)
1 point for each room up to 12 8.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children - 4 points _____.

Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.POSSESSION OF GARDEN: - Maximum 5 points 5.TOTAL POINTS ON FAMILY HOME: 96FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 01Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 13 hours;Time of Arising in Morning: 6:00 or 6:30 A.M.;Hours of Rest at Home: 2½ hours in the afternoon;Number of Windows in Child's Bedroom: 3;Number of Windows Open When Child Sleeps: 1;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs little help;Child's Diet at Home: Typical Day's DietaryBreakfast: Orange juice, milk, oatmeal, toast with butter and jelly, Usually a banana.Dinner: Baked potato, two vegetables, some meat (chicken, lamb or beef occasionally or liver or egg).Supper: Cream soup, fruit, milk, jello or sponge cake or ice cream.Cod-Liver Oil or Other Rich Sources of Vitamin D: Received a few drops of viosterol from the age of six months, then it was increased to two teaspoons, and now she receives cod liver oil at 11:00 A.M. and 4:00 P.M. with orange juice.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 01)

Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 4 to 5 loaves of bread; 1 pound flour; $1\frac{1}{2}$ box dry cereal and $\frac{1}{2}$ pound rolled oats.

Potatoes: 7 to 8 pounds;

Dried peas, beans, and nuts: $\frac{1}{4}$ pound nuts;

Tomatoes and citrus fruits: 1 quart tomato juice; 5 pounds tomatoes; 1 can tomatoes; 5 dozen oranges or 4 dozen oranges and 3 grapefruits;

Leafy, green, and yellow vegetables: 2 pounds sweet potatoes; 3 bunches carrots; 2 pounds spinach; 4 pounds green beans; 1 squash; 2 heads lettuce;

Dried fruits: Prunes and peaches; Few apricots;

Other vegetables and fruits: Peaches - 4 or 5 pounds or 1 can; 5 pounds apples; Pears - 4 or 5 pounds or 1 can; 1 can apricots; 1 can pineapple;

Fats: 2 pounds butter; $\frac{1}{2}$ pound lard;

Sugars: 2 pounds;

Lean meat, poultry and fish: 5 pounds;

Eggs: $1\frac{1}{2}$ to 2 dozen;

Milk: 17 quarts; 1 pint cream; 2 quarts buttermilk;

COMMENTS: $\frac{1}{2}$ pound cheese; 1 package Pabst.

(Case 01)
PERCENTAGE HAEMOGLOBIN: June 5, 1936

14.85 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight 6 pounds 4 ounces.

Had pneumonia at six months.

Had sinus trouble since two years of age.

Tonsillitis. Had tonsils and adenoids removed at three years.

Has had pilitis since she was about six months and still does periodically.

Was quarantined for measles but Doctor believed it to be a dietary rash.

Has gastro - intestinal trouble all the time.

Has been given serum for gastro - intestinal condition and for whooping cough.

Had inoculations to prevent colds.

Has sun lamp treatments every winter.

EXAMINATION OF CHILD (Case 91)

EVALUATION OF X-RAYS

Chronological Age: 4 years, 0 months, 22 days

Bone Age (penetration): 2 years, 7 months. Retarded 2 years, 5 months.

Epiphysial rating (Centers): 2 year, 5 months.
Retarded 1 year, 7 months.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 7

MUSCLE TONE

Foot: Arches
Toes Very poor

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 01)

(1) Weight.....	<u>30 lbs.</u>	(14) Cristal Breadth.....	<u>16.1 cms.</u>
(2) Standing Height.....	<u>92 cms.</u>	(15) Trochanteric Breadth..	<u>18.2 "</u>
(3) Horizontal Height.....	<u>93.1 "</u>	(16) Transverse Chest.....	<u>12.9 "</u>
(4) Sitting Height.....	<u>57.4 "</u>	(17) Entire Arm Length.....	<u>35.5 "</u>
(5) Stem End.....	<u>56.5 "</u>	(18) Upper Arm Length.....	<u>16.7 "</u>
(6) Suprasternal Height...	<u>72.2 "</u>	(19) Forearm Length.....	<u>12.7 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>8.9 "</u>
(8) Tip of Acromion Height	<u>73.2 "</u>	(21) Chest Girth.....	<u>50.2 "</u>
(9) Cristal Height.....	<u>52.5 "</u>	(22) Head Length.....	<u>13. "</u>
(10) Anterior Iliac Spine Height.	<u>46.8 "</u>	(23) Head Breadth.....	<u>9.5 "</u>
(11) Knee Height.....	<u>22.2 "</u>	(24) Head Height.....	<u>9.4 "</u>
(12) Tibial Length.....	<u>18.7 "</u>	(25) Interpupillary Distance	<u>5.5 "</u>
(13) Acromial Breadth.....	<u>22.3 "</u>	(26) Suprasternum to Head Top.....	<u>22.2 "</u>
		(27) Head Circumference....	<u>47.0 Hairline</u> <u>47.3 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF
METHOD)

Measurement of July 14, 1936 ----- 25 cms.

Case Number: 02

Sex: Female

Birthday of Child: April 23, 1932

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 4 years, 1 month, 12 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | C ₁ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 44

Haemoglobin - 13.29 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 45 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 39 to 45 .

F A M I L Y (Case 02)ADULTS: Two;CHILDREN: One;MOTHER'S NATIONALITY: American;FATHER'S NATIONALITY: American;F A M I L Y I N C O M ENUMBER OF WAGE EARNERS IN FAMILY: One (Father);OCCUPATIONS OF WAGE EARNERS: College Teaching;MONEY INCOME: \$2400;SOURCES OF MONEY INCOME: College Teaching;ADDITIONAL INCOME (Gifts, Charity, etc.): No gifts; very little from investments;FAMILY RATING ON BASIS OF INCOME: C₁

FAMILY EDUCATION (Case 02)FATHER'S EDUCATION: M.S.MOTHERS'S EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 9)
 1 point for each room up to 12 9.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children - 4 points _____.

Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 3.

TOTAL POINTS ON FAMILY HOME: 92

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R ECase Number: 02Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 11 hours at night;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: 2½ hours if the child desires;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2 in the summer but both closed in the winter;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Helps self;Child's Diet at Home: Typical Day's Dietary

Breakfast: Cereal, fruit milk, toast and jam

Lunch: Meat, potatoes, vegetable, fruit

Dinner: Fruit, vegetable, milk and in winter cereal

Cod-Liver Oil or Other Rich Sources of Vitamin D: Started to get viosterol at three months, and received it until she started to nursery school.LIBRARY
THE PA. STATE
COLLEGE

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 02)

Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 1 pound flour; 1 package wheaties; 15 pounds corn meal per year; 10 pounds wheat flour per year. Occasionally - wheatina, rice, barley;
Potatoes: $\frac{1}{2}$ peck

Dried peas, beans, and nuts: $\frac{1}{2}$ pound lima beans; $\frac{1}{3}$ pound nuts;

Tomatoes and citrus fruits: $\frac{1}{4}$ pint tomatoes; 2 dozen oranges (During winter)

Leafy, green, and yellow vegetables: 2 heads lettuce; 1 head cabbage; 1 bunch celery; 1 quart beets; 1 quart string beans; 2 pounds carrots; spinach, dandelion, endive, peas, corn - occasionally;

Dried fruits: $\frac{1}{4}$ pound prunes;

Other vegetables and fruits: 3 pounds bananas (during summer), 3 pounds apples (during winter); 1 pint cherries; 1 pint pears, (occasionally - onions, radishes, cauliflower, cucumber);

Fats: $\frac{1}{4}$ pound oleo; $\frac{1}{4}$ pound lard; 1 pound butter;

Sugars: $\frac{1}{4}$ pound;

Lean meat, poultry and fish: 4 pounds beef; 1 pound fish;

Eggs: $\frac{1}{4}$ dozen;

Milk: 14 quarts;

COMMENTS: $\frac{1}{3}$ pint mayonnaise; $\frac{1}{3}$ pound chocolate; cottage cheese, cream and other cheese occasionally.

PERCENTAGE HAEMOGLOBIN: June 5, 1936

13.29 grams of haemoglobin per 100 c.c. of blood

MEDICAL RECORD:

Has had no diseases of any kind

Has colds very often

Had both ears abscessed and had them lanced at the age of two

Has an allergy towards eggs

EXAMINATION OF CHILD (Case 02)

EVALUATION OF X-RAYS

Chronological Age: 4 years, 1 month, 12 days

Bone Age (Penetration): 3 years, 6 months. Retarded 7 months.

Epiphysial Rating (Centers): 3 years. Retarded 1 year, 1 month.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 3

The scars on the lower radius and the scorings on the femur indicate minor disturbances about four months ago.

MUSCLE TONE

Foot: Arches
Toes Medium

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 02)

(1) Weight.....	<u>31 lbs.</u>	(14) Cristal Breath.....	<u>16.7 cms.</u>
(2) Standing Height.....	<u>97.4 cms.</u>	(15) Trochanteric Breadth..	<u>17.15 "</u>
(3) Horizontal Height.....	<u>98.9 "</u>	(16) Transverse Chest.....	<u>13.3 "</u>
(4) Sitting Height.....	<u>51.8 "</u>	(17) Entire Arm Length.....	<u>38.8 "</u>
(5) Stem End.....	<u>55.1 "</u>	(18) Upper Arm Length.....	<u>15.1 "</u>
(6) Suprasternal Height...	<u>75.5 "</u>	(19) Forearm Length.....	<u>13.7 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>11.1 "</u>
(8) Tip of Acromion Height	<u>76.6 "</u>	(21) Chest Girth.....	<u>50.8 "</u>
(9) Cristal Height.....	<u>58.95 "</u>	(22) Head Length.....	<u>14.0 "</u>
(10) Anterior Iliac Spine Height.	<u>51.7 "</u>	(23) Head Breadth.....	<u>10.9 "</u>
(11) Knee Height.....	<u>27.0 "</u>	(24) Head Height.....	<u>8.3 "</u>
(12) Tibial Length.....	<u>20.0 "</u>	(25) Interpupillary Distance	<u>5.0 "</u>
(13) Acromial Breadth.....	<u>23.3 "</u>	(26) Suprasternum to Head Top.....	<u>23.3 "</u>
		(27) Head Circumference....	<u>48.3 Hairline</u> <u>49.8 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of July 16, 1936 ----- 45 cms.

Case Number: 03

Sex: Male

Birthday of Child: August 1, 1932

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 3 years, 10 months, 4 days

Family Rating on Basis of:

(1) Income B₁

(2) Parents' Education A

(3) Physical Home A

Summary of Nutritional Status:

Body Build - About 10 per cent underweight for width and height

Bone Status - See page 52

Haemoglobin - 10.10 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 54 cms.

Muscle Tone as Shown by Footprints. - Good

Details of this case are given on pages 47 to 53.

F A M I L Y (Case 03)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M ENUMBER OF WAGE EARNERS IN FAMILY: FatherOCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$4000SOURCES OF MONEY INCOME: Extension teaching \$2400
InvestmentsADDITIONAL INCOME (Gifts, Charity, etc.): Investments \$1600FAMILY RATING ON BASIS OF INCOME: B₁

FAMILY EDUCATION (Case 03)FATHER'S EDUCATION: M.A.MOTHER'S EDUCATION:FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
 1 point for each room up to 12 7.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 93.

FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 03;Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12 hours;Time of Arising in Morning: 6:30 or 7:30 A.M.;Hours of Rest at Home: One hour after lunch;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Can help himself but receives some supervision.

<u>Child's Diet at Home:</u>	<u>Typical Day's Dietary</u>
Breakfast:	Orange juice, hot cereal, soft boiled egg or bacon, milk, toast.
Dinner:	Potato or substitute, 2 cooked vegetables, buttered graham crackers, milk.
Supper:	Fruit, apple sauce, cereal, milk, buttered graham crackers, cookie, sandwich, Very little meat - liver once a week.

Cod-Liver Oil or Other Rich Sources of Vitamin D: Receives one teaspoon of Cod-Liver Oil every morning before his orange juice.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 03)
Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 1 pound flour; 2 boxes cereal;

Potatoes: $\frac{1}{2}$ peck;

Dried peas, beans, and nuts: Nuts occasionally;

Tomatoes and citrus fruits: 2 pounds tomatoes; 4 dozen oranges, 2 grapefruits, lemons occasionally;

Leafy, green, and yellow vegetables: 2 heads lettuce, 4 bunches celery, 6 bunches carrots, $\frac{3}{4}$ head cabbage, $\frac{1}{2}$ bunch beets. (In season - asparagus, spinach, beets, cauliflower);

Dried fruits: Peaches, apricots, prunes - occasionally;

Other vegetables and fruits: 3 pounds apples; 2 bounds bananas;

Fats: $4\frac{1}{2}$ pounds;

Sugars: $1\frac{3}{4}$ pounds;

Lean meat, poultry and fish: 4 pounds meat, liver once every ten days; fish once a week, poultry 3 times a month;

Eggs: $1\frac{1}{2}$ dozen;

Milk: 14 quarts; 2 quarts cream;

COMMENTS:

(Case 03)

PERCENTAGE HAEMOGLOBIN: June 5, 1936

10.10 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

No diseases or illness of any kind.

EXAMINATION OF CHILD (Case 03)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 10 months, 4 days.

Bone Age (Penetration): 3 years, 8 months. Retarded 2 months.

Epiphysial Rating (Centers): 3 years, 1 month. Retarded 9 months.

Number of epiphysial centers missing for ossific center age: 4

Number of epiphysial centers missing for chronological age: 11

Scorings on the lower tibia indicate minor ill-health disturbances.

MUSCLE TONE

Foot: Arches
Toes Good

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 03)

(1) Weight.....	<u>40 lbs.</u>	(14) Cristal Breadth.....	<u>16.6 cms.</u>
(2) Standing Height.....	<u>108.2 cms.</u>	(15) Trochanteric Breadth..	<u>20.1 "</u>
(3) Horizontal Height.....	<u>110.4 "</u>	(16) Transverse Chest.....	<u>13.5 "</u>
(4) Sitting Height.....	<u>60.4 "</u>	(17) Entire Arm Length.....	<u>42.2 "</u>
(5) Sten End.....	<u>61.1 "</u>	(18) Upper Arm Length.....	<u>15.5 "</u>
(6) Suprasternal Height...	<u>79.1 "</u>	(19) Forearm Length.....	<u>13.8 "</u>
(7) Symphision Height.....	<u> </u>	(20) Hand Length.....	<u>10.2 "</u>
(8) Tip of Acromion Height	<u>77.2 "</u>	(21) Chest Girth.....	<u>54.6 "</u>
(9) Cristal Height.....	<u>59.8 "</u>	(22) Head Length.....	<u>16.6 "</u>
(10) Anterior Iliac Spine Height.	<u>55.6 "</u>	(23) Head Breadth.....	<u>10.1 "</u>
(11) Knee Height.....	<u>26.6 "</u>	(24) Head Height.....	<u>6.6 "</u>
(12) Tibial Length.....	<u>23.8 "</u>	(25) Interpupillary Distance	<u>5.2 "</u>
(13) Acromial Breadth.....	<u>27.6 "</u>	(26) Suprasternum to Head Top.....	<u>24.3 "</u>
		(27) Head Circumference....	<u>50.2 Hairline</u> <u>52.1 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 6, 1936 ----- 54 cms.

Case Number: 04

Sex: Female

Birthday of Child: August 29, 1932

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 3 years, 9 months, 6 days

Family Rating on Basis of:

- (1) Income C₂
- (2) Parents' Education A
- (3) Physical Home A

Summary of Nutritional Status:

Body Build - About 10 per cent underweight for width and height.

Bone Status - See page 60.

Haemoglobin - 10.52 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 63 cms.

Muscle Tone as Shown by Footprints - Good

Details of this case are given on pages 55 to 61 .

F A M I L Y (Case 04)ADULTS: TwoCHILDREN: ThreeMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M ENUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$1900SOURCES OF MONEY INCOME: TeachingADDITIONAL INCOME (Gifts, Charity, etc.): Grandparents give articles of clothing occasionally.FAMILY RATING ON BASIS OF INCOME: C₂

FAMILY EDUCATION (Case 04)FATHER'S EDUCATION: Ph. D.MOTHERS'S EDUCATION: B. A.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
 1 point for each room up to 12 7.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 5.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 9.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points ____.
 Sleeps with one adult - 6 points ____.
 Sleeps with two other children - 4 points ____.
 Sleeps with three other children - 1 point ____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 87

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R E

Case Number: 04 (Sister of Case 05 and 07)

Sleeping Arrangements: Sleeps alone;

Hours of Sleep at Home: 13 hours;

Time of Arising in Morning: 7:00 A.M.;

Hours of Rest at Home: About one or two;

Number of Windows in Child's Bedroom: 3;

Number of Windows Open When Child Sleeps: 2;

Number of Times Child is Bathed a Week: Daily;

Comments on Child's Clothing: A,A,A;

Self-Help in Dressing, Washing, Toileting: Dresses self;

Child's Diet at Home:

Typical Day's Dietary

Breakfast:	Fruit, cereal, eggs, toast, milk;
10:00 A.M.:	Fruit juice;
11:00 A.M.:	Milk,
Dinner:	2 vegetables, potato, liver, milk dessert, whole wheat bread or zwieback, milk;
3:30 P.M.:	Milk or fruit juice;
Supper:	Milk, cereal, fruit or junket.

Cod-Liver Oil or Other Rich Sources of Vitamin D: Received a few drops of haliver oil daily before starting cod-liver oil. Received cod-liver oil at two years, one teaspoon twice a week in the winter. From three to four years received cod-liver oil from October to March, one teaspoon daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 04)

Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 2 pounds cereals; 5 loaves bread; 2 boxes zwieback.

Potatoes: 6 pounds;

Dried peas, beans, and nuts: $\frac{1}{4}$ pound nuts; $\frac{3}{4}$ pound beans;

Tomatoes and citrus fruits: 6 dozen oranges, 3 grapefruits, 4 lemons, $5\frac{1}{2}$ quarts tomatoes;

Leafy, green, and yellow vegetables: 2 pounds spinach, $2\frac{1}{2}$ pounds green peas, $2\frac{1}{2}$ pounds carrots, 1 bunch beets, 1 pound broccoli, 1 pound lettuce, 2 pounds green beans;

Dried fruits: None

Other vegetables and fruits: 4 small cans prunes;

Fats: 7 pounds;

Sugars: 1 pound;

Lean meat, poultry and fish: 6 pounds;

Eggs: $3\frac{1}{2}$ dozen;

Milk: 28 quarts;

COMMENTS: Pineapple juice, ginger ale, ginger cookies, no candy.

