

## **Report of Committee on Children to the Council of British Medical Association.**

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REPORT OF COMMITTEE ON CHILDREN  
TO THE  
COUNCIL OF BRITISH MEDICAL ASSOCIATION.

YOUR Committee appointed to investigate the physical and mental condition of school children have carried on the work in conjunction with the Committee appointed by the International Congress of Hygiene. A report is now presented to you on 50,000 children—boys, 26,287; girls, 23,713—seen individually in sixty-three schools by Dr. Francis Warner from June, 1892, to May, 1894.

The large amount of tabulated information now gained has made it possible to prepare a list of the signs or abnormal points observed in children classed in divisions representing the conditions of children, with the number of children presenting each defect respectively. A catalogue giving definition or description of these signs or conditions, together with the number of children presenting each condition, represents this portion of the work as far as it has been carried out.

A card has been prepared for each of the children noted as presenting a defect, and represents the condition of the individuals—boys, 5,112; girls, 3,829. These cards are being arranged in groups as to social class, nationality, town or country, etc., and results tabulated by actuarial processes. The relations of mental dulness, low nutrition, defects in development, and nerve conditions among the different groups of children are being investigated, and will be published. The work done and results so far as they have been obtained point strongly to the desirability of completing the investigation of 100,000 children, of whom half have been seen, and preparing a complete report from which conclusions may be drawn. Many of the most important groups of cases are small in number.

A CATALOGUE GIVING DEFINITION OR DESCRIPTION OF THE  
SIGNS OR ABNORMAL POINTS OBSERVED IN 50,000  
CHILDREN AND REGISTERED.

A. *Defects in Development.*—The term includes any point of defect in the form, proportion, or size in the body and its parts or their absence. Cases: Boys, 2,308; girls, 1,618.

A 1. *Cranium Defective* includes any defect in size, form, proportions, or ossification of the cranium. A given case may come under more than one of the classes below. As to a standard of normal size: In a well-developed child of good potentiality the head circumference at 9th month is  $17\frac{1}{2}$  inches, at 12 months 19 inches, at 7 years 20 to 21 inches. This is a rather high standard of size. Boys, 706; girls, 622.

Δ 2. *Cranium Large*.—A head of 22 inches circumference or over may be considered large in a school child; allowance must be made for age. Doubtless many of these cases are rachitic. Hydrocephalus is entered in its own class. Boys, 107; girls, 13.

Δ 3. *Cranium Small*.—The point of size of head is recorded as apart from the size of the child for its age. The volume is estimated in relation to the normal for age. This is determined by inspection, by the open hand placed upon the head, and by the measuring tape. A head with circumference over 20 inches at any school age is not registered as small; usually the small heads are 18 to 19½ inches circumference. Small head is noted independent of stature. Boys, 149; girls, 516.

Δ 4. *Cranium Bossed*.—There may be bosses, protuberances, or outgrowth at the sites of the ossific centres of the frontal bones, at the parietal centres, at the site of the fontanelle, and elsewhere. These are usually symmetrical, but not always. Boys, 323; girls, 47.

Δ 5. *Forehead Defective*.—The forehead may be narrow, shallow in vertical measurement, or small in all dimensions; it may bulge forward and overhang. All defects of the forehead, except "bosses" and "frontal ridge" (Δ 4, Δ 6) are here included. Boys, 53; girls, 23.

Δ 6. *Interfrontal Ridge*.—The vertical suture between the two halves of the frontal bone may be the site of a bony ridge, present in all degrees; if the forehead be also narrow it forms the scapho-cephalic type. Boys, 121; girls, 19.

Δ 7. *Cranium Asymmetrical*.—Asymmetry may be as to the forehead or other part; one side of the cranium may be smaller than the other. Boys, 27; girls, 2.

Δ 8. *Dolichocephalic*.—Head long in antero-posterior diameter. Boys, 26; girls, 2.

Δ 9. *Hydrocephalic*.—This term is used as in medicine. Boys, 2; girls, 1.

Δ 10. *Other Types of Cranium*.—Square; oxycephalic, or elevated and conical; cranium larger in anterior than in posterior segment. Boys, 11; girls, 2.

B 11. *External ear defective* in its parts, size, or form. Abnormality in size, proportioning, absence of parts, texture of skin are here recorded. The ear may be outstanding with great convexity posteriorly and concavity in front; the helix or portions thereof and the antehelix may be absent; the skin over the cartilage may be tight and adherent, coarse in texture with varicosities. The ears may be asymmetrical, and the lobes may be adherent to the face. Boys, 364; girls, 110.

c 12. *Eyelids with Epicanthis*.—The epicanthis is a fold of skin continuous with the lower fold of the upper eyelid (not a fold of mucous membrane) placed across the inner angle of the opening of the eyelids covering the caruncle; it may be asymmetrical. Boys, 288; girls, 196.

D 13. *Palate Defective in Shape*.—Defects in form are described as seen in the horizontal and in the vertical plane. Boys, 496; girls, 324.

D 14. *Palate Narrow*.—Without being otherwise altered, the palate may be contracted laterally in the space between the alveolar processes. Boys, 276; girls, 163.

D 15. *V-shaped Palate*.—Pointed more or less sharply at its anterior extremity, the alveolar processes being nearly straight

lines, meeting at their extremities at an acute angle. Boys, 179; girls, 110.

▷ 16. *Palate arched or vaulted*, thus deviating from the normal in the vertical plane with a high roof. Boys, 30; girls, 22.

▷ 17. *Palate Cleft*.—A deformity which may affect the hard and the soft palate. Boys, 12; girls, 12.