(Case 04)

PERCENTAGE HAEMOGLOBIN: June 5, 1936

10.52 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight - 6 pounds 4 ounces.

No diseases of any kinds.

Colds occasionally.

EXAMINATION OF CHILD (Case 04)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 9 months, 6 days

Bone Age (Penetration): 3 years, 4 months. Retarded 5 months.

Epiphysial Rating (Centers): 3 years. Retarded 9 months

Number of epiphysial centers
missing for ossific center age: 1

Number of epiphysial centers
missing for chronological age: 2

The scorings on the lower radius indicate minor health disturbances within the past year.

MUSCLE TONE

Foot: Arches Good
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 04)

(1) Weight.....	<u>30½ lbs.</u>	(14) Cristal Breadth.....	<u>16.8 cms.</u>
(2) Standing Height.....	<u>96.7 cms</u>	(15) Trochanteric Breadth..	<u>18.4 "</u>
(3) Horizontal Height.....	<u>99.4 "</u>	(16) Transverse Chest.....	<u>12.9 "</u>
(4) Sitting Height.....	<u>52.6 "</u>	(17) Entire Arm Length.....	<u>41.9 "</u>
(5) Stem End.....	<u>57.9 "</u>	(18) Upper Arm Length.....	<u>19.6 "</u>
(6) Suprasternal Height...	<u>75.6 "</u>	(19) Forearm Length.....	<u>14.7 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>11.3 "</u>
(8) Tip of Acromion Height	<u>73.5 "</u>	(21) Chest Girth.....	<u>49.5 "</u>
(9) Cristal Height.....	<u>58.9 "</u>	(22) Head Length.....	<u>15.0 "</u>
(10) Anterior Iliac Spine Height.	<u>51.5 "</u>	(23) Head Breadth.....	<u>10.0 "</u>
(11) Knee Height.....	<u>26.4 "</u>	(24) Head Height.....	<u>7.6 "</u>
(12) Tibial Length.....	<u>23.5 "</u>	(25) Interpupillary Distance	<u>5.0 "</u>
(13) Acromial Breadth.....	<u>25.2 "</u>	(26) Suprasternum to Head Top.....	<u>21.9 "</u>
		(27) Head Circumference....	<u>48.3 Hairline</u> <u>48.9 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 30, 1936 ----- 63 cms.

Case Number: 05

Sex: Male

Birthday of Child: August 18, 1933

Date of Tests: June 6, 1936

Chronological Age at Time of Tests: 2 years, 9 months, 17 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | C ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - About 10 per cent underweight for width and height

Bone Status - See page 68.

Haemoglobin - 9.71 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 55 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 63 to 69.

F A M I L Y (Case 05)ADULTS: TwoCHILDREN: ThreeMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College InstructorMONEY INCOME: \$1900SOURCES OF MONEY INCOME: College TeachingADDITIONAL INCOME (Gifts, Charity, etc.): Grandparents give articles of clothing occasionally;FAMILY RATING ON BASIS OF INCOME: C₂

FAMILY EDUCATION (Case 05)FATHER'S EDUCATION: Ph. D.MOTHER'S EDUCATION: B. A.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: **A**FAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
 1 point for each room up to 12 7.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 5.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 9.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MEDICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: **87**.

FAMILY RATING ON BASIS OF HOME: **A**.

C H I L D ' S H O M E C A R ECase Number: 05 (Brother of 04 and 07)Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 13;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: 3;Number of Windows in Child's Bedroom: 3;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A,A,A;Self-Help in Dressing, Washing, Toileting: Needs supervision;Child's Diet at Home: Typical Day's Dietary

Breakfast: Fruit, cereal, eggs, toast, milk
 Dinner: Potato, 1 or 2 vegetables, liver; dessert of milk or
 fruit; milk; zwieback or whole wheat bread
 Supper: Cereal, fruit, junket, milk
 Fruit juice at 10:00 A.M.; Milk at 11:00 A.M.; Drink at
 3:30 P.M.

Cod-Liver Oil or Other Rich Sources of Vitamin D: Cod-liver oil in
winter after breakfast and supper. Receives 4 teaspoons daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 05)

Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 2 pounds cereals; 5 loaves bread; 2 boxes zwieback.

Potatoes: 6 pounds;

Dried peas, beans, and nuts: $\frac{1}{4}$ pound nuts; $\frac{1}{4}$ pound beans;

Tomatoes and citrus fruits: 6 dozen oranges, 3 grapefruits, 4 lemons, $5\frac{1}{2}$ quarts tomatoes;

Leafy, green, and yellow vegetables: 2 pounds spinach, $2\frac{1}{2}$ pounds green peas, $2\frac{1}{2}$ pounds carrots, 1 bunch beets, 1 pound broccoli, 1 pound lettuce, 2 pounds green beans;

Dried fruits: None;

Other vegetables and fruits: 4 small cans prunes;

Fats: 7 pounds;

Sugars: 1 pound;

Lean meat, poultry and fish: 6 pounds;

Eggs: 53 dozen;

Milk: 33 quarts;

COMMENTS: Pineapple juice, ginger ale, ginger cookies, no candy.

(Case 05)

PERCENTAGE HAEMOGLOBIN: June 5, 1936

9.71 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.
Weight $7\frac{1}{2}$ pounds.
No diseases.
Very few colds.

EXAMINATION OF CHILD (Case 05)

EVALUATION OF X-RAYS

Chronological Age: 2 years, 9 months, 17 days

Bone Age (Penetration): 3 years, 6 months. Advanced 9 months.

Epiphysial Rating (Centers): 2 years, 5 months. Retarded 4 months.

Number of epiphysial centers
missing for ossific center age: 0

Number of epiphysial centers
missing for chronological age: 0

Scars on lower radius and femur indicate illness in the
past four months.

MUSCLE TONE

Foot: Arches
Toes Medium

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 05)

(1) Weight.....	<u>30 lbs.</u>	(14) Cristal Breadth.....	<u>18.2 cms.</u>
(2) Standing Height.....	<u>93.1 cms.</u>	(15) Trochanteric Breadth..	<u>18.4 "</u>
(3) Horizontal Height.....	<u>95.0 "</u>	(16) Transverse Chest.....	<u>13.0 "</u>
(4) Sitting Height.....	<u>50.0 "</u>	(17) Entire Arm Length.....	<u>37.9 "</u>
(5) Stem End.....	<u>59.7 "</u>	(18) Upper Arm Length.....	<u>18.0 "</u>
(6) Suprasternal Height...	<u>70.5 "</u>	(19) Forearm Length.....	<u>13.4 "</u>
(7) Symphysis Height.....	<u> </u>	(20) Hand Length.....	<u>11.5 "</u>
(8) Tip of Acromion Height	<u>71.6 "</u>	(21) Chest Girth.....	<u>53.3 "</u>
(9) Cristal Height.....	<u>53.0 "</u>	(22) Head Length.....	<u>15.9 "</u>
(10) Anterior Iliac Spine Height.	<u>49.7 "</u>	(23) Head Breadth.....	<u>11.5 "</u>
(11) Knee Height.....	<u>24.9 "</u>	(24) Head Height.....	<u>8.5 "</u>
(12) Tibial Length.....	<u>21.5 "</u>	(25) Interpupillary Distance	<u>5.1 "</u>
(13) Acromial Breadth.....	<u>24.6 "</u>	(26) Suprasternum to Head Top.....	<u>22.3 "</u>
		(27) Head Circumference....	<u>47.6 Hairline</u> <u>48.9 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 30, 1936 ----- 55 cms.

Case Number: 06

Sex: Male

Birthday of Child: July 7, 1933

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 2 years, 10 months, 38 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 76

Haemoglobin - 10.52 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 37 cms.

Muscle Tone as Shown by Footprints - Poor

Details of this case are given on pages 71 to 77.

F A M I L Y (Case 06)ADULTS: Four. Two parents and two roomers (one eating with the family)CHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$3500SOURCES OF MONEY INCOME: Salary and room rentADDITIONAL INCOME (Gifts, Charity, etc.): \$108 room rent (during school term)
\$ 18 InvestmentsFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 06)FATHER'S EDUCATION: B.S.MOTHERS'S EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 6.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 4.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 89

FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 06Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 13;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: 1;Number of Windows in Child's Bedroom: 3;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A,A,A;Self-Help in Dressing, Washing, Toileting: Needs some assistance;Child's Diet at Home: Typical Day's Dietary

Breakfast: Orange juice, milk, toast, cereal
Egg and bacon, three times a week.

Dinner: Potato, vegetable, tuna fish, dessert, milk.

Supper: Sandwiches (Peanut butter), fruit, creamed asparagus,
dessert, milk.
Egg for supper if not for breakfast.

Cod-Liver Oil or Other Rich Sources of Vitamin D: Received 3 teaspoons
cod-liver oil daily in winter before going to nursery school. While in
nursery school received 1 teaspoon and 2 teaspoons at home.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 06)
Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 2 pounds flour; 3 pounds cereal;

Potatoes: $\frac{1}{2}$ peck;

Dried peas, beans, and nuts:

Tomatoes and citrus fruits: 1 can tomatoes, 2 quarts tomato juice, 10 dozen oranges, 6 grapefruits, 2 lemons;

Leafy, green, and yellow vegetables: 2 heads lettuce, $1\frac{1}{4}$ pounds string beans, 2 pounds peas, $\frac{1}{2}$ head cauliflower, 1 head broccoli, 1 bunch celery, $4\frac{1}{2}$ pounds asparagus (in season), 1 can beets, $\frac{1}{2}$ pound spinach, 1 bunch carrots;

Dried fruits: Some prunes, approximately $\frac{1}{2}$ pound;

Other vegetables and fruits: 2 dozen bananas, 4 quarts apples (in season);

Fats: $2\frac{1}{2}$ pounds butter, $\frac{1}{4}$ pound crisco;

Sugars: 4 pounds;

Lean meat, poultry and fish: 7 pounds;

Eggs: 3 dozen;

Milk: 20 quarts, 1 quart cream.

COMMENTS:

(Case 06)

PERCENTAGE HAEMOGLOBIN: June 5, 1936

10.52 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Had razelea at about 7 weeks.

Had measles in March 1935.

Has been immunized against scarlet fever with injections.

Has had whooping cough serum.

Has inflamed ear when he has a cold.

Had artificial sun lamp used for a month in the winter under Doctor's direction February to March.

EXAMINATION OF CHILD (Case 06)

EVALUATION OF X-RAYS

Chronological Age: 2 years, 10 months, 28 days.

Bone Age (Penetration): 3 years, 3 months. Advanced 5 months.

Epiphysial Rating (Centers): 3 years, 1 month. Advanced 9 months.

Number of epiphysial centers
missing for ossific center age: 4

Number of epiphysial centers
missing for chronological age: 1

Scorings on the upper tibia indicate minor illnesses
in the past 2 years.

MUSCLE TONE

Foot: Arches	Poor
Toes	

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 06)

(1) Weight.....	<u>33½ lbs.</u>	(14) Cristal Breadth.....	<u>16.7 cms.</u>
(2) Standing Height.....	<u>95.8 cms.</u>	(15) Trochanteric Breadth..	<u>17.2 "</u>
(3) Horizontal Height.....	<u>97.8 "</u>	(16) Transverse Chest.....	<u>12.5 "</u>
(4) Sitting Height.....	<u>53.3 "</u>	(17) Entire Arm Length.....	<u>37. "</u>
(5) Stem End.....	<u>57.8 "</u>	(18) Upper Arm Length.....	<u>16.9 "</u>
(6) Suprasternal Height...	<u>75.6 "</u>	(19) Forearm Length.....	<u>13.2 "</u>
(7) Symphision Height.....	<u> </u>	(20) Hand Length.....	<u>8.7 "</u>
(8) Tip of Acromion Height	<u>84.3 "</u>	(21) Chest Girth.....	<u>52.1 "</u>
(9) Cristal Height.....	<u>54.3 "</u>	(22) Head Length.....	<u>16.1 "</u>
(10) Anterior Iliac Spine Height.	<u>53. "</u>	(23) Head Breadth.....	<u>10.3 "</u>
(11) Knee Height.....	<u>23.5 "</u>	(24) Head Height.....	<u>7.6 "</u>
(12) Tibial Length.....	<u>21.5 "</u>	(25) Interpupillary Distance	<u>5.7 "</u>
(13) Acromial Breadth.....	<u>24.6 "</u>	(26) Suprasternum to Head Top.....	<u>20.8 "</u>
		(27) Head Circumference....	<u>52.1 Hairline</u> <u>52.1 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 3, 1936 ----- 37 cms.

Case Number: 07

Sex: Female

Birthday of Child: September 5, 1934

Date of Tests: June 5, 1936

Chronological Age at Time of Tests: 1 year, 9 months

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | C ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Somewhat overweight for height and width.

Bone Status - See page 84

Haemoglobin - 12.02 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 64 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 79 to 85.

F A M I L Y (Case 07)ADULTS: TwoCHILDREN: ThreeMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One (Father)OCCUPATIONS OF WAGE EARNERS: College InstructorMONEY INCOME: \$1900SOURCES OF MONEY INCOME: College TeachingADDITIONAL INCOME (Gifts, Charity, etc.): Grandparents give articles of clothing occasionally.FAMILY RATING ON BASIS OF INCOME:C₂

FAMILY EDUCATION (Case 07)FATHER'S EDUCATION: Ph. D.MOTHERS'S EDUCATION: B. A.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOMESIZE OF HOUSE: (Number of rooms 7)
1 point for each room up to 12 7.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 5.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 9.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.
Sleeps with one other child - 7 points _____.
Sleeps with one adult - 6 points _____.
Sleeps with two other children - 4 points _____.
Sleeps with three other children - 1 point _____.EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.POSSESSION OF GARDEN: - Maximum 5 points 5.TOTAL POINTS ON FAMILY HOME: 87FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R ECase Number: 07 (Sister of 04 and 05)Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 13;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: 1 to 2 each day;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A,A,A;Self-Help in Dressing, Washing, Toileting: Needs assistance;Child's Diet at Home:Typical Day's Dietary

Breakfast:	Fruit, cereal, eggs, toast milk
10:00 A.M.:	Fruit juice
11:00 A.M.:	Milk
Dinner:	2 vegetables, potato, liver, milk dessert or fruit, whole wheat bread or zwieback, milk
3:30 P.M.:	Fruit juice or milk
Supper:	Milk, cereal, fruit, junket

Cod-Liver Oil or Other Rich Sources of Vitamin D: Cod-liver oil in winter after breakfast and supper. 2 teaspoonsful daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 07)

Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 2 pounds cereals; 5 loaves bread; 2 boxes zwieback.

Potatoes: 6 pounds;

Dried peas, beans, and nuts: $\frac{1}{4}$ pound nuts; $\frac{3}{4}$ pound beans;

Tomatoes and citrus fruits: 6 dozen oranges, 3 grapefruits, 4 lemons, $5\frac{1}{2}$ quarts tomatoes;

Leafy, green, and yellow vegetables: 2 pounds spinach, $2\frac{1}{2}$ pounds green peas, $2\frac{1}{2}$ pounds carrots, 1 bunch beets, 1 pound broccoli, 1 pound lettuce, 2 pounds green beans;

Dried fruits: None;

Other vegetables and fruits: 4 small cans prunes;

Fats: 7 pounds;

Sugars: 1 pound ;

Lean meat, poultry and fish: 6 pounds;

Eggs: $3\frac{1}{2}$ dozen;

Milk: 28 quarts;

COMMENTS: Pineapple juice, ginger ale, ginger cookies, no candy.

(Case 07)

PERCENTAGE HAEMOGLOBIN: June 5, 1936

12.02 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight - 7½ pounds.

No diseases of any kind.

EXAMINATION OF CHILD (Case 07)

EVALUATION OF X-RAYS

Chronological Age: 1 year, 9 months.

Bone Age (Penetration): 2 years, 3 months. Advanced 6 months.

Epiphysial Rating (Centers): O.K. through 13 months, but ? after that time.

Number of epiphysial centers missing was not accurate because of a poor film.

Scar on lower radius indicates a severe constitutional disturbance about one year ago.

MUSCLE TONE

Foot: Arches Medium
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 07)

(1) Weight.....	<u>36 lbs.</u>	(14) Cristal Breadth.....	<u>14.7 cms.</u>
(2) Standing Height.....	<u>83.8 cms.</u>	(15) Trochanteric Breadth..	<u>16.9 "</u>
(3) Horizontal Height.....	<u>86.7 "</u>	(16) Transverse Chest.....	<u>13.0 "</u>
(4) Sitting Height.....	<u>47.5 "</u>	(17) Entire Arm Length.....	<u>36.4 "</u>
(5) Stem End.....	<u>53.0 "</u>	(18) Upper Arm Length.....	<u>17.6 "</u>
(6) Suprasternal Height...	<u>63.1 "</u>	(19) Forearm Length.....	<u>12.8 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>10.0 "</u>
(8) Tip of Acromion Height	<u>65.6 "</u>	(21) Chest Girth.....	<u>49.5 "</u>
(9) Cristal Height.....	<u>45.5 "</u>	(22) Head Length.....	<u>14.0 "</u>
(10) Anterior Iliac Spine Height.	<u>43.3 "</u>	(23) Head Breadth.....	<u>10.3 "</u>
(11) Knee Height.....	<u>23.4 "</u>	(24) Head Height.....	<u>9.0 "</u>
(12) Tibial Length.....	<u>17.5 "</u>	(25) Interpupillary Distance	<u>4.9 "</u>
(13) Acromial Breadth.....	<u>23.9 "</u>	(26) Suprasternum to Head Top.....	<u>19.8 "</u>
		(27) Head Circumference....	<u>47.9 Hairline</u> <u>47.6 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of August 12, 1936 ----- 64 cms. (slight break)

Case Number: 08

Sex: Male

Birthday of Child: July 18, 1932

Date of Tests: June 10, 1936

Chronological Age at Time of Tests: 3 years, 10 months, 22 days

Family Rating on Basis of:

(1) Income B₁

(2) Parents' Education A

(3) Physical Home A

Summary of Nutritional Status:

Body Build - About 10 per cent underweight for height and width

Bone Status - See page 92.

Haemoglobin - 8.15 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 30 cms.

Muscle Tone as Shown by Footprints - Poor.

Details of this case are given on pages 87 to 93 .

F A M I L Y (Case 08)ADULTS: TwoCHILDREN: FourMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One (Father)OCCUPATIONS OF WAGE EARNERS: LibrarianMONEY INCOME: \$4500SOURCES OF MONEY INCOME: College workADDITIONAL INCOME (Gifts, Charity, etc.): None reportedFAMILY RATING ON BASIS OF INCOME: B 1

FAMILY EDUCATION (Case 08)FATHER'S EDUCATION: M.A.MOTHER'S EDUCATION:FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 9)
 1 point for each room up to 12 9.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children - 4 points _____.

Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 95.

FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 08Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12;Time of Arising in Morning: 6:00 A.M.;Hours of Rest at Home: 1 $\frac{1}{2}$;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A,A,A;Self-Help in Dressing, Washing, Toileting: Helps himself but needs some supervision;Child's Diet at Home: Typical Day's Dietary

Breakfast: Orange juice, cereal, toast, bacon (occasionally), milk.

Lunch: Hot dish, devilled egg, milk, fruit, cake or cookies.

Dinner: Meat, potato, 2 vegetables, dessert.

Candy after meals.

Not fond of eggs, fruits or vegetables.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 08)
Family Consumption of Types of Food Per Week

Flour, meal, and other cereals: 1 pound flour; 2 boxes cereals;

Potatoes: 1 peck;

Dried peas, beans, and nuts: None used;

Tomatoes and citrus fruits: 5 pounds tomatoes;

Leafy, green, and yellow vegetables: Beans, peas, spinach, cauliflower, brussel sprouts, carrots, lettuce and beets;

Dried fruits: Prunes and raisins occasionally;

Other vegetables and fruits: 1 dozen oranges, apples and cantaloupes;

Fats: $4\frac{1}{2}$ pounds;

Sugars: 6 pounds;

Lean meat, poultry and fish: 8 pounds;

Eggs: 2 dozen;

Milk: 16 quarts;

COMMENTS: Canned fruits, peaches, pears, apricots, plums used occasionally.

(Case 08)

PERCENTAGE HAEMOGLOBIN:

June 10, 1936

8.15 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight $7\frac{1}{2}$ pounds.

Has not had any children's diseases.

Colds occasionally.

EXAMINATION OF CHILD (Case 08)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 10 months, 22 days

Bone Age (Penetration): 3 years, 5 months. Retarded 5 months.

Epiphysial Rating (Centers): 3 years, 8 months. Retarded 2 months.
Slightly patchy after 23 months.

Number of epiphysial centers
missing for ossific center age: 8

Number of epiphysial centers
missing for chronological age: 9

MUSCLE TONE

Foot: Arches Poor
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 08)

(1) Weight.....	<u>32$\frac{1}{2}$ lbs.</u>	(14) Cristal Breadth.....	<u>17.5 cms.</u>
(2) Standing Height.....	<u>97.5 cms.</u>	(15) Trochanteric Breadth..	<u>19.9 "</u>
(3) Horizontal Height.....	<u>98.4 "</u>	(16) Transverse Chest.....	<u>14.8 "</u>
(4) Sitting Height.....	<u>49.5 "</u>	(17) Entire Arm Length.....	<u>38.5 "</u>
(5) Stem End.....	<u>56.8 "</u>	(18) Upper Arm Length.....	<u>18.4 "</u>
(6) Suprasternal Height...	<u>74.9 "</u>	(19) Forearm Length.....	<u>13.9 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>10.6 "</u>
(8) Tip of Acromion Height	<u>72.3 "</u>	(21) Chest Girth.....	<u>50.8 "</u>
(9) Cristal Height.....	<u>55.4 "</u>	(22) Head Length.....	<u>16.5 "</u>
(10) Anterior Iliac Spine Height.	<u>46.9 "</u>	(23) Head Breadth.....	<u>10.1 "</u>
(11) Knee Height.....	<u>26.4 "</u>	(24) Head Height.....	<u>6.7 "</u>
(12) Tibial Length.....	<u>23.5 "</u>	(25) Interpupillary Distance	<u>5.0 "</u>
(13) Acromial Breadth.....	<u>25.3 "</u>	(26) Suprasternum to Head Top.....	<u>21.4 "</u>
		(27) Head Circumference....	<u>49.8 Hairline</u> <u>52.07 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 10, 1936 ----- 30 cms.

Case Number: 09

Sex: Female

Birthday of Child: July 25, 1932

Date of Tests: June 10, 1936

Chronological Age at Time of Tests: 3 years, 10 months, 15 days

Family Rating on Basis of:

- (1) Income B₂
- (2) Parents' Education A
- (3) Physical Home A

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 100.

Haemoglobin - 14.03 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 33 cms.

Muscle Tone as Shown by Footprints - Poor.

Details of this case are given on pages 95 to 101.

F A M I L Y (Case 09)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$3000SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): None reportedFAMILY RATING ON BASIS OF INCOME: B
2

FAMILY EDUCATION (Case 09)

FATHER'S EDUCATION:

MOTHERS'S EDUCATION:

FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A

FAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
1 point for each room up to 12 7.
(Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 9.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 4.

SLEEPING ACCOMODATIONS FOR CHILD:

- Sleeps alone - 8 points 8.
- Sleeps with one other child - 7 points _____.
- Sleeps with one adult - 6 points _____.
- Sleeps with two other children - 4 points _____.
- Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 0.

TOTAL POINTS ON FAMILY HOME: 86

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R E (Case 09)SLEEPING ARRANGEMENTS: Sleeps alone;HOURS OF SLEEP AT HOME: 9 hours;TIME OF ARISING IN MORNING: 6:00 A.M.;HOURS OF REST AT HOME: 1;NUMBER OF WINDOWS IN CHILD'S BEDROOM: 2;NUMBER OF WINDOWS OPEN WHEN CHILD SLEEPS: 2;
NUMBER OF TIMES CHILD IS BATHED A WEEK: DailyCOMMENTS ON CHILD'S CLOTHING: A, A, A;SELF-HELP IN DRESSING, WASHING, TOILETING: Needs little supervision;CHILD'S DIET AT HOME:Breakfast: Fruit and cereal, milk, toast
Dinner: 2 vegetables, very little meat, bread, buttermilk

Lunch: Cereal or sandwich, milk dessert

2 quarts milk daily for family

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 09)
Consumption of Types of Food per Week.

Flour, meal, and other cereals: 2 loaves bread, 5/6 pound flour, 2 boxes cornmeal or 4 large box of oatmeal in winter;

Potatoes: 1/4 peck;

Dried peas, beans, and nuts: Few nuts, baked beans occasionally;

Tomatoes and citrus fruits: 2 pounds tomatoes, 1 can tomatoes;

Leafy, green, and yellow vegetables: 4 bunches carrots, 5 pounds rhubarb (in season), spinach and asparagus once a week, lettuce, celery daily;

Dried fruits: Some dried fruit but much more canned fruit;

Other vegetables and fruits: 1 1/2 dozen bananas;

Fats: 2 pounds butter;

Sugars: 2 pounds;

Lean meat, poultry and fish: 3 pounds meat, fish once a week, poultry once a month;

Eggs: 1 1/2 dozen;

Milk: 21 quarts (raw) milk;

COMMENTS:

NUTRITIONAL ANEMIA June 10, 1936

14.03 grams haemoglobin per 100 c.c. of blood

MEDICAL RECORD

EXAMINATION OF CHILD (Case 09)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 10 months, 15 days.

Bone Age (Penetration): 4 years. Advanced 2 months.

Epiphysial Rating (Centers): 2 years, 9 months. Retarded 1 year, 1 month.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 5

Scars on lower radius indicate a severe constitutional disturbance
4 to 5 months ago.

The Scorings on the radius indicate minor disturbances over a period
of 2 years and those on the femur about 6 months ago.

MUSCLE TONE

Foot: Arches Poor
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 09)

(1) Weight.....	<u>39 lb.</u>	(14) Cristal Breadth.....	<u>17.5 cms.</u>
(2) Standing Height.....	<u>102.1 cms</u>	(15) Trochanteric Breadth..	<u>21.1 "</u>
(3) Horizontal Height.....	<u>104.9 "</u>	(16) Transverse Chest.....	<u>14.3 "</u>
(4) Sitting Height.....	<u>54.1 "</u>	(17) Entire Arm Length.....	<u>40.4 "</u>
(5) Stem End.....	<u>57.9 "</u>	(18) Upper Arm Length.....	<u>19.85 "</u>
(6) Suprasternal Height...	<u>80.0 "</u>	(19) Forearm Length.....	<u>24.4 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>10.5 "</u>
(8) Tip of Acromion Height	<u>79.1 "</u>	(21) Chest Girth.....	<u>55.2 "</u>
(9) Cristal Height.....	<u>61.9 "</u>	(22) Head Length.....	<u>14.9 "</u>
(10) Anterior Iliac Spine Height.	<u>54.7 "</u>	(23) Head Breadth.....	<u>10.6 "</u>
(11) Knee Height.....	<u>26.8 "</u>	(24) Head Height.....	<u>6.8 "</u>
(12) Tibial Length.....	<u>25.7 "</u>	(25) Interpupillary Distance	<u>5.1 "</u>
(13) Acromial Breadth.....	<u>26.1 "</u>	(26) Suprasternum to Head Top.....	<u>21.8 "</u>
		(27) Head Circumference....	<u>54.6 Hairline</u> <u>51.4 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF
METHOD)

Measurement of June 10, 1936 ----- 33 cms.

Case Number: 010

Sex: Female

Birthday of Child: August 11, 1932

Date of Tests: June 10, 1936

Chronological Age at Time of Tests: 3 years, 9 months, 29 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 108

Haemoglobin - 10.70 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 28 cms.

Muscle Tone as Shown by Footprints - Good.

Details of this case are given on pages 103 to 109.

F A M I L Y (Case 010)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: FatherOCCUPATIONS OF WAGE EARNERS: MinisterMONEY INCOME: \$3300SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): NoneFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 010)

FATHER'S EDUCATION: **College Graduate**
MOTHER'S EDUCATION: **High School Graduate**

FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: **8**

FAMILY HOME

SIZE OF HOUSE: (Number of rooms **8**)
 1 point for each room up to 12 **8**.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition **7**.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader **9**.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points **10**.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points **5**.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points **5**.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points **5**.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points **3**.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points **8**.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points **9**.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points **10**.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points **5**.

POSSESSION OF GARDEN: - Maximum 5 points **4**.

TOTAL POINTS ON FAMILY HOME: **88**.

FAMILY RATING ON BASIS OF HOME: **A**.

C H I L D ' S H O M E C A R ECase Number: 010Sleeping Arrangements: Sleeps alone:Hours of Sleep at Home: 12;Time of Arising in Morning: 6:30 or 7:00 A.M.;Hours of Rest at Home: $\frac{1}{2}$ hours in the afternoon;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A,A,A;Self-Help in Dressing, Washing, Toileting: Helps herself;Child's Diet at Home: Typical Day's Dietary

Breakfast: Fruit, cereal, bacon, toast, milk.

Dinner: Meat or liver, salad, vegetable, bread and butter,
chocolate pudding or ice cream, milk.Supper: Fruit, sandwich or cereal, cocoa or cake or cone, milk.
She does not like oranges or potatoes.
She never eats between meals.Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIETFAMILY CONSUMPTION OF TYPES OF FOOD PER WEEKCASE NUMBER 010FLOUR, MEAL, AND OTHER CEREALS 2 pounds flour, 1 box cereal, $1\frac{1}{2}$ loaves of bread;POTATOES 5 pounds;DRIED PEAS, BEANS, AND NUTS 1 pound nuts;TOMATOES AND CITRUS FRUITS 1 can and 2 pounds tomatoes; 1 dozen oranges; 3 grapefruits;LEAFY, GREEN, AND YELLOW VEGETABLES 6 heads lettuce, 3 bunches celery, 3 bunches carrots, 1 can corn, 1 can string beans;DRIED FRUITS 1 pound prunes, 1 pound apricots;OTHER VEGETABLES AND FRUITS: 1 squash occasionally;FATS $\frac{3}{4}$ pound butter, $\frac{1}{2}$ pound crisco;SUGARS 3 pounds;LEAN MEAT, POULTRY AND FISH 7 pounds;EGGS 1 dozen;MILK 8 quarts;COMMENTS Milk for dinner, coffee for supper. No spinach, cakes and pies occasionally.

(Case 010)

PERCENTAGE HAEMOGLOBIN: June 10, 1936

10.70 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Protein reaction to whooping cough serum.
Reaction to eggs, milk and meat.
Cold symptoms and digestive upsets.

EXAMINATION OF CHILD (Case 010)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 9 months, 29 days.

Bone Age (Penetration): 3 years, 9 months. Satisfactory.

Epiphysial Rating (Centers): 3 years. Retarded 9 months.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 3

MUSCLE TONE

Foot: Arches Good
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 010)

(1) Weight.....	<u>39½ lbs.</u>	(14) Cristal Breadth.....	<u>18.5 cms.</u>
(2) Standing Height.....	<u>99.4 cms.</u>	(15) Trochanteric Breadth..	<u>20.6 "</u>
(3) Horizontal Height.....	<u>99.8 "</u>	(16) Transverse Chest.....	<u>15.6 "</u>
(4) Sitting Height.....	<u>52.5 "</u>	(17) Entire Arm Length.....	<u>40.2 "</u>
(5) Stem End.....	<u>56.1 "</u>	(18) Upper Arm Length.....	<u>18.8 "</u>
(6) Suprasternal Height...	<u>75.9 "</u>	(19) Forearm Length.....	<u>13.5 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>9.5 "</u>
(8) Tip of Acromion Height	<u>74.1 "</u>	(21) Chest Girth.....	<u>56.5 "</u>
(9) Cristal Height.....	<u>54.4 "</u>	(22) Head Length.....	<u>15.7 "</u>
(10) Anterior Iliac Spine Height.	<u>50.1 "</u>	(23) Head Breadth.....	<u>10.8 "</u>
(11) Knee Height.....	<u>27.9 "</u>	(24) Head Height.....	<u>30.6 "</u>
(12) Tibial Length.....	<u>23.9 "</u>	(25) Interpupillary Distance	<u>5.0 "</u>
(13) Acromial Breadth.....	<u>26.8 "</u>	(26) Suprasternum to Head Top.....	<u>22.1 "</u>
		(27) Head Circumference....	<u>48.9 Hairline</u> <u>48.9 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF
METHOD)

Measurement of June 10, 1936 ----- 28 cms.

Case Number: 011

Sex: Male

Birthday of Child: July 11, 1932

Date of Tests: June 10, 1936

Chronological Age at Time of Tests: 3 years, 10 months, 29 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 116

Haemoglobin - 12.63 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 40 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 111 to 117.

F A M I L Y (Case 011)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanNUMBER OF WAGE EARNERS IN FAMILY: F A M I L Y I N C O M E
One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$3470SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): NoneFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 011)FATHER'S EDUCATION: M.A.MOTHERS'S EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
 1 point for each room up to 12 7.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 93

FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 011Sleeping Arrangements: Sleeps alone:Hours of Sleep at Home: 11 hours;Time of Arising in Morning: 6:30 A.M.;Hours of Rest at Home: None;Number of Windows in Child's Bedroom: 1;Number of Windows Open When Child Sleeps: 1;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs little supervision;Child's Diet at Home:

Breakfast: Fruit, cereal, milk, toast occasionally.

Dinner: Meat, potato, vegetable, milk, dessert. Never any pastry.

Supper: Soup or main dish of vegetables, egg, salad, milk, dessert.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

In winter 2 teaspoonsful cod-liver oil daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 011)
Family Consumption of Types of Food per Week

Flour, meal, and other cereals: 2 loaves bread, 5 - 6 pounds cereals and flour for cereals, thickening, cakes, rolls, pastry, dark breads;

Potatoes: 4 pounds white potatoes,
2 pounds sweet potatoes;

Dried peas, beans, and nuts: 1/4 pound (except during winter);

Tomatoes and citrus fruits: In season - 1 - 1/2 pounds tomatoes daily, 8 - 10 citrus fruits (more during other seasons when tomatoes are not in the garden);

Leafy, green, and yellow vegetables: 7 pounds green and yellow vegetables;
2 heads lettuce;

Dried fruits: In winter - 1/2 pound prunes, Very few in the Fall;

Other vegetables and fruits: 2 pounds additional vegetables, 2 - 3 pounds apples, pears, peaches;

Fats: 2 pounds butter, 1 - 1 1/2 pounds lard, mazola, bacon;

Sugars: 4 pounds;

Lean meat, poultry and fish: 5 pounds;

Eggs: 2 1/2 dozens;

Milk: 17 - 20 quarts;

COMMENTS: 1/2 - 1 pound cheese;
This child does not eat 1/4 of the food used during the week but has this variety of food with emphasis on milk, fruits, vegetables and eggs.

(Case 011)

PERCENTAGE HAEMOGLOBIN: June 10, 1936

12.63 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight at birth $8\frac{1}{2}$ pounds.

Mild case of scarlet fever in December 1935.

Has about 4 colds a year.

Had had whooping cough.

Had diptheria inoculation.

EXAMINATION OF CHILD (Case 011)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 10 months, 29 days.

Bone Age (Penetration): 3 years, 2 months. Retarded 8 months.

Epiphysial Rating: 3 years, 7 months. Retarded 3 months.

Number of epiphysial centers
missing for ossific center age: 4

Number of epiphysial centers
missing for chronological age: 7

Scars on the lower femur and radius indicate severe constitutional disturbances the past year and also six months ago. The scoring on the radius and tibia are signs of minor illness the past year and a half.

MUSCLE TONE

Foot: Arches
Toes Medium

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I.

ANTHROPOMETRIC RECORD (Case 011)

(1) Weight.....	<u>38½ lbs.</u>	(14) Cristal Breadth.....	<u>18.4 cms.</u>
(2) Standing Height.....	<u>101.7 cms</u>	(15) Trochanteric Breadth..	<u>19.7 "</u>
(3) Horizontal Height.....	<u>103.8 "</u>	(16) Transverse Chest.....	<u>13.5 "</u>
(4) Sitting Height.....	<u>54.3 "</u>	(17) Entire Arm Length.....	<u>40.5 "</u>
(5) Stem End.....	<u>59.4 "</u>	(18) Upper Arm Length.....	<u>17.85 "</u>
(6) Suprasternal Height...	<u>78.2 "</u>	(19) Forearm Length.....	<u>16.6 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>11 "</u>
(8) Tip of Acromion Height	<u>75.1 "</u>	(21) Chest Girth.....	<u>54.6 "</u>
(9) Cristal Height.....	<u>58.5 "</u>	(22) Head Length.....	<u>17.1 "</u>
(10) Anterior Iliac Spine Height.	<u>12.7 "</u>	(23) Head Breadth.....	<u>10.8 "</u>
(11) Knee Height.....	<u>26.9 "</u>	(24) Head Height.....	<u>6.3 "</u>
(12) Tibial Length.....	<u>24.5 "</u>	(25) Interpupillary Distance	<u>5.1 "</u>
(13) Acromial Breadth.....	<u>25.8 "</u>	(26) Suprasternum to Head Top.....	<u>22.3 "</u>
		(27) Head Circumference....	<u>52.7 Hairline</u> <u>53.3 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 10, 1936 ----- 40 cms.