▷ 18. *Other defective types of palate*, such as the flat and the horse-shoe type. Boys, —; girls, 1.

⊘ 19. *Nasal bones*, wide, sunken, or indented. The bony bridge of the nose may be thus ill-shapen and depressed as in the undeveloped condition of babyhood. Boys, 155; girls, 156.

⊘ 20. *Growth small* or stature short. Children short and small in build for their age. Boys, 275; girls, 335.

⊘ 21. *Other defects in development* less frequently observed. Boys, 251; girls, 213.

⊘ 22. *Adipose Type*.—Children flat and flabby, generally without spontaneity and slow in action. Boys, 1; girls, 4.

⊘ 23. *Cyanosis*.—General blueness of face, lips, and ears, commonly dependent on defect of the heart. Boys, 2; girls, —.

⊘ 24. *Dermoid Cyst*.—Tumours at margin of orbit or near the temporal fossa.

⊘ 25. *Face asymmetrical*, one side being smaller than the other. Boys, 3; girls, 1.

⊘ 26. *Face Small*.—The face, including the upper and lower jaws, with their bones, may be small, independent of the size of the calvarium or brain case of the skull. Boys, 17; girls, 21.

⊘ 27. *Features Coarse*, heavy, flat, or lips thick. The features may be large and ill-proportioned. The separate features may not be individually malformed, but disproportionate one to another or to the size of the face; thus the nose may be small, the face large, round, flat, the features rising from the plane of the face. The lips may be thick and protuberant. Boys, 27; girls, 12.

⊘ 28. *Forehead Hairy*.—The forehead may be covered with downy hair; the hairy scalp may join the outer extremities of the eyebrows. Boys, 19; girls, 4.

⊘ 29. *Frontal Veins Large*.—There may be well-marked veins in the middle of the forehead and across the bridge of the nose. Boys, 12; girls, 4.

⊘ 30. *Hands Blue and Cold*.—This was registered when it appeared to be a more or less permanent condition as a defect independent of weather. It may be seen in a paralysed limb. Boys, 13; girls, 47.

⊘ 31. *Hare Lip*.—Congenital fissure of the upper lip. Boys, 15; girls, 7.

⊘ 32. *Ichthyosis*.—Scaly skin on wrists and arms, or general on face, ears, and all parts. Boys, 5; girls, 2.

⊘ 33. *Moles* on face or eyebrows; they may be pigmented, and may or may not be raised, and are often covered with hair. Boys, 1; girls, 6.

⊘ 34. *Mouth Small*.—Referring to measurement of the opening when the face is at rest. Boys, 50; girls, 38.

⊘ 35. *Nævus*.—"Port wine stains" or patches on the face coloured by vascularity. Half the face may be thus affected, with affection of conjunctiva and mucous membrane of mouth. Boys, 4; girls, 2.

⊘ 36. *Nose soft tissue*, wide or superabundant. The skin and

subcutaneous tissue of the bridge of nose may be superabundant and wide, giving an appearance of great width between the eyes. Boys, 13; girls, 17.

g 37. *Orbits Oblique*.—The transverse axis of the orbits sloping in place of being horizontal.

g 38. *Orbits Sunken*.—The whole cavity and its malar boundary appearing sunken into the skull.

g 39. *Palpebral fissures defective* in size or form. The eyelids may be small as well as the palpebral fissures or openings between them, both in their vertical and transverse measurements. In some cases the opening is not symmetrical, being wider on the inner than on its outer half. The transverse axis may slope outwards and upwards, or outwards and downwards, instead of being horizontal. Boys, 41; girls, 25.

g. 40. *Prognathous Type*.—The lower jaw large, heavy, underhung.

g 41. *Supernumerary ears* represented by sessile or pedunculated outgrowths in front of the tragus, sometimes nearly half an inch long. Boys, 21; girls, 12.

g 42. *Miscellaneous Defects in Development*.—Under this heading are included congenital defects of eyes and congenital deformities of the body. Boys, 12; girls, 15.

B. *Abnormal nerve signs* seen in the balances and movements of the body. Cases: Boys, 2,853; girls, 2,015.

43. *General Balance Defective*.—Asymmetrical positions of the limbs, shoulders, back; slouching, listless gait. Boys, 90; girls, 115.

44. *Expression Defective*.—Want of changefulness, vacancy, fixed expression. The visible muscular action and balance seen in a face may be described, and still there may be an expression that cannot be described anatomically. A face may be balanced or moved abnormally by action of its muscles, and yet carry a good expression. Boys, 152; girls, 196.

45. *Frontals Overacting*.—The frontal muscles may produce horizontal creases in the forehead, which may be deep if these muscles overact coarsely. Sometimes these muscles are seen working under the skin in vermicular fashion, with an athetoid movement; in other cases the action is fine, producing what may be called a dull forehead. This over-muscular action does not necessarily erase expression. Boys, 696; girls, 158.

46. *Corrugation*.—Knitting the eyebrows, drawing the eyebrows together; vertical creases are thus produced on the forehead above the nose. Corrugation may coexist with over-action in the frontal muscles. Boys, 38; girls, 12.

47. *Orbicularis Oculi Relaxed*.—There is a thin muscle, the orbicularis oculi, which encircles the eyelids. Its tone gives sharpness to the lower lid, so that its convexity is seen. When this muscle is relaxed there is a fulness or bagginess under the eyes, which is not due to œdema (dropsy), and may disappear on laughter. Boys, 371; girls, 296.

48. *Eye Movements Defective*.—When an object is moved at a distance 2 feet in front of the face, the eyes normally move in following it; in some children the head always turns towards the object, while the eyes