Case Number: 013

Sex: Female

Birthday of Child: October 6, 1932

Date of Tests: June 19, 1936

Chronological Age at Time of Tests: 3 years, 8 months, 13 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 124.

Haemoglobin - 8.42 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 40 cms.

Details of this case are given on pages 119 to 125.

F A M I L Y (Case 013)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College Administration and teachingMONEY INCOME: \$3600SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): None reportedFAMILY RATING ON BASIS OF INCOME: B2

FAMILY EDUCATION (Case 013)FATHER'S EDUCATION: Ph. D.MOTHERS'S EDUCATION: B.S.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOMESIZE OF HOUSE: (Number of rooms 8)
1 point for each room up to 12 8.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children - 4 points _____.

Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.POSSESSION OF GARDEN: - Maximum 5 points 5.TOTAL POINTS ON FAMILY HOME: 94FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 013Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: $12\frac{1}{2}$ hours;Time of Arising in Morning: 6:30 A.M;Hours of Rest at Home: 1 - $1\frac{1}{2}$ hours;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 1 (or ventilated from the hall);Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Helps herself;Child's Diet at Home:

Breakfast: Fruit, milk, cooked cereal.

Dinner: Meat (occasionally omelet or scrambled egg), Potatoes (rice or macaroni substituted several times a month), Salad or cooked vegetable, Dessert - Custard, fruit, cookies or cake.

Supper: Fruit, milk, macaroni or rice.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIETFAMILY CONSUMPTION OF TYPES OF FOOD PER WEEKCASE NUMBER 013

FLOUR, MEAL, AND OTHER CEREALS Wheat flour in bread and rolls, served each meal, very small quantity eaten, oatmeal or Ralston's whole wheat for breakfast;

POTATOES Once a day;

DRIED PEAS, BEANS, AND NUTS Beans three times a week during the winter;

TOMATOES AND CITRUS FRUITS 7 quarts orange juice during Fall, Winter and Spring; 1 1/4 quarts tomatoes from October to July 1; fresh tomatoes daily during Summer;

LEAFY, GREEN, AND YELLOW VEGETABLES Once daily; frequently twice a day;

DRIED FRUITS Figs, prunes and apricots;

OTHER VEGETABLES AND FRUITS Peas, beans, celery, carrots, asparagus, squash, bananas, cherries, raspberries, peaches, pineapple, cantaloupe, grapefruit, apples;

FATS 2 pounds butter, little Crisco;

SUGARS 3 1/8 pounds;

LEAN MEAT, POULTRY, AND FISH 7 pounds;

EGGS 3 dozens;

MILK 21 quarts, 1 quart cream;

COMMENTS _____

(Case 013)

PERCENTAGE HAEMOGLOBIN: June 19, 1936

10.10 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Birth normal.

Full term baby.

No diseases.

Has had toxin anti-toxin and diptheria serums.

Had trouble with wetting the bed.

EXAMINATION OF CHILD (Case 013).

EVALUATION OF X-RAYS

Chronological Age: 3 years, 8 months, 13 days.

Bone Age (Penetration): 3 years, 8 months. O.K.

Epiphysial Rating (Centers): 3 years, 2 months. Retarded 6 months.

Number of epiphysial centers
missing for ossific center age: 1

Number of ossific centers missing for chronological age: 1

MUSCLE TONE

Foot: Arches
Toes Medium

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 013)

(1) Weight.....	<u>36 lbs.</u>	(14) Cristal Breadth.....	<u>15.8 cms.</u>
(2) Standing Height.....	<u>103.5 cms.</u>	(15) Trochanteric Breadth..	<u>19 "</u>
(3) Horizontal Height.....	<u>106 "</u>	(16) Transverse Chest.....	<u>13.5 "</u>
(4) Sitting Height.....	<u>54.3 "</u>	(17) Entire Arm Length.....	<u>41.1 "</u>
(5) Stem End.....	<u>59.6 "</u>	(18) Upper Arm Length.....	<u>16.2 "</u>
(6) Suprasternal Height...	<u>79.3 "</u>	(19) Forearm Length.....	<u>14.4 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>11 "</u>
(8) Tip of Acromion Height	<u>78 "</u>	(21) Chest Girth.....	<u>52.7 "</u>
(9) Cristal Height.....	<u>57.6 "</u>	(22) Head Length.....	<u>15.6 "</u>
(10) Anterior Iliac Spine Height.	<u>53.9 "</u>	(23) Head Breadth.....	<u>10.5 "</u>
(11) Knee Height.....	<u>27.3 "</u>	(24) Head Height.....	<u>7.65 "</u>
(12) Tibial Length.....	<u>23.8 "</u>	(25) Interpupillary Distance	<u>5.2 "</u>
(13) Acromial Breadth.....	<u>25. "</u>	(26) Suprasternum to Head Top.....	<u>22 "</u>
		(27) Head Circumference....	<u>51.1 Hair line</u> <u>51.1 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 19, 1936 ----- 40 cms.

Case Number: 014

Sex: Female

Birthday of Child: April 25, 1932

Date of Tests: June 19, 1936

Chronological Age at Time of Tests: 4 years, 1 month, 24 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | A ₃ |
| (2) <u>Parents' Education</u> | B |
| (3) <u>Physical Home</u> | B |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 132

Haemoglobin - 7.89 grams of haemoglobin per 100 c.c. of blood.

Capillary Wall Strength - 40 cms.

Muscle Tone as Shown by Footprints - Good

Details of this case are given on pages 127 to 133.

F A M I L Y (Case 014)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: American

F A M I L Y I N C O M E

NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)
OCCUPATIONS OF WAGE EARNERS: BusinessMONEY INCOME: About \$5000SOURCES OF MONEY INCOME: Commission in business,
StocksADDITIONAL INCOME (Gifts, Charity, etc.): Investments
HomeFAMILY RATING ON BASIS OF INCOME: A₃

FAMILY EDUCATION (Case 014)FATHER'S EDUCATION: **Four year technical course**MOTHERS'S EDUCATION: **One year college**FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: **B**FAMILY HOMESIZE OF HOUSE: (Number of rooms 8)
1 point for each room up to 12 8.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 6.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 5.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.

Sleeps with one other child - 7 points _____.

Sleeps with one adult - 6 points _____.

Sleeps with two other children - 4 points _____.

Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 8.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.POSSESSION OF GARDEN: - Maximum 5 points 0.TOTAL POINTS ON FAMILY HOME: 80FAMILY RATING ON BASIS OF HOME: B.

C H I L D ' S H O M E C A R ECase Number: 014Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12 hours;Time of Arising in Morning: 7:00 A.M;Hours of Rest at Home: Very little;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Helps herself except for toileting;Child's Diet at Home:

Breakfast: Prune or tomato juice, cocoa, cereal, toast.

Dinner: Meat, potato, vegetable, $\frac{1}{4}$ slice bread, pudding, milk.

Supper: Soup, sandwich, fruit, milk.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

Patch's cod-liver oil twice a day in winter,

Sun lamp one winter.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 014)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: 7 loaves bread, 1 pound flour, $\frac{1}{2}$ box cooked cereal, 1 box prepared cereal;

Potatoes: 1/2 peck;

Dried peas, beans, and nuts: 1/4 pound nuts, Do not use dried peas or beans;

Tomatoes and citrus fruits: 3 pounds tomatoes (more in summer), 3 dozen oranges;

Leafy, green, and yellow vegetables: 2 pounds cabbage, 1 pound spinach, 2 pounds peas, 1 $\frac{1}{2}$ pounds carrots, 1 pound string beans, 2 heads lettuce;

Dried fruits: None;

Other vegetables and fruits: Beets every other week;

Fats: 4 pounds butter;

Sugars: 2 $\frac{1}{2}$ pounds;

Lean meat, poultry and fish: 6 pounds;

Eggs: 2 dozens;

Milk: 21 quarts (certified);

COMMENTS:

(Case 014)

PERCENTAGE HAEMOGLOBIN:

June 19, 1936

6.42 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Full term baby.
Weight 6½ pounds.
Whooping cough.
Some bronchitis.
Had diptheria serum.

EXAMINATION OF CHILD (Case 014)

EVALUATION OF X-RAYS

Chronological Age: 4 years, 1 month, 24 days.

Bone Age (Penetration): 4 years, 6 months. Advanced 5 months.

Epiphysial Rating (Centers): 4-6 certainly and perhaps 5+.
slightly patchy.

Number of epiphysial centers missing for ossific center age: 1

Number of epiphysial centers missing for chronological age: 1

MUSCLE TONE

Foot: Arches Good
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 014)

(1) Weight.....	<u>38 lbs.</u>	(14) Cristal Breadth.....	<u>16.8 cms.</u>
(2) Standing Height.....	<u>103.5 cms</u>	(15) Trochanteric Breadth..	<u>19.9 "</u>
(3) Horizontal Height.....	<u>107.3 "</u>	(16) Transverse Chest.....	<u>11.9 "</u>
(4) Sitting Height.....	<u>53.1 "</u>	(17) Entire Arm Length.....	<u>41.5 "</u>
(5) Stem End.....	<u>59.5 "</u>	(18) Upper Arm Length.....	<u>16.6 "</u>
(6) Suprasternal Height...	<u>82.2 "</u>	(19) Forearm Length.....	<u>14.1 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>10.3 "</u>
(8) Tip of Acromion Height	<u>80.4 "</u>	(21) Chest Girth.....	<u>54.0 "</u>
(9) Cristal Height.....	<u>62.7 "</u>	(22) Head Length.....	<u>16.2 "</u>
(10) Anterior Iliac Spine Height.	<u>58.5 "</u>	(23) Head Breadth.....	<u>10.1 "</u>
(11) Knee Height.....	<u>29.5 "</u>	(24) Head Height.....	<u>7.95 "</u>
(12) Tibial Length.....	<u>25.4 "</u>	(25) Interpupillary Distance	<u>4.9 "</u>
(13) Acromial Breadth.....	<u>29.3 "</u>	(26) Suprasternum to Head Top.....	<u>22.5 "</u>
		(27) Head Circumference....	<u>49.5 Hairline</u> <u>51.4 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 19, 1936 ----- 40 cms.

Case Number: 015

Sex: Female

Birthday of Child: June 10, 1933

Date of Tests: June 20, 1936

Chronological Age at Time of Tests: 3 years, 0 months, 10 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 140

Haemoglobin - 7.89 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 63 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 135 to 141.

F A M I L Y (Case 015)ADULTS: TwoCHILDREN: OneMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: Assistant administrator in college officeMONEY INCOME: \$3300SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): Part time workFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 015)FATHER'S EDUCATION: A.B.MOTHERS'S EDUCATION: A.B.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 8.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 0.

TOTAL POINTS ON FAMILY HOME: 87

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R E

Case Number: 015

Sleeping Arrangements: Sleeps alone;

Hours of Sleep at Home: 12 hours;

Time of Arising in Morning: 8:00 A.M.;

Hours of Rest at Home: 2 - 2½ hours;

Number of Windows in Child's Bedroom: 2;

Number of Windows Open When Child Sleeps: 2;

Number of Times Child is Bathed a Week: Daily;

Comments on Child's Clothing: A, A, A;

Self-Help in Dressing, Washing, Toileting: Needs little supervision;

Child's Diet at Home:

Breakfast: Cereal, orange juice, toast, milk or ovaltine.

Lunch: Soup, vegetable, milk.

Dinner: Meat, vegetable, whole wheat bread, milk, pudding.
Candy after dinner.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

Takes cod-liver oil, viosterol and ABDG tablets. One teaspoonful daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 015)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: 7 loaves bread, 2 pounds flour, 2 cups cereal;

Potatoes: 5 pounds;

Dried peas, beans, and nuts: Very little;

Tomatoes and citrus fruits: 3 pounds tomatoes, 2 dozens oranges, 2 grapefruits;

Leafy, green, and yellow vegetables: 1 pound spinach, 1 head lettuce, 1 head cabbage, 1 pound green beans, celery, corn, lima beans;

Dried fruits: 1 pound prunes;

Other vegetables and fruits: 1 bunch beets, 1 bunch carrots, squash, egg plant;

Fats: $3\frac{1}{2}$ pounds butter, $\frac{1}{3}$ pound lard;

Sugars: 5 pounds granulated sugar, $\frac{1}{2}$ pound brown sugar, $\frac{1}{2}$ pound cane sugar;

Lean meat, poultry and fish: 1 chicken, $1\frac{1}{2}$ pounds steak, 6 lamb chops;

Eggs: $1\frac{1}{2}$ dozen;

Milk: 7 quarts milk, $3\frac{1}{2}$ quarts cream;

COMMENTS:

(Case 015)

PERCENTAGE HAEMOGLOBIN: June 20, 1936

7.89 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.
Weight 8 pounds 4 ounces.
No diseases.
Colds in winter.
Had diptheria serum.

EXAMINATION OF CHILD (Case 015)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 0 months, 10 days

Bone Age (Penetration): 3 years, 7 months. Advanced 7 months.

Epiphysial Rating (Centers): 2 years, 9 months. Retarded 3 months.

Number of epiphysial centers
missing for ossific center age: 5

Number of epiphysial centers
missing for chronological age: 7

MUSCLE TONE

Foot: Arches Medium
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 015)

(1) Weight.....	<u>33 lbs.</u>	(14) Cristal Breadth.....	<u>15.3 cms.</u>
(2) Standing Height.....	<u>97.4 cms.</u>	(15) Trochanteric Breadth..	<u>17.1 "</u>
(3) Horizontal Height.....	<u>98.5 "</u>	(16) Transverse Chest.....	<u>11.4 "</u>
(4) Sitting Height.....	<u>51.0 "</u>	(17) Entire Arm Length.....	<u>40.7 "</u>
(5) Stem End.....	<u>56.5 "</u>	(18) Upper Arm Length.....	<u>14.5 "</u>
(6) Suprasternal Height...	<u>75.0 "</u>	(19) Forearm Length.....	<u>14.2 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>11.1 "</u>
(8) Tip of Acromion Height	<u>77.4 "</u>	(21) Chest Girth.....	<u>53.0 "</u>
(9) Cristal Height.....	<u>59.1 "</u>	(22) Head Length.....	<u>14.6 "</u>
(10) Anterior Iliac Spine Height.	<u>52.1 "</u>	(23) Head Breadth.....	<u>9.9 "</u>
(11) Knee Height.....	<u>25.5 "</u>	(24) Head Height.....	<u>7.9 "</u>
(12) Tibial Length.....	<u>20.1 "</u>	(25) Interpupillary Distance	<u>5.5 "</u>
(13) Acromial Breadth.....	<u>22.0 "</u>	(26) Suprasternum to Head Top.....	<u>19.0 "</u>
		(27) Head Circumference....	<u>49.5 Hairline</u> <u>49.2 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 22, 1936 ----- 63 cms.

Case Number: 016

Sex: Female

Birthday of Child: May 9, 1932

Date of Tests: June 19, 1936

Chronological Age at Time of Tests: 4 years, 1 month, 10 days

Family Rating on Basis of:

- (1) Income B₁
- (2) Parents' Education A
- (3) Physical Home A

Summary of Nutritional Status:

Body Build - About 15 per cent underweight for height and width.

Bone Status - See page 148

Hæmoglobin - 9.71 grams of hæmoglobin per 100 c.c. of blood

Capillary Wall Strength - 42 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 143 to 149.

F A M I L Y (Case 016)ADULTS: TwoCHILDREN: OneMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$4375SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): None reportedFAMILY RATING ON BASIS OF INCOME: B₁

FAMILY EDUCATION (Case 016)FATHER'S EDUCATION: Ph. D.MOTHERS' EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 96

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R ECase Number: 016Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12 hours;Time of Arising in Morning: 7:00 A.M;Hours of Rest at Home: 2;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 1;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs supervision;Child's Diet at Home:

Breakfast: Fruit juice (orange), cereal (puffed wheat, rice crispies), toast, jelly, cocoamalt.

Dinner: Potato, 2 vegetables, pudding or milk dessert, ice cream, cake, bread, butter, milk.

Lunch: Soup or macaroni and cheese or always a salad and a dessert, cocoa, or milk.

Cod-Liver Oil or Other Rich Sources of Vitamin D:2 teaspoonsful cod-liver oil daily since she was born.
Had cod-liver oil with viosterol and some haliver oil.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 016)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: 4 loaves white bread, 1 pound flour, cereals;

Potatoes: 1/2 peck;

Dried peas, beans, and nuts: 1/3 pound peas (Winter), 1 pound beans, 1/2 pound nuts

Tomatoes and citrus fruits: Winter - 1 quart tomatoes, 1 1/2 dozen oranges, 2 grapefruit, Summer - 1/2 dozen lemons, 1/2 dozen oranges;

Leafy, green, and yellow vegetables: 3 pounds weekly in Spring and Summer;

Dried fruits: 1 pound apricots and prunes, dates and raisins;

Other vegetables and fruits: 5 pounds - beets, melons, apples, bananas, rhubarb, pineapple;

Fats: 1 1/2 pounds butter, 1/2 pound crisco or bacon fat;

Sugars: 2 1/2 or 3 pounds granulated sugar, 1/2 pound brown sugar;

Lean meat, poultry and fish: 4 pounds;

Eggs: 1 dozen;

Milk: 17 1/2 quarts;

COMMENTS:

(Case 016)

PERCENTAGE HAEMOGLOBIN:

June 19, 1936

9.71 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Caesarian birth.

Premature birth - 5 weeks.

Weight 5 pounds - 12 ounces.

Second month - gastro-intestinal disturbance.

First year - raw milk caused her sickness.

Upset stomach precedes colds.

Tonsils and adenoids removed in Spring 1936.

Had whooping cough serum and diphtheria toxoid.

EXAMINATION OF CHILD (Case 016)

EVALUATION OF X-RAYS

Chronological Age: 4 years, 1 month, 10 days.

Bone Age (Penetration): 4 years, 3 months. Advanced 2 months.

Epiphysial Rating (Centers): 5+. Well-filled in to third year except some minor centers.

Number of epiphysial centers missing for ossific center age: 4

Number of epiphysial centers missing for chronological age: 3

MUSCLE TONE

Foot: Arches
Toes Medium

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 016)

(1) Weight.....	<u>38$\frac{3}{4}$ lbs.</u>	(14) Cristal Breadth.....	<u>15.9 cms.</u>
(2) Standing Height.....	<u>107.5 cms.</u>	(15) Trochanteric Breadth..	<u>18.8 "</u>
(3) Horizontal Height.....	<u>109.2 "</u>	(16) Transverse Chest.....	<u>13.6 "</u>
(4) Sitting Height.....	<u>53.1 "</u>	(17) Entire Arm Length.....	<u>44.7 "</u>
(5) Stem End.....	<u>60.7 "</u>	(18) Upper Arm Length.....	<u>17.3 "</u>
(6) Suprasternal Height...	<u>83.9 "</u>	(19) Forearm Length.....	<u>15.6 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>12 "</u>
(8) Tip of Acromion Height	<u>81.7 "</u>	(21) Chest Girth.....	<u>55.6 "</u>
(9) Cristal Height.....	<u>61.6 "</u>	(22) Head Length.....	<u>16 "</u>
(10) Anterior Iliac Spine Height.	<u>54.8 "</u>	(23) Head Breadth.....	<u>10.1 "</u>
(11) Knee Height.....	<u>28.7 "</u>	(24) Head Height.....	<u>7.8 "</u>
(12) Tibial Length.....	<u>26 "</u>	(25) Interpupillary Distance	<u>5 "</u>
(13) Acromial Breadth.....	<u>25.1 "</u>	(26) Suprasternum to Head Top.....	<u>22.6 "</u>
		(27) Head Circumference....	<u>51.1 Hairline</u> <u>49.8 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 19, 1936 ----- 42 cms.

Case Number: 017

Sex: Male

Birthday of Child: July 2, 1932

Date of Tests: June 20, 1936

Chronological Age at Time of Tests: 3 years, 11 months, 18 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 156

Haemoglobin - 10.70 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 40 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 151 to 517.

F A M I L Y (Case 017)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$3100SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): Room rentFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 017)FATHER'S EDUCATION: M.S.MOTHERS'S EDUCATION: A.B.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOMESIZE OF HOUSE: (Number of rooms 8)
1 point for each room up to 12 8.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 9.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 4.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.
Sleeps with one other child - 7 points _____.
Sleeps with one adult - 6 points _____.
Sleeps with two other children - 4 points _____.
Sleeps with three other children - 1 point _____.EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.POSSESSION OF GARDEN: - Maximum 5 points 5.TOTAL POINTS ON FAMILY HOME: 92FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R ECase Number: 017Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12½ hours;Time of Arising in Morning: 8:00 A.M.;Hours of Rest at Home: Very little;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs little supervision;Child's Diet at Home:

Breakfast: Orange or tomato juice, cereal, toast, bacon, small glass milk.

Dinner: Baked potato, vegetable, meat (4 times a week), custard or fruit dessert, cookie, milk.

Lunch: Cereal, egg or soup, fruit, milk, sometimes dessert, bread, butter or toast.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 017)
 Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: $2\frac{1}{2}$ pounds flour, 1 box shredded wheat, about 6 loaves bread, $\frac{1}{2}$ box (large) rolled oats or whole wheat cereal;

Potatoes: 4 pounds;

Dried peas, beans, and nuts: $\frac{1}{2}$ - 1 pound nuts, dried lima beans or baked beans occasionally;

Tomatoes and citrus fruits: 3 dozen oranges, tomatoes (juice, soup, canned or raw twice a week), 2 grapefruits;

Leafy, green, and yellow vegetables: 1 - 2 heads lettuce, 1 - 2 pounds spinach, 1 stalk celery, 1 bunch carrots, 1 can or 2 pounds peas (fresh), 1 can or 1 pound green beans, 1 can or 1 pound asparagus;

Dried fruits: 1 pound;

Other vegetables and fruits: 1 - 2 dozen bananas, cauliflower or beets once a week, apple sauce daily, 2 - 4 cans fruit or quarts of berries;

Fats: $2\frac{3}{4}$ pounds butter, less than $\frac{1}{2}$ pound of other fats;

Sugars: 2 pounds granulated sugar, 2 pounds brown sugar;

Lean meat, poultry and fish: 1 pound bacon, 3 - 4 pounds beef or 1 chicken, lamb chops, liver, fish once a week, $\frac{1}{2}$ pound cheese (cream and cottage);

Eggs: $1\frac{1}{2}$ dozens;

Milk: 20 quarts, 1 pint cream;

COMMENTS: Father away 4 days in the week.

(Case 017)

PERCENTAGE HAEMOGLOBIN:

June 20, 1936

10.70 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.
Weight 7 pounds 13 ounces.
Had tonsils removed.
Had measles.
Received diphtheria serum.
No other illnesses.

EXAMINATION OF CHILD (Case 017)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 11 months, 18 days.

Bone Age (Penetration): 4 years, 7 months; Advanced 4 months.

Epiphysial Rating (Centers): 3 years, 10 months. Retarded 1 month.
Well filled in.

Number of Epiphysial Centers missing for ossific center age: 0

Number of Epiphysial Centers missing for chronological age: 0

There are many scorings over a period of 2 years, indicating many minor upsets.

Scar seems to appear on the lower radius at $2\frac{1}{2}$ m.m., which means that there has been a severe illness the past three months.

MUSCLE TONE

Foot: Arches Medium
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 017)

(1) Weight.....	<u>34½ lbs.</u>	(14) Cristal Breadth.....	<u>17.2 cms.</u>
(2) Standing Height.....	<u>104.5 cms.</u>	(15) Trochanteric Breadth..	<u>18.1 "</u>
(3) Horizontal Height.....	<u>106.0 "</u>	(16) Transverse Chest.....	<u>13.1 "</u>
(4) Sitting Height.....	<u>55.2 "</u>	(17) Entire Arm Length.....	<u>47.4 "</u>
(5) Stem End.....	<u>60.8 "</u>	(18) Upper Arm Length.....	<u>19 "</u>
(6) Suprasternal Height...	<u>79.8 "</u>	(19) Forearm Length.....	<u>15.8 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>11.8 "</u>
(8) Tip of Acromion Height	<u>78.8 "</u>	(21) Chest Girth.....	<u>51.1 "</u>
(9) Cristal Height.....	<u>59 "</u>	(22) Head Length.....	<u>16.1 "</u>
(10) Anterior Iliac Spine Height.	<u>56.2 "</u>	(23) Head Breadth.....	<u>10.6 "</u>
(11) Knee Height.....	<u>27.6 "</u>	(24) Head Height.....	<u>7.0 "</u>
(12) Tibial Length.....	<u>24.3 "</u>	(25) Interpupillary Distance	<u>4.95 "</u>
(13) Acromial Breadth.....	<u>25.4 "</u>	(26) Suprasternum to Head Top.....	<u>24.3 "</u>
		(27) Head Circumference....	<u>50.8 Hairline</u> <u>51.1 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 22, 1936 ----- 40 cms.

Case Number: 018

Sex: Male

Birthday of Child: March 3, 1933

Date of Tests: June 20, 1936

Chronological Age at Time of Tests: 3 years, 3 months, 17 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₁ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | B |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 164

Haemoglobin - 12.95 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 37 cms.

Muscle Tone as Shown by Footprints - Poor

Details of this case are given on pages 159 to 165.

F A M I L Y (Case 018)ADULTS: TwoCHILDREN: ThreeMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: American

F A M I L Y I N C O M E

NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)
OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$4000SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): Investments
HomeFAMILY RATING ON BASIS OF INCOME: B₁

FAMILY EDUCATION (Case 018)FATHER'S EDUCATION: M. S.MOTHERS'S EDUCATION: B. S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 6.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 4.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points ____.
 Sleeps with one adult - 6 points ____.
 Sleeps with two other children - 4 points ____.
 Sleeps with three other children - 1 point ____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 8.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 84

FAMILY RATING ON BASIS OF HOME: B.

C H I L D ' S H O M E C A R ECase Number: 018Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12½ hours;Time of Arising in Morning: 7:30 A.M.;Hours of Rest at Home: 1½ - 2 hours;

Goes to bed later when he rests;

Number of Windows in Child's Bedroom: 3;Number of Windows Open When Child Sleeps: 3 in summer, 2 in winter;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs some supervision;Child's Diet at Home:Breakfast: Fruit Juice, cereal, cantaloupe (in season, milk, toast, sometimes egg and bacon.Dinner: Meat (Beef, chicken or lamb), or fish, some potato, 2 vegetables, whole wheat or white bread, milk, dessert (Jello, plain fruit, ice cream).Supper: Soup or broth, crackers, ovaltine, chocolate milk or cocoa, fruit. Candy after meals, sometimes during the day.Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 018)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: $2\frac{1}{2}$ pounds flour, 6 loaves white bread, 3 whole wheat bread, 2 boxes prepared cereal;

Potatoes: 1 peck;

Dried peas, beans, and nuts: $\frac{1}{2}$ pound peanut butter, In Winter - 1 pound shelled nuts;

Tomatoes and citrus fruits: 7 quarts tomato juice, 6 dozen oranges, lemons, grapefruit;

Leafy, green, and yellow vegetables: 4 - 6 pounds beans, 2 bunches carrots, 4 bunches celery, 5 heads ice berg lettuce in winter - 2 pounds garden lettuce in summer;

Dried fruits: 1 pound prunes, $\frac{1}{2}$ pound apricots, 2 pounds dates;

Other vegetables and fruits: Yellow corn, lima beans, broccoli, cantaloupe, grapes, peaches, plums, cherries;

Fats: 4-6 pounds butter, $\frac{1}{2}$ pound crisco, $\frac{1}{8}$ pound bacon fat;

Sugars: 3 pounds granulated sugar, occasionally - maple syrup, karo, molasses, honey;

Lean meat, poultry and fish: 6 pounds beef and lamb, $1\frac{1}{2}$ pounds fish, $1\frac{1}{2}$ - 2 pounds chicken;

Eggs: 3 dozen;

Milk: 35 quarts;

COMMENTS: Generally an extra adult. Also use ice cream, jello, junket. Sweetbreads once a month, liver once a week. Children drink ovaltine, cocomalt and chocolate milk. Use rice and macaroni.

(Case 018)

PERCENTAGE HAEMOGLOBIN: August 14, 1936

12.95 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Full term baby.

Normal birth.

Weight 8 pounds 5 ounces.

First year was hard - many colds.

Had chicken pox.

Has had serums for pneumonia, diphtheria and whooping cough.

EXAMINATION OF CHILD (Case 018)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 3 months, 17 days.

Bone Age (Penetration): 3 years, 7 months. Advanced 4 months.

Epiphysial Rating (Centers): 3 years, 8 months. Advanced 5 months.

Number of epiphysial centers missing for ossific center age: 2

Number of epiphysial centers missing for chronological age: 1

Scorings on lower radius and tibia are indications of minor disturbances about 13 months ago.

MUSCLE TONE

Foot: Arches Poor
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I.

ANTHROPOMETRIC RECORD (Case 018)

- | | | | |
|--------------------------------------|------------------|---------------------------------------|--|
| (1) Weight..... | <u>33 lbs.</u> | (14) Cristal Breadth..... | <u>16.9 cms.</u> |
| (2) Standing Height..... | <u>95.4 cms.</u> | (15) Trochanteric Breadth.. | <u>19.4 "</u> |
| (3) Horizontal Height..... | <u>99.7 "</u> | (16) Transverse Chest..... | <u>14.3 "</u> |
| (4) Sitting Height..... | <u>51.9 "</u> | (17) Entire Arm Length..... | <u>39.8 "</u> |
| (5) Stem End..... | <u>55.0 "</u> | (18) Upper Arm Length..... | <u>14.9 "</u> |
| (6) Suprasternal Height... | <u>72.6 "</u> | (19) Forearm Length..... | <u>15.5 "</u> |
| (7) Symphision Height..... | _____ | (20) Hand Length..... | <u>10.8 "</u> |
| (8) Tip of Acromion Height | <u>72.7 "</u> | (21) Chest Girth..... | <u>54.0 "</u> |
| (9) Cristal Height..... | <u>56.6 "</u> | (22) Head Length..... | <u>16.0 "</u> |
| (10) Anterior Iliac
Spine Height. | <u>51.0 "</u> | (23) Head Breadth..... | <u>10.3 "</u> |
| (11) Knee Height..... | <u>26.7 "</u> | (24) Head Height..... | <u>7.3 "</u> |
| (12) Tibial Length..... | <u>22.6 "</u> | (25) Interpupillary Distance | <u>4.5 "</u> |
| (13) Acromial Breadth..... | <u>25.3 "</u> | (26) Suprasternum to Head
Top..... | <u>23.2 "</u> |
| | | (27) Head Circumference.... | <u>50.8 Hairline</u>
<u>52.1 Headline</u> |

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 23, 1936 ----- 37 cms.

Case Number: 019

Sex: Male

Birthday of Child: July 13, 1933

Date of Tests: July 13, 1936

Chronological Age at Time of Tests: 3 years

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | C ₁ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width.

Bone Status - See page 172

Haemoglobin - 9.71 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 35 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 167 to 173.

F A M I L Y (Case 019)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanNUMBER OF WAGE EARNERS IN FAMILY: F A M I L Y I N C O M E
One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$2300 - 2400SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): Additional teaching
Home
InsuranceFAMILY RATING ON BASIS OF INCOME: C₁

FAMILY EDUCATION (Case 019)FATHER'S EDUCATION: M. S.MOTHERS'S EDUCATION:FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 7.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 4.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 9.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 87

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R E

Case Number: 019

Sleeping Arrangements: Sleeps alone;

Hours of Sleep at Home: 12 hours;

Time of Arising in Morning: 6:30 - 7:30 A.M;

Hours of Rest at Home: 3;

Number of Windows in Child's Bedroom: 2;

Number of Windows Open When Child Sleeps: 2 in summer; neither in winter;

Number of Times Child is Bathed a Week: Daily;

Comments on Child's Clothing: A, A, A;

Self-Help in Dressing, Washing, Toileting: Needs some supervision;

Child's Diet at Home:

Breakfast: Orange juice, cereal, (occasionally milk, sugar bun or toast).

Lunch: Soup, sandwich, fruit dessert, salad or hot dish, milk.

Dinner: Meat, potsto, vegetable, milk, fruit dessert. Fond of fish.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

3 teaspoonsful of cod-liver oil daily.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 019)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: 1 pound flour, 3/4 pound cream of wheat,
 1/2 pound wheatena, 2 1/4 pounds oatmeal. In winter - hot cereal (wheat and oats),
 Summer - cold cereal (wheat);
Potatoes: 9 pounds;

Dried peas, beans, and nuts: 1/2 cup, 1/2 pound nuts, 1/2 cup beans, 1/2 can beans;

Tomatoes and citrus fruits: 1 pint orange juice in summer and 1 quart in
 winter, 5 pounds tomatoes (in season), 4 grapefruits (in season);

Leafy, green, and yellow vegetables: One hot vegetable a day, and one is soup
 or salad. More occasionally;

Dried fruits: 1/2 pound prunes, 1/2 pound apricots;

Other vegetables and fruits: Turnips once a month, mushrooms once a week, any
 fruit except citrus or dried;

Fats: 1 1/2 - 2 1/2 pounds butter, 1/2 pound crisco;

Sugars: 2 pounds;

Lean meat, poultry and fish: 7 pounds;

Eggs: 1 dozen;

Milk: 24 quarts;

COMMENTS: Cheese at least twice a week, 1/2 box spaghetti, 3/4 cup brown
 rice, 2 loaves white bread and 1 rye or whole wheat.

(Case 019)

PERCENTAGE HAEMOGLOBIN: July 13, 1936

9.71 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Weight 7 pounds 9 ounces.

Baby jaundice when one week.

Few winter colds the first year.

At 1½ years was severely burned with coffee, since then has had trouble with toilet habits and occasionally wets the bed. Before the burn he would run a very high temperature but now when he has a cold his temperature decreases.

Has respiratory condition.

Had colds last winter - 1935-36.

Was vaccinated in 1936.

Has trouble with a black tartar forming around his teeth.

Usually in good health and never needs a doctor.

Families of both parents are subject to colds.

EXAMINATION OF CHILD (Case 019)

EVALUATION OF X-RAYS

Chronological Age: 3 years.

Bone Age (Penetration): 2 years, 7 months. Retarded 5 months.

Epiphysial Rating (Centers): 2 years, 5 months. Retarded 7 months.
Patchy after 21 months.

Number of epiphysial centers missing for ossific center age: 5

Number of epiphysial centers missing for chronological age: 7

MUSCLE TONE

Foot: Arches Medium
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 019)

(1) Weight.....	<u>41. lbs.</u>	(14) Cristal Breadth.....	<u>19.5 cms.</u>
(2) Standing Height.....	<u>97.7 cms.</u>	(15) Trochanteric Breadth..	<u>20.3 "</u>
(3) Horizontal Height.....	<u>100.1 "</u>	(16) Transverse Chest.....	<u>14 "</u>
(4) Sitting Height.....	<u>55.8 "</u>	(17) Entire Arm Length.....	<u>42.7 "</u>
(5) Stem End.....	<u>59.6 "</u>	(18) Upper Arm Length.....	<u>17 "</u>
(6) Suprasternal Height...	<u>79.3 "</u>	(19) Forearm Length.....	<u>14.8 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>10.7 "</u>
(8) Tip of Acromion Height	<u>75.1 "</u>	(21) Chest Girth.....	<u>23.3 "</u>
(9) Cristal Height.....	<u>57.1 "</u>	(22) Head Length.....	<u>13.6 "</u>
(10) Anterior Iliac Spine Height.	<u>50.1 "</u>	(23) Head Breadth.....	<u>11.3 "</u>
(11) Knee Height.....	<u>27.5 "</u>	(24) Head Height.....	<u>8.1 "</u>
(12) Tibial Length.....	<u>24 "</u>	(25) Interpupillary Distance	<u>5.1 "</u>
(13) Acromial Breadth.....	<u>27 "</u>	(26) Suprasternum to Head Top.....	<u>21.9 "</u>
		(27) Head Circumference....	<u>50.8 Hairline</u> <u>49.2 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of July 14, 1936 ----- 35 cms.

Case Number: 020

Sex: Female

Birthday of Child: July 8, 1932

Date of Tests: June 20, 1936

Chronological Age at Time of Tests: 3 years, 11 months, 12 days

Family Rating on Basis of:

(1) Income A₃

(2) Parents' Education B

(3) Physical Home A

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 180

Haemoglobin - 8.42 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 60 cms.

Muscle Tone as Shown by Footprints - Poor

Details of this case are given on pages 175 to 181.

F A M I L Y (Case 020)ADULTS: TwoCHILDREN: ThreeMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M ENUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: Army officerMONEY INCOME: \$5600SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): Allowances
InvestmentsFAMILY RATING ON BASIS OF INCOME: A₃

FAMILY EDUCATION (Case 020)FATHER'S EDUCATION: Military AcademyMOTHERS'S EDUCATION: One year at CollegeFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: BFAMILY HOME

SIZE OF HOUSE: (Number of rooms 9)
 1 point for each room up to 12 9.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 5.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points ____.
 Sleeps with one adult - 6 points ____.
 Sleeps with two other children - 4 points ____.
 Sleeps with three other children - 1 point ____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 0.

TOTAL POINTS ON FAMILY HOME: 92

FAMILY RATING ON BASIS OF HOME: A.

CHILD'S HOME CARECase Number: 020Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12 hours;Time of Arising in Morning: 7:00 A.M.Hours of Rest at Home: None;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs some assistance;Child's Diet at Home:

Breakfast: Orange juice , Cereal, Toast, Milk.

Lunch: Egg, meat, or sandwich, soup, milk.

Dinner: Meat or substitute, potato, vegetable, dessert of fruit or custard, milk.
Candy after meals.Cod-Liver Oil or Other Rich Sources of Vitamin D:

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 020)
Family Consumption of Types of Food per Week

Flour, meal, and other cereals: 1 pound flour, 3 boxes cereal;

Potatoes: $\frac{1}{2}$ peck;

Dried peas, beans, and nuts: nuts occasionally;

Tomatoes and citrus fruits: 2 dozen tomatoes, 5 dozen oranges, $3\frac{1}{2}$ dozen lemons, tomato juice occasionally;

Leafy, green, and yellow vegetables: 20 pounds - string beans, peas, lima beans, beans, corns, 6 heads lettuce;

Dried fruits: 1 pound in winter;

Other vegetables and fruits: Apples, pears, peaches, broccoli, cauliflower;

Fats: 4 pounds butter, $1\frac{1}{2}$ pounds crisco;

Sugars: 5 pounds ; Brown sugar occasionally;

Lean meat, poultry and fish: 16 pounds (poultry included), fish once a week;

Eggs: $3\frac{1}{2}$ dozens;

Milk: 28 quarts;

COMMENTS: Child given meat with the family. She does not like spinach and does not eat it.
 Family does not care for carrots, beets, or squash.

(Case 020)

PERCENTAGE HAEMOGLOBIN:

June 20, 1936

8.42 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Normal birth.

Measles 1934.

Ear trouble last winter 1935-36 - Abscess.

Had colds occasionally which settled in her ears.

Is immune to whooping cough.

EXAMINATION OF CHILD (Case 020)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 11 months, 12 days.

Bone Age (Penetration): 3 years, 3 months. Retarded 8 months.

Epiphysial Rating (Centers): 2 years, 2 months. Retarded 1 year,
9 months.

Number of epiphysial centers
missing for ossific center age: 3

Number of epiphysial centers
missing for chronological age: 9

The scars on the lower radius at 3 m.m., the lower tibia at 3 m.m., and the lower femur at 5 m.m., as well as scorings on radius and tibia, indicate severe constitutional disturbances the past 6 months, and minor illness approximately 18 months ago.

MUSCLE TONE

Foot: Arches
Toes Poor

Muscular Tone as Judged From Foot, and From a Comparison of Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 020)

(1) Weight.....	<u>39½ lbs.</u>	(14) Cristal Breadth.....	<u>16.5 cms.</u>
(2) Standing Height.....	<u>102.9 cms.</u>	(15) Trochanteric Breadth..	<u>19.5 "</u>
(3) Horizontal Height.....	<u>106.5 "</u>	(16) Transverse Chest.....	<u>13.1 "</u>
(4) Sitting Height.....	<u>58.1 "</u>	(17) Entire Arm Length.....	<u>41.9 "</u>
(5) Stem End.....	<u>60.6 "</u>	(18) Upper Arm Length.....	<u>16.0 "</u>
(6) Suprasternal Height...	<u>80.7 "</u>	(19) Forearm Length.....	<u>13.9 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>11.0 "</u>
(8) Tip of Acromion Height	<u>81.3 "</u>	(21) Chest Girth.....	<u>55.9 "</u>
(9) Cristal Height.....	<u>61.6 "</u>	(22) Head Length.....	<u>13.7 "</u>
(10) Anterior Iliac Spine Height.	<u>55.2 "</u>	(23) Head Breadth.....	<u>11.0 "</u>
(11) Knee Height.....	<u>27.5 "</u>	(24) Head Height.....	<u>7.35 "</u>
(12) Tibial Length.....	<u>20.0 "</u>	(25) Interpupillary Distance	<u>5.4 "</u>
(13) Acromial Breadth.....	<u>25.1 "</u>	(26) Suprasternum to Head Top.....	<u>22.0 "</u>
		(27) Head Circumference....	<u>49.2 Hairline</u> <u>50.1 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 20, 1936 ----- 60 cms. (very slight break)

Case Number: 021

Sex: Female

Birthday of Child: August 17, 1932

Date of Tests: June 19, 1936

Chronological Age at Time of Tests: 3 years, 10 months, 3 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₂ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 188

Haemoglobin - 9.35 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 40 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 183 to 189.

F A M I L Y (Case 021)ADULTS: TwoCHILDREN: TwoMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M ENUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: College TeachingMONEY INCOME: \$3150SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): HomeFAMILY RATING ON BASIS OF INCOME: B₂

FAMILY EDUCATION (Case 021)FATHER'S EDUCATION: Ph. D.MOTHERS'S EDUCATION: B.S. Home EconomicsFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: AFAMILY HOME

SIZE OF HOUSE: (Number of rooms 7)
 1 point for each room up to 12 7.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points _____.
 Sleeps with one other child - 7 points 7.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 92

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R ECase Number: 021Sleeping Arrangements: Sleeps with sister;Hours of Sleep at Home: 10 hours;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: 1½ hours;Number of Windows in Child's Bedroom: 2;Number of Windows Open When Child Sleeps: 2;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Helps herself;Child's Diet at Home:

Breakfast: Fruit, cereal, toast, milk.

Dinner: Potato, meat, 2 vegetables, milk, dessert.

Supper: (Winter) hot dish, salad, dessert.
(Summer) cereal, eggs, milk, dessert.Cod-Liver Oil or Other Rich Sources of Vitamin D:

2 teaspoonsful cod-liver oil daily. Has had haliver oil and irradiola.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 021)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: $6\frac{1}{4}$ pounds flour, 1 box wheaties,
1 box shredded wheat, $\frac{1}{2}$ box oatmeal;

Potatoes: 5 pounds;

Dried peas, beans, and nuts: 1 box dried peas, 1 box lentils in winter;

Tomatoes and citrus fruits: 3 grapefruit, 2 dozens lemons, 1 dozen oranges -
winter, 2 dozen oranges - summer;

Leafy, green, and yellow vegetables: 2 vegetables daily, celery, lettuce, cabbage
daily;

Dried fruits: 2 pounds prunes;

Other vegetables and fruits: 2 pounds. Bananas and apples;

Fats: 2 pounds butter, $\frac{3}{4}$ pound Crisco;

Sugars: 10 pounds;

Lean meat, poultry and fish: $1\frac{1}{2}$ pounds fish, 9 pounds meat;

Eggs: 2 dozens;

Milk: 21 quarts;

COMMENTS: 1 quart mayonnaise.

(Case 021)

PERCENTAGE HAEMOGLOBIN: June 19, 1936

9.35 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Full term, normal birth.

Had two attacks of bronchial pneumonia. At 4 months and again at 3 years. These left her with a weak chest.

Has had inoculations against pneumonia and whooping cough.

Had measles.

EXAMINATION OF CHILD (Case 021)

EVALUATION OF X-RAYS

Chronological Age: 3 years, 10 months, 3 days.

Bone Age (Penetration): 4 years, 6 months. Advanced 8 months.

Epiphysial Rating (Centers): 3 years. Retarded 10 months.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 3

MUSCLE TONE

Foot: Arches Medium
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 021)

(1) Weight.....	<u>32 lbs.</u>	(14) Cristal Breadth.....	<u>15.7 cms.</u>
(2) Standing Height.....	<u>100.2 cms.</u>	(15) Trochanteric Breadth..	<u>17 "</u>
(3) Horizontal Height.....	<u>101.4 "</u>	(16) Transverse Chest.....	<u>12.6 "</u>
(4) Sitting Height.....	<u>52.3 "</u>	(17) Entire Arm Length.....	<u>41.9 "</u>
(5) Stem End.....	<u>58.3 "</u>	(18) Upper Arm Length.....	<u>17.8 "</u>
(6) Suprasternal Height...	<u>78.7 "</u>	(19) Forearm Length.....	<u>14.7 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>11.7 "</u>
(8) Tip of Acromion Height	<u>77.9 "</u>	(21) Chest Girth.....	<u>51.1 "</u>
(9) Cristal Height.....	<u>57.3 "</u>	(22) Head Length.....	<u>15.2 "</u>
(10) Anterior Iliac Spine Height.	<u>51.7 "</u>	(23) Head Breadth.....	<u>10.2 "</u>
(11) Knee Height.....	<u>28 "</u>	(24) Head Height.....	<u>8.2 "</u>
(12) Tibial Length.....	<u>20.6 "</u>	(25) Interpupillary Distance	<u>4.6 "</u>
(13) Acromial Breadth.....	<u>23.7 "</u>	(26) Suprasternum to Head Top.....	<u>23.2 "</u>
		(27) Head Circumference....	<u>49.8 Hairline</u> <u>50.8 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORDCAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of July 19, 1936 ----- 40 cms.

Case Number: 022

Sex: Male

Birthday of Child: May 12, 1932

Date of Tests: June 30, 1936

Chronological Age at Time of Tests: 4 years, 1 month, 18 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | C ₂ |
| (2) <u>Parents' Education</u> | C |
| (3) <u>Physical Home</u> | C |

Summary of Nutritional Status:

Body Build - About 20 per cent underweight for height and width

Bone Status - See page 196

Haemoglobin - 8.42 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 30 cms.

Muscle Tone as Shown by Footprints - Medium

Details of this case are given on pages 191 to 197.

F A M I L Y (Case 022)ADULTS: TwoCHILDREN: OneMOTHER'S NATIONALITY: AmericanFATHER'S NATIONALITY: AmericanF A M I L Y I N C O M E
NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)OCCUPATIONS OF WAGE EARNERS: Publisher.MONEY INCOME: \$2000.SOURCES OF MONEY INCOME: SalaryADDITIONAL INCOME (Gifts, Charity, etc.): None reportedFAMILY RATING ON BASIS OF INCOME:C
2

FAMILY EDUCATION (Case 022)FATHER'S EDUCATION: Special College WorkMOTHERS'S EDUCATION: High School GraduateFAMILY RATING ON BASIS OF EDUCATION OF PARENTS: CFAMILY HOMESIZE OF HOUSE: (Number of rooms 7)
1 point for each room up to 12 7.
(Note whether roomers or not)FURNITURE:10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 7.CLEANLINESS:10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 8.POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.SLEEPING ACCOMODATIONS FOR CHILD:Sleeps alone - 8 points 8.
Sleeps with one other child - 7 points ____.
Sleeps with one adult - 6 points ____.
Sleeps with two other children - 4 points ____.
Sleeps with three other children - 1 point ____.EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 5.POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 5.POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 0.POSSESSION OF GARDEN: - Maximum 5 points 0.TOTAL POINTS ON FAMILY HOME: 68FAMILY RATING ON BASIS OF HOME: C.

CHILD'S HOME CARECase Number: 022Sleeping Arrangements: Sleeps alone;Hours of Sleep at Home: 12 hours;Time of Arising in Morning: 7:00 A.M.;Hours of Rest at Home: none;Number of Windows in Child's Bedroom: 3;Number of Windows Open When Child Sleeps: 3;Number of Times Child is Bathed a Week: Daily;Comments on Child's Clothing: A, A, A;Self-Help in Dressing, Washing, Toileting: Needs some supervision;Child's Diet at Home:

Breakfast: Orange juice, milk, cereal, toast.

Lunch: Fruit, vegetable, milk, bread.

Dinner: Meat (occasionally, vegetable, fruit, milk, dessert.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

Had 6 drops of haliver oil daily from 2 months; at 1 year had one teaspoonful of Squibbs cod-liver oil daily in winter.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 022)
Family Consumption of Types of Food per Week.

Flour, meal, and other cereals: 5 pounds flour, 3 - 4 loaves bread, 2 boxes cereal;

Potatoes: 1/4 peck;

Dried peas, beans, and nuts: Winter - few dried peas and beans, Pecan nuts;

Tomatoes and citrus fruits: 1 quart tomatoes, 3 - 4 dozens oranges, grapefruit in winter, a few lemons;

Leafy, green, and yellow vegetables: Peas, beans, carrots, squash, lettuce, celery onions;

Dried fruits: Prunes, peaches, apricots;

Other vegetables and fruits: Apples, plums;

Fats: 1 pound butter, $\frac{1}{2}$ pound lard;

Sugars: 5 pounds;

Lean meat, poultry and fish: 3-4 pounds; Occasionally fish and poultry;

Eggs: 1 dozen;

Milk: 14 quarts;

COMMENTS:

(Case 022)

PERCENTAGE HAEMOGLOBIN: June 20, 1936

8.42 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Full term, forceps baby.
Weight - 7 pounds.
Had tonsillitis once.
No other illnesses.
Had diptheria and whooping cough serum.

EXAMINATION OF CHILD (Case 022)

EVALUATION OF X-RAYS

Chronological Age: 4 years, 1 month, 18 days.

Bone Age (Penetration): 3 years, 4 months. Retarded 9 months.

Epiphysial Rating (Centers): 3 years, 1 month. Retarded 1 year.

Number of epiphysial centers
missing for ossific center age: 2

Number of epiphysial centers
missing for chronological age: 9

Scar on lower radius indicates a severe illness about 6 months ago.

Scorings on radius signifies minor upsets approximately one year ago.

MUSCLE TONE

Foot: Arches Medium
Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 022)

(1) Weight.....	<u>38 lbs.</u>	(14) Cristal Breadth.....	<u>15.5 cms.</u>
(2) Standing Height.....	<u>106.1 cms.</u>	(15) Trochanteric Breadth..	<u>25.1 "</u>
(3) Horizontal Height.....	<u>110.8 "</u>	(16) Transverse Chest.....	<u>13.4 "</u>
(4) Sitting Height.....	<u>58.8 "</u>	(17) Entire Arm Length.....	<u>42.5 "</u>
(5) Stem End.....	<u>60.5 "</u>	(18) Upper Arm Length.....	<u>15.7 "</u>
(6) Suprasternal Height...	<u>81.5 "</u>	(19) Forearm Length.....	<u>15.3 "</u>
(7) Symphision Height.....	_____	(20) Hand Length.....	<u>11 "</u>
(8) Tip of Acromion Height	<u>80.6 "</u>	(21) Chest Girth.....	<u>55.9 "</u>
(9) Cristal Height.....	<u>60.6 "</u>	(22) Head Length.....	<u>15.1 "</u>
(10) Anterior Iliac Spine Height.	<u>59.0 "</u>	(23) Head Breadth.....	<u>11 "</u>
(11) Knee Height.....	<u>27.7 "</u>	(24) Head Height.....	<u>7.55 "</u>
(12) Tibial Length.....	<u>26.7 "</u>	(25) Interpupillary Distance	<u>5.6 "</u>
(13) Acromial Breadth.....	<u>12.6 "</u>	(26) Suprasternum to Head Top.....	<u>23.8 "</u>
		(27) Head Circumference....	<u>54.0 Hairline</u> <u>51.4 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF METHOD)

Measurement of June 30, 1936 ----- 30 cms.

Case Number: 023

Sex: Female

Birthday of Child: December 22, 1933

Date of Tests: July 1, 1936

Chronological Age at Time of Tests: 2 years, 6 months, 9 days

Family Rating on Basis of:

- | | |
|-------------------------------|----------------|
| (1) <u>Income</u> | B ₃ |
| (2) <u>Parents' Education</u> | A |
| (3) <u>Physical Home</u> | A |

Summary of Nutritional Status:

Body Build - Weight satisfactory for height and width

Bone Status - See page 204

Haemoglobin - 14.85 grams of haemoglobin per 100 c.c. of blood

Capillary Wall Strength - 35 cms.

Muscle Tone as Shown by Footprints - Poor

Details of this case are given on pages to .

F A M I L Y (Case 023)

ADULTS: Two

CHILDREN: One

MOTHER'S NATIONALITY: American

FATHER'S NATIONALITY: American

F A M I L Y I N C O M E

NUMBER OF WAGE EARNERS IN FAMILY: One - (Father)

OCCUPATIONS OF WAGE EARNERS: College Teaching

MONEY INCOME: \$2900

SOURCES OF MONEY INCOME: Salary

ADDITIONAL INCOME (Gifts, Charity, etc.): Stocks
Property
Home

FAMILY RATING ON BASIS OF INCOME:

B3

FAMILY EDUCATION (Case 023)FATHER'S EDUCATION: M.A.MOTHER'S EDUCATION: M.S.FAMILY RATING ON BASIS OF EDUCATION OF PARENTS: A.FAMILY HOME

SIZE OF HOUSE: (Number of rooms 8)
 1 point for each room up to 12 8.
 (Note whether roomers or not)

FURNITURE:

10 points for entirely adequate furniture (in good condition) for the size of the house; number of points adjusted downward at discretion of grader; 6 points is the maximum to be given if furniture is adequate, but not in good condition 10.

CLEANLINESS:

10 points if interior is immaculate in every detail; number of points to be adjusted downward at the discretion of the grader 10.

POSSESSION OF A CENTRAL HEATING PLANT: - 10 points 10.

POSSESSION OF CONVENIENT COOKING EQUIPMENT: - 5 points 5.

POSSESSION OF SATISFACTORY REFRIGERATOR: - 5 points 5.

POSSESSION OF A WORTHWHILE MUSICAL INSTRUMENT: - 5 points 3.

ORNAMENTATION WITHIN THE HOUSE: - Maximum 5 points 5.

SLEEPING ACCOMODATIONS FOR CHILD:

Sleeps alone - 8 points 8.
 Sleeps with one other child - 7 points _____.
 Sleeps with one adult - 6 points _____.
 Sleeps with two other children - 4 points _____.
 Sleeps with three other children - 1 point _____.

EXTERIOR OF HOUSE WELL KEPT: - Maximum 10 points 10.

POSSESSION OF ADEQUATE YARD FOR PLAY: - Maximum 10 points 10.

POSSESSION OF GRASS AND FLOWERS: - Maximum 5 points 5.

POSSESSION OF GARDEN: - Maximum 5 points 5.

TOTAL POINTS ON FAMILY HOME: 94.

FAMILY RATING ON BASIS OF HOME: A.

C H I L D ' S H O M E C A R E

Case Number: 023

Sleeping Arrangements: Sleeps alone;

Hours of Sleep at Home: 12 hours;

Time of Arising in Morning: 8:00 A.M.;

Hours of Rest at Home: 1½ hours;

Number of Windows in Child's Bedroom: 2;

Number of Windows Open When Child Sleeps: 2;

Number of Times Child is Bathed a Week: Daily;

Comments on Child's Clothing: A, A, A;

Self-Help in Dressing, Washing, Toileting: Needs supervision;

Child's Diet at Home:

Breakfast: Cereal, toast, orange juice or prune juice or other fruit, milk.

Lunch: Vegetable salad, sandwiches, skimmed milk.

Dinner: Vegetable, meat, potato or rice, dessert of fruit or pudding, milk.
No sugar on cereal; candy occasionally; does not drink a quart of milk a day.

Cod-Liver Oil or Other Rich Sources of Vitamin D:

Had viosterol and haliver oil in winter only.

CLASSES OF FOODS INCLUDED IN CHILD'S HOME DIET (Case 023)
Family Consumption of Types of Food per Week

Flour, meal, and other cereals: 1 box cereal, 7 loaves bread, 1 3/8 pounds cake flour;

Potatoes: 1/2 peck;

Dried peas, beans, and nuts: 1/4 pound dried peas, 1/4 pound nuts;

Tomatoes and citrus fruits: 2 dozen oranges (winter), 1 can tomatoes, or 1 pound tomatoes;

Leafy, green, and yellow vegetables: 14 pounds;

Dried fruits: 1 pound prunes (winter);

Other vegetables and fruits: 7 pounds apples;

Fats: 1 1/4 pounds butter, 1/3 pound Crisco;

Sugars: 2 1/2 pounds;

Lean meat, poultry and fish: 1 chicken and 9 pounds meat;

Eggs: 3 dozen;

Milk: 10 quarts;

COMMENTS:

(CASE 023)
PERCENTAGE HAEMOGLOBIN: July 1, 1936

14.85 grams of haemoglobin per 100 c.c. of blood.

MEDICAL RECORD:

Full term, normal birth.
Weight - 8 pounds - 12 ounces.
Unconscious at 6 months, caused by a tooth.
Nursed $4\frac{1}{2}$ months.
No children's diseases.
Had test for scarlet fever.
Had whooping cough and diptheria serum.

EXAMINATION OF CHILD (Case 023)

EVALUATION OF X-RAYS

Chronological Age: 2 years, 6 months, 9 days.

Bone Age (Penetration): 3 years. Advanced 6 months.

Epiphysial Rating (Centers): 3 years. Advanced 6 months.

Number of epiphysial centers
missing for ossific center age: 1

Number of epiphysial centers
missing for chronological age: 0

MUSCLE TONE

Foot: Arches Poor
 Toes

Muscular Tone as Judged From Foot, and From a Comparison of
Upright and Recumbent Body Measurements

See Table I

ANTHROPOMETRIC RECORD (Case 023)

(1) Weight.....	<u>32 lbs.</u>	(14) Cristal Breadth.....	<u>16.2 cms.</u>
(2) Standing Height.....	<u>89 cms.</u>	(15) Trochanteric Breadth..	<u>17.4 "</u>
(3) Horizontal Height.....	<u>95 "</u>	(16) Transverse Chest.....	<u>12.2 "</u>
(4) Sitting Height.....	<u>51.3 "</u>	(17) Entire Arm Length.....	<u>37.6 "</u>
(5) Stem End.....	<u>54.9 "</u>	(18) Upper Arm Length.....	<u>14.6 "</u>
(6) Suprasternal Height...	<u>64.7 "</u>	(19) Forearm Length.....	<u>13.5 "</u>
(7) Symphysis Height.....	_____	(20) Hand Length.....	<u>10.4 "</u>
(8) Tip of Acromion Height	<u>69.1 "</u>	(21) Chest Girth.....	<u>51.4 "</u>
(9) Cristal Height.....	<u>50.2 "</u>	(22) Head Length.....	<u>14.1 "</u>
(10) Anterior Iliac Spine Height.	<u>45.2 "</u>	(23) Head Breadth.....	<u>10.5 "</u>
(11) Knee Height.....	<u>23.0 "</u>	(24) Head Height.....	<u>8.65 "</u>
(12) Tibial Length.....	<u>16.6 "</u>	(25) Interpupillary Distance	<u>5.5 "</u>
(13) Acromial Breadth.....	<u>22.2 "</u>	(26) Suprasternum to Head Top.....	<u>20.4 "</u>
		(27) Head Circumference....	<u>49.5 Hairline</u> <u>50.8 Headline</u>

RATING ON BASIS OF ANTHROPOMETRIC RECORD

CAPILLARY WALL FRAGILITY (DALLDORF
METHOD)

Measurement of July 1, 1936 ----- 35 cms.

The complete data for weights and anthropometric measurements are presented in Table I. The only anthropometric data used in this report were the height, weight, and hip width of the children in the study. On the basis of the Pryor standards (published by the Stanford University Press), it was determined approximately whether the child was the correct weight for his height and width. Later, when the Todd anthropometric standards become available, the data will be re-evaluated in terms of these latter standards.

The data resulting from the Roentgenogram studies are presented in Table II. The results of the haemoglobin measurements are given in Table III. Capillary Wall Strength data are given in Table IV. Arbitrary muscle tone ratings from footprints are given in Table V.

T A B L E I

WEIGHTS AND BODY MEASUREMENTS

Case No.	Weight (Lbs.)	Standing Height	Horizontal Height	Sitting Height	Stem End	Supra-ster-nal Height	Tip of Acro-mial Height	Cris-tal Height	Ante-rior Iliac Spine Height	Knee Height	Tibial Length	Acro-mial Breadth	Cristal Breadth
01	30	92.	93.1	57.4	56.5	72.2	73.2	52.5	46.8	22.2	18.7	22.3	16.1
02	31	97.4	98.9	51.8	55.1	75.5	76.6	58.9	51.7	27.0	20.0	23.3	16.7
03	40	108.2	110.4	60.4	61.1	79.1	77.2	59.8	55.6	26.6	23.8	27.6	16.6
04	30 $\frac{1}{4}$	96.7	99.4	52.6	57.9	75.6	73.5	58.9	51.5	26.4	23.5	25.2	16.8
05	30	93.1	95.0	50.0	59.7	70.5	71.6	53.0	49.7	24.9	21.5	24.6	18.2
06	33 $\frac{1}{2}$	95.8	97.8	53.3	57.8	75.6	84.3	54.3	53.0	23.5	21.5	24.6	16.7
07	36	83.8	86.7	47.5	53.0	63.1	65.6	45.5	43.3	23.4	17.5	23.9	14.7
08	32 $\frac{1}{2}$	97.5	98.4	49.5	56.8	74.9	72.3	55.4	46.9	26.4	23.5	25.3	17.5
09	39	102.1	104.9	54.1	57.9	80.0	79.1	61.9	54.7	26.8	25.7	26.1	17.5
010	39 $\frac{1}{2}$	99.4	99.8	52.5	56.1	75.9	74.1	54.4	50.1	27.9	23.9	26.8	18.5
011	38 $\frac{1}{2}$	101.7	103.8	54.3	59.4	78.2	75.1	58.5	12.7	26.9	24.5	25.8	18.4
013	36	103.5	106.0	54.3	59.6	79.3	78.0	57.6	53.9	27.3	23.8	25.0	15.8
014	38	103.5	107.3	53.1	59.5	82.2	80.4	62.7	58.5	29.5	25.4	29.3	16.8
015	33	97.4	98.5	51.0	56.5	75.0	77.4	59.1	52.1	25.5	20.1	22.0	15.3
016	38 $\frac{3}{4}$	107.5	109.2	53.1	60.7	83.9	81.7	61.6	54.8	28.7	26.0	25.1	15.9
017	34 $\frac{1}{2}$	104.5	106.0	55.2	60.8	79.8	78.8	59.0	56.2	27.6	24.3	25.4	17.2
018	33	95.4	99.7	51.9	55.0	72.6	73.7	56.6	51.0	26.7	22.6	25.3	16.9
019	41	97.7	100.1	55.8	59.6	79.3	75.1	57.1	50.1	27.5	24.0	27.0	19.5
020	39 $\frac{1}{2}$	102.9	106.5	58.1	60.6	80.7	81.3	61.6	55.2	27.5	20.0	25.1	16.5
021	32	100.2	101.4	52.3	58.3	78.7	77.9	57.3	51.7	28.0	20.6	23.7	15.7
022	38	106.1	110.8	58.8	60.5	81.5	80.6	60.6	59.0	27.7	26.7	12.6	15.5
023	32	89.0	95.0	51.3	54.9	64.7	69.1	50.2	45.2	23.0	16.6	22.2	16.2
32.6 (Omitting 01)													

TABLE I
WEIGHTS AND BODY MEASUREMENTS
(Continued)

Case No.	Trochanteric Breadth	Transverse Chest	Entire Arm Length	Upper Arm Length	Forearm Length	Hand Length	Chest Girth	Head Length	Head Breadth	Head Height	Inter-Pupillary Distance	Supra Sternum to Head Top	Head Circumference	
													Hair Line	Head Line
01	18.2	12.9	35.5	16.7	12.7	8.9	50.2	13.0	9.5	9.4	5.5	22.2	47.0	47.3
02	17.1	13.3	38.8	15.1	13.7	11.1	50.8	14.0	10.9	8.3	5.0	22.3	48.3	49.8
03	20.1	13.5	42.2	15.5	13.8	10.2	54.6	16.6	10.1	6.6	5.2	24.3	50.2	52.1
04	18.4	12.9	41.9	19.6	14.7	11.3	49.5	15.0	10.0	7.6	5.0	21.9	48.3	48.9
05	18.4	13.0	37.9	18.0	13.4	11.5	53.3	15.9	11.5	8.5	5.1	22.3	47.6	48.9
06	17.2	12.5	37.0	16.9	13.2	8.7	52.1	16.1	10.3	7.6	5.7	20.8	52.1	52.1
07	16.9	13.0	36.4	17.6	12.8	10.0	49.5	14.0	10.3	9.0	4.9	19.8	47.9	47.6
08	19.9	14.8	38.5	18.4	13.9	10.6	50.8	16.5	10.1	6.7	5.0	21.4	49.8	52.0
09	21.1	14.3	40.4	19.8	24.4	10.5	55.2	14.9	10.6	6.8	5.1	21.8	54.6	51.4
010	20.6	15.6	40.2	18.8	13.5	9.5	56.5	15.7	10.8		5.0	22.1	48.9	48.9
011	19.7	13.5	40.5	17.8	16.6	11.0	54.6	17.1	10.8	6.3	5.1	22.3	52.7	53.3
013	19.0	13.5	41.1	16.2	14.4	11.0	52.7	15.6	10.5	7.6	5.2	22.0	51.1	51.1
014	19.9	11.9	41.5	16.6	14.1	10.3	54.0	16.2	10.1	7.9	4.9	22.5	49.5	51.4
015	17.1	11.4	40.7	14.5	14.2	11.1	53.0	14.6	9.9	7.9	5.5	19.0	49.5	49.2
016	18.8	13.6	44.7	17.3	15.6	12.0	55.6	16.0	10.1	7.8	5.0	22.6	51.1	49.8
017	18.1	13.1	47.4	19.0	15.8	11.8	51.1	16.1	10.6	7.0	4.9	24.3	50.8	51.1
018	19.4	14.3	39.8	14.9	15.5	10.8	54.0	16.0	10.3	7.3	4.5	23.2	50.8	52.1
019	20.3	14.0	42.7	17.0	14.8	10.7	23.3	13.6	11.3	8.1	5.1	21.9	50.8	49.2
020	19.5	13.1	41.9	16.0	13.9	11.0	55.9	13.7	11.0	7.2	5.4	22.0	49.2	50.1
021	17.0	12.6	41.9	17.8	14.7	11.7	51.1	15.2	10.2	8.2	4.6	23.2	49.8	50.8
022	25.1	13.4	42.5	15.7	15.3	11.0	55.9	15.1	11.0	7.5	5.6	23.8	54.0	51.4
023	17.4	12.2	37.6	14.6	13.5	10.4	51.4	14.1	10.5	8.6	5.5	20.4	49.5	50.8

TABLE II
EVALUATION OF BONE STATUS FROM ROENTGENOGRAMS

NUMBER	EPIPHYSEAL RATING																									CHRONOLOGICAL AGE	AGE BASED ON OSSIFIC CENTERS		COMPARISON WITH CHRONOLOGICAL AGE		NUMBER OF OSSIFIC CENTERS MISSING FOR		NUMBER OF PREVIOUSLY MISSING OSSIFIC CENTERS APPEARING SINCE LAST X-RAY	ON BASIS OF PENETRATION		AGE BASED ON PENETRATION	COMPARISON WITH CHRONOLOGICAL AGE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	11-14	15-18	19-22	23-26	27-30	31-34	35-38	39-42	43-46	47-50	51-54	55-58	59-62	63-66	67-70	71-74	75-78	79-82	83-86	87-90	91-94	95-98	99-102	103-106	107-110		111-114	115-118	119-122	123-126	127-130	131-134		135-138	139-142			143-146	147-150	151-154	155-158	159-162	163-166	167-170	171-174	175-178	179-182	183-186	187-190	191-194	195-198	199-202	203-206	207-210	211-214	215-218	219-222	223-226	227-230	231-234	235-238	239-242	243-246	247-250	251-254	255-258	259-262	263-266	267-270	271-274	275-278	279-282	283-286	287-290	291-294	295-298	299-302	303-306	307-310	311-314	315-318	319-322	323-326	327-330	331-334	335-338	339-342	343-346	347-350	351-354	355-358	359-362	363-366	367-370	371-374	375-378	379-382	383-386	387-390	391-394	395-398	399-402	403-406	407-410	411-414	415-418	419-422	423-426	427-430	431-434	435-438	439-442	443-446	447-450	451-454	455-458	459-462	463-466	467-470	471-474	475-478	479-482	483-486	487-490	491-494	495-498	499-502	503-506	507-510	511-514	515-518	519-522	523-526	527-530	531-534	535-538	539-542	543-546	547-550	551-554	555-558	559-562	563-566	567-570	571-574	575-578	579-582	583-586	587-590	591-594	595-598	599-602	603-606	607-610	611-614	615-618	619-622	623-626	627-630	631-634	635-638	639-642	643-646	647-650	651-654	655-658	659-662	663-666	667-670	671-674	675-678	679-682	683-686	687-690	691-694	695-698	699-702	703-706	707-710	711-714	715-718	719-722	723-726	727-730	731-734	735-738	739-742	743-746	747-750	751-754	755-758	759-762	763-766	767-770	771-774	775-778	779-782	783-786	787-790	791-794	795-798	799-802	803-806	807-810	811-814	815-818	819-822	823-826	827-830	831-834	835-838	839-842	843-846	847-850	851-854	855-858	859-862	863-866	867-870	871-874	875-878	879-882	883-886	887-890	891-894	895-898	899-902	903-906	907-910	911-914	915-918	919-922	923-926	927-930	931-934	935-938	939-942	943-946	947-950	951-954	955-958	959-962	963-966	967-970	971-974	975-978	979-982	983-986	987-990	991-994	995-998	999-1002	1003-1006	1007-1010	1011-1014	1015-1018	1019-1022	1023-1026	1027-1030	1031-1034	1035-1038	1039-1042	1043-1046	1047-1050	1051-1054	1055-1058	1059-1062	1063-1066	1067-1070	1071-1074	1075-1078	1079-1082	1083-1086	1087-1090	1091-1094	1095-1098	1099-1102	1103-1106	1107-1110	1111-1114	1115-1118	1119-1122	1123-1126	1127-1130	1131-1134	1135-1138	1139-1142	1143-1146	1147-1150	1151-1154	1155-1158	1159-1162	1163-1166	1167-1170	1171-1174	1175-1178	1179-1182	1183-1186	1187-1190	1191-1194	1195-1198	1199-1202	1203-1206	1207-1210	1211-1214	1215-1218	1219-1222	1223-1226	1227-1230	1231-1234	1235-1238	1239-1242	1243-1246	1247-1250	1251-1254	1255-1258	1259-1262	1263-1266	1267-1270	1271-1274	1275-1278	1279-1282	1283-1286	1287-1290	1291-1294	1295-1298	1299-1302	1303-1306	1307-1310	1311-1314	1315-1318	1319-1322	1323-1326	1327-1330	1331-1334	1335-1338	1339-1342	1343-1346	1347-1350	1351-1354	1355-1358	1359-1362	1363-1366	1367-1370	1371-1374	1375-1378	1379-1382	1383-1386	1387-1390	1391-1394	1395-1398	1399-1402	1403-1406	1407-1410	1411-1414	1415-1418	1419-1422	1423-1426	1427-1430	1431-1434	1435-1438	1439-1442	1443-1446	1447-1450	1451-1454	1455-1458	1459-1462	1463-1466	1467-1470	1471-1474	1475-1478	1479-1482	1483-1486	1487-1490	1491-1494	1495-1498	1499-1502	1503-1506	1507-1510	1511-1514	1515-1518	1519-1522	1523-1526	1527-1530	1531-1534	1535-1538	1539-1542	1543-1546	1547-1550	1551-1554	1555-1558	1559-1562	1563-1566	1567-1570	1571-1574	1575-1578	1579-1582	1583-1586	1587-1590	1591-1594	1595-1598	1599-1602	1603-1606	1607-1610	1611-1614	1615-1618	1619-1622	1623-1626	1627-1630	1631-1634	1635-1638	1639-1642	1643-1646	1647-1650	1651-1654	1655-1658	1659-1662	1663-1666	1667-1670	1671-1674	1675-1678	1679-1682	1683-1686	1687-1690	1691-1694	1695-1698	1699-1702	1703-1706	1707-1710	1711-1714	1715-1718	1719-1722	1723-1726	1727-1730	1731-1734	1735-1738	1739-1742	1743-1746	1747-1750	1751-1754	1755-1758	1759-1762	1763-1766	1767-1770	1771-1774	1775-1778	1779-1782	1783-1786	1787-1790	1791-1794	1795-1798	1799-1802	1803-1806	1807-1810	1811-1814	1815-1818	1819-1822	1823-1826	1827-1830	1831-1834	1835-1838	1839-1842	1843-1846	1847-1850	1851-1854	1855-1858	1859-1862	1863-1866	1867-1870	1871-1874	1875-1878	1879-1882	1883-1886	1887-1890	1891-1894	1895-1898	1899-1902	1903-1906	1907-1910	1911-1914	1915-1918	1919-1922	1923-1926	1927-1930	1931-1934	1935-1938	1939-1942	1943-1946	1947-1950	1951-1954	1955-1958	1959-1962	1963-1966	1967-1970	1971-1974	1975-1978	1979-1982	1983-1986	1987-1990	1991-1994	1995-1998	1999-2002	2003-2006	2007-2010	2011-2014	2015-2018	2019-2022	2023-2026	2027-2030	2031-2034	2035-2038	2039-2042	2043-2046	2047-2050	2051-2054	2055-2058	2059-2062	2063-2066	2067-2070	2071-2074	2075-2078	2079-2082	2083-2086	2087-2090	2091-2094	2095-2098	2099-2102	2103-2106	2107-2110	2111-2114	2115-2118	2119-2122	2123-2126	2127-2130	2131-2134	2135-2138	2139-2142	2143-2146	2147-2150	2151-2154	2155-2158	2159-2162	2163-2166	2167-2170	2171-2174	2175-2178	2179-2182	2183-2186	2187-2190	2191-2194	2195-2198	2199-2202	2203-2206	2207-2210	2211-2214	2215-2218	2219-2222	2223-2226	2227-2230	2231-2234	2235-2238	2239-2242	2243-2246	2247-2250	2251-2254	2255-2258	2259-2262	2263-2266	2267-2270	2271-2274	2275-2278	2279-2282	2283-2286	2287-2290	2291-2294	2295-2298	2299-2302	2303-2306	2307-2310	2311-2314	2315-2318	2319-2322	2323-2326	2327-2330	2331-2334	2335-2338	2339-2342	2343-2346	2347-2350	2351-2354	2355-2358	2359-2362	2363-2366	2367-2370	2371-2374	2375-2378	2379-2382	2383-2386	2387-2390	2391-2394	2395-2398	2399-2402	2403-2406	2407-2410	2411-2414	2415-2418	2419-2422	2423-2426	2427-2430	2431-2434	2435-2438	2439-2442	2443-2446	2447-2450	2451-2454	2455-2458	2459-2462	2463-2466	2467-2470	2471-2474	2475-2478	2479-2482	2483-2486	2487-2490	2491-2494	2495-2498	2499-2502	2503-2506	2507-2510	2511-2514	2515-2518	2519-2522	2523-2526	2527-2530	2531-2534	2535-2538	2539-2542	2543-2546	2547-2550	2551-2554	2555-2558	2559-2562	2563-2566	2567-2570	2571-2574	2575-2578	2579-2582	2583-2586	2587-2590	2591-2594	2595-2598	2599-2602	2603-2606	2607-2610	2611-2614	2615-2618	2619-2622	2623-2626	2627-2630	2631-2634	2635-2638	2639-2642	2643-2646	2647-2650	2651-2654	2655-2658	2659-2662	2663-2666	2667-2670	2671-2674	2675-2678	2679-2682	2683-2686	2687-2690	2691-2694	2695-2698	2699-2702	2703-2706	2707-2710	2711-2714	2715-2718	2719-2722	2723-2726	2727-2730	2731-2734	2735-2738	2739-2742	2743-2746	2747-2750	2751-2754	2755-2758	2759-2762	2763-2766	2767-2770	2771-2774	2775-2778	2779-2782	2783-2786	2787-2790	2791-2794	2795-2798	2799-2802	2803-2806	2807-2810	2811-2814	2815-2818	2819-2822	2823-2826	2827-2830	2831-2834	2835-2838	2839-2842	2843-2846	2847-2850	2851-2854	2855-2858	2859-2862	2863-2866	2867-2870	2871-2874	2875-2878	2879-2882	2883-2886	2887-2890	2891-2894	2895-2898	2899-2902	2903-2906	2907-2910	2911-2914	2915-2918	2919-2922	2923-2926	2927-2930	2931-2934	2935-2938	2939-2942	2943-2946	2947-2950	2951-2954	2955-2958	2959-2962	2963-2966	2967-2970	2971-2974	2975-2978	2979-2982	2983-2986	2987-2990	2991-2994	2995-2998	2999-3002	3003-3006	3007-3010	3011-3014	3015-3018	3019-3022	3023-3026	3027-3030	3031-3034	3035-3038	3039-3042	3043-3046	3047-3050	3051-3054	3055-3058	3059-3062	3063-3066	3067-3070	3071-3074	3075-3078	3079-3082	3083-3086	3087-3090	3091-3094	3095-3098	3099-3102	3103-3106	3107-3110	3111-3114	3115-3118	3119-3122	3123-3126	3127-3130	3131-3134	3135-3138	3139-3142	3143-3146	3147-3150	3151-3154	3155-3158	3159-3162	3163-3166	3167-3170	3171-3174	3175-3178	3179-3182	3183-3186	3187-3190	3191-3194	3195-3198	3199-3202	3203-3206	3207-3210	3211-3214	3215-3218	3219-3222	3223-3226	3227-3230	3231-3234	3235-3238	3239-3242	3243-3246	3247-3250	3251-3254	3255-3258	3259-3262	3263-3266	3267-3270	3271-3274	3275-3278	3279-3282	3283-3286	3287-3290	3291-3294	3295-3298	3299-3302	3303-3306	3307-3310	3311-3314	3315-3318	3319-3322	3323-3326	3327-3330	3331-3334	3335-3338	3339-3342	3343-3346	3347-3350	3351-3354	3355-3358	3359-3362	3363-3366	3367-3370	3371-3374	3375-3378	3379

T A B L E I I I

PERCENTAGE OF HAEMOGLOBIN OF COLLEGE NURSERY SCHOOL CHILDREN IN
COMPARISON WITH FEDERAL EMERGENCY NURSERY SCHOOL GROUP AND
WITH CONTROL GROUP FROM FAMILIES OF LOW INCOME LEVEL

College Nursery School Group			Federal Emergency Nursery School Group Tested at a Comparable Date (Malley)			Group of Children from Low Income Level Families Used as Controls by Malley		
Case No.	Percentage Haemoglobin (Grams of Haemoglobin Per 100 c.c. of blood)	Date of Test	Case No.	Percentage Haemoglobin (Grams of Haemoglobin Per 100 c.c. of blood)	Date of Test	Case No.	Percentage Haemoglobin (Grams of Haemoglobin Per 100 c.c. of blood)	Date of Test
01	14.85%	June 5, 1936	7	13.75%	May 5, 1936	C-37	7.01%	May 12, 1936
02	13.29	June 5, 1936	16	13.30	May 5, 1936	C-38	12.63	May 12, 1936
03	10.10	June 5, 1936	4	13.33	May 6, 1936	C-36	12.91	May 12, 1936
04	10.52	June 5, 1936	8	13.61	May 5, 1936	C-34	8.42	May 12, 1936
05	9.71	June 5, 1936	20	13.61	May 6, 1936	C-30	13.61	May 12, 1936
06	10.52	June 5, 1936	3	13.61	May 6, 1936	C-41	14.03	May 12, 1936
07	12.02	June 5, 1936	6	13.33	May 6, 1936	C-28	13.47	May 12, 1936
08	8.15	June 10, 1936	18	13.33	May 5, 1936	C-35	14.03	May 12, 1936
09	14.03	June 10, 1936	14	13.47	May 5, 1936	C-40	13.33	May 12, 1936
010	10.70	June 10, 1936	23	13.33	May 5, 1936	C-39	7.89	May 12, 1936
011	12.63	June 10, 1936	9	13.61	May 5, 1936	C-26	7.01	May 12, 1936
013	10.10	June 19, 1936	10	12.63	May 6, 1936	C-31	8.42	May 12, 1936
014	8.42	June 19, 1936	15	13.89	May 6, 1936			
015	7.89	June 20, 1936	2	13.75	May 5, 1936			
016	9.71	June 19, 1936	13	13.61	May 5, 1936			
017	10.70	June 20, 1936	17	13.47	May 5, 1936			
018	12.95	Aug. 14, 1936	11	12.63	May 6, 1936			
019	9.71	July 13, 1936	5	13.33	May 5, 1936			
020	8.42	June 20, 1936	21	13.75	May 5, 1936			
021	9.35	June 19, 1936	19	13.47	May 5, 1936			
022	8.42	June 30, 1936						
023	14.85	July 1, 1936						
10.77% Average			13.44% Average			11.06% Average		

TABLE IV

CAPILLARY WALL STRENGTH

College Nursery School Group			Federal Emergency Nursery School Group			Group of Children from Low Income Level Families Used as Controls		
Case No.		Date	Case No.		Date	Case No.		Date
01	25 cms.	June-July	7	40 cms.	May	C-37	25 cms.	May
02	45 cms.	June-July	16	45 cms.	May	C-38	37 cms.	May
03	54 cms.	June-July	4	35 cms.	May	C-34	23 cms.	May
04	63 cms.	June-July	8	30 cms.	May	C-36	17 cms.	May
05	55 cms.	June-July	20	30 cms.	May	C-28	22 cms.	May
06	37 cms.	June-July	3	44 cms.	May	C-41	32 cms.	May
07	64 cms.	June-July	6	38 cms.	May	C-35	24 cms.	May
08	30 cms.	June-July	18	32 cms.	May	C-30	40 cms.	May
09	33 cms.	June-July	14	32 cms.	May	C-39	23 cms.	May
010	28 cms.	June-July	23	32 cms.	May	C-26	27 cms.	May
011	40 cms.	June-July	9	35 cms.	May			
013	40 cms.	June-July	10	63 cms.	May			
014	40 cms.	June-July	15	42 cms.	May			
015	63 cms.	June-July	2	37 cms.	May			
016	42 cms.	June-July	13	31 cms.	May			
017	40 cms.	June-July	17	62 cms.	May			
018	37 cms.	June-July	11	30 cms.	May			
019	35 cms.	June-July	5	60 cms.	May			
020	60 cms.	June-July	21	60 cms.	May			
021	40 cms.	June-July	9	55 cms.	May			
022	30 cms.	June-July						
023	35 cms.	June-July						
42.54 cms. - Average			42.15 cms. - Average			28.25 cms. - Average		

TABLE V
FOOTPRINTS

Case No.	Date	
01	June 5, 1936	Very Poor
02	June 5, 1936	Medium
03	June 5, 1936	Good
04	June 5, 1936	Good
05	June 5, 1936	Medium
06	June 5, 1936	Poor
07	June 5, 1936	Medium
08	June 10, 1936	Poor
09	June 10, 1936	Poor
010	June 10, 1936	Good
011	June 10, 1936	Medium
013	June 19, 1936	Medium
014	June 19, 1936	Good
015	June 20, 1936	Medium
016	June 19, 1936	Medium
017	June 20, 1936	Medium
018	June 20, 1936	Poor
019	July 13, 1936	Medium
020	June 20, 1936	Poor
021	June 19, 1936	Medium
022	June 30, 1936	Medium
023	July 1, 1936	Poor

DISCUSSION

Although the number of cases included in this study was small, the statistical method was used to determine whether there were significant differences between the averages of various of the ratings for this group and those of the Lytle Addition Federal Emergency Nursery School group taken near the same time, and also a control group from families of low income level.

BONE RATINGS

The complete data for the bone status of the children in this group have been presented in Table II. In making the averages for bone status, case 01 was omitted because of a long past history of illnesses. Although the child is well at the present time, it was felt that the case was not a normal one as far as bone development was concerned. The other measurements for this child were kept in the study. At the same time at which this thesis was presented, Mary Malley completed a report based upon a similar study involving children enrolled at the Lytle Addition Federal Emergency Nursery School, and a control group of children from families of low income level. By a statistical method outlined by R. A. Fisher (Statistical Methods for Research Workers, Edinburgh, 1928, pages 107-112), calculations were made to find whether there is a significant difference between the skeletal status of the group of children included in this study and those of Malley. In the study by Malley, the children were measured in March and again in August. Since the measurements of this study come about midway between these dates, comparisons were made with this group and with her group at each of those dates. No control group was used in March, and hence data for the August controls

were considered.

In the following table (Table VI), the summary of the epiphysial and bone penetration ratings are given:

T A B L E V I
COMPARISON OF BONE RATINGS OF
THREE GROUPS OF CHILDREN

	College Nursery School Children	Emergency Nursery School Children		Control Children From Low Income Levels
		March	August	
Average Number of Centers Miss- ing for Ossific Center Age	2.65	7.0	6.1	5.3
Average Number of Ossific Cen- ters Missing for Chronological Age	4.1	10.5	9.3	11.7
Average Ossific Center Age Com- pared with Chron- ological Age	-4.5 (Retarded)	- 6.9 (Retarded)	7.6 (Retarded)	5.7 (Retarded)
Average bone Penetration Age Compared with Chronological Age	+ 0.43 (Advanced)	- 5.5 (Retarded)	- 1.0 (Retarded)	2.0 (Retarded)

By the use of the method outlined by Fisher, and just cited, it was found that, although the College nursery School children have less average number of missing centers for the ossific center age than either the March or August Emergency nursery school children, and less than the low income level control group, the number of cases was too small to establish significance.

It was established, however, that the average number of missing ossific centers for the chronological age in the College Nursery School children was significantly less than those for the Emergency Nursery School group, or for the control group. The probability of the difference between the College and the March Emergency groups ^{not} being significant was less than 0.01. With regard to the College group and the August Emergency group, the probabilities were also less than 0.01 that the difference is ^{not} significant; that for the College group and the low income level control group is of the same order of magnitude.

Although the average ossific center age of the College nursery school group is less than that of the other groups, the significance of the difference was not established because the number of cases was too small, and the variability within each group was too great.

The difference in average bone age, based on bone penetration, between the College group and the Emergency nursery school March group was highly significant. That between the College group and the August Emergency nursery school group was not significant; while that between the College group and the low income level control group was highly significant.

It is interesting to note that the number of ossific centers missing for chronological age in the children of good homes, good incomes, and well-educated parents is significantly lower than those missing in the poorer children of the same age group. This may be attributed to the fact that the former are better cared for, less likely to be constantly beset by minor illnesses, and more likely to have medical care when it is needed. Home visits to both types of homes showed that poorly heated homes in the case of the poor children caused frequent

colds, that ear infections were common, and that good care was frequently lacking.

The fact that the bone age of the College group was equal to the chronological age, while that of the poorer groups (except the August nursery school group) was significantly retarded can be accounted for on the basis of diet. On the point of milk alone, a marked difference between the groups may be noted. There is scarcely a child in the College nursery school which does not receive a quart of milk a day at home, while the children of the other groups come from families where a quart, or sometimes as little as a pint of milk serves for an entire family - sometimes a large one. The fact that the August Federal Emergency Nursery school group was not significantly retarded in bone age based on penetration, while the March Emergency nursery school and the August low income level control groups were retarded by a difference which was highly significant is to be accounted for by the milk, good mid-day meal, cod-liver oil, and other foods which most of the Emergency nursery school group had received between March and August.

HAEMOGLOBIN

An examination of Table III shows that the average milligrams of haemoglobin per 100 c.c. of blood for College nursery school children, measured in June, is significantly lower than that for the group of Federal Emergency Nursery School children taken in May. The statistical procedure previously mentioned shows that the difference is significant. A low income control group measured in May was shown to be lower than the Federal Emergency Nursery School group measured during the same month, and not significantly different from the College group. The mean of the

College nursery school was 10.77 and that of the Emergency Nursery School 13.44, a difference of 2.67, which is highly significant. The mean of the control group is 11.06, and the difference between this and the College group is 0.29, which is of significance.

Not sufficient detailed dietary information is available to determine the cause of this difference entirely. In the case of the Federal Emergency Nursery School group, it is known that the children received meat an average of three times a week at the school, and that they ate what was set before them. Other iron-containing foods were given daily at this school and exact records of the foods and the sizes of the portions were kept. It is also known that the low income level control group received little meat, and that their general dietary was inadequate in most or all respects. Since the College nursery school children are not fed at the school, and since the survey method of obtaining information is not thoroughly satisfactory, further study is needed on the reason why this group is significantly lower in haemoglobin than the Emergency Nursery School group.

CAPILLARY WALL

In Table IV, the mean of the capillary wall strength of the College nursery school group was 42.54 centimeters, and that of the Emergency nursery school group was 42.15 centimeters, the difference 0.39 centimeters. The measurements for the three groups were taken near the same calendar time. This difference is insignificant, as shown by the fact that the probabilities as computed by the methods of Fisher are greater than 0.9.

The difference between the College nursery school group and the

group of children from low income level families used as controls is highly significant, since the probabilities are less than 0.01.

The method of Dalldorf, used in this study, was in process of standardization by Catherine Logan, working under the direction of Dr. Leita Davy at The Pennsylvania State College, at the time when this study was in progress. The method as outlined by Dalldorf (Journal of the American Medical Association, 104: 1701-2, May 11, 1935; and, Journal of Diseases of Children, 46: 794-802, October, 1933) was used, extreme care being taken to confine the area of skin tested to the same general region of the inner arm, as was mentioned in the section of this work on Procedure.

MUSCLE TONE

The muscle tone of the children studied was determined empirically by matching footprints against arbitrary standards. Four of the group were shown to have good muscle tone by this method, 11 were medium, and six were poor, and one was very poor. A more exact method of footprint evaluation will be worked out in this laboratory when a greater number of cases shall have been studied. The prints made in this study have been filed so that they may be re-evaluated when a better standard rating method has been developed.

S U M M A R Y

This is a report covering a study of the nutritional status of 22 College nursery school children. These children were measured for body build, bone age (based on epiphysial status and bone penetration), for haemoglobin, for capillary wall strength, and for muscle tone.

Detailed data have been presented, and ratings given to the children insofar as standards were available.

Comparisons were made between the nutritional status of the children in the study and of a group of children attending a Federal Emergency Nursery School, and a group of control children from families of low income level.

Significant differences were found in the following cases, as shown by the statistical method outlined by R. A. Fisher:

1. The average number of missing ossific centers for the chronological age was less for the College nursery School group than for the Federal Emergency Nursery School group or the low income level controls.

2. The average age based on penetration and the chronological age were approximately the same for the College nursery school group; the Federal Emergency nursery school group was significantly retarded in March, 1936, but was not significantly retarded in August, 1936. The control group of children from families of low income was significantly retarded in bone penetration age as compared with chronological age in August, 1936. Todd standards were used in making the evaluations.

3. The College nursery school children were significantly lower in percentage haemoglobin than the Federal Emergency group of near the same time. They were not significantly different from a control group of low income level children measured at about the same time.

**End of
Title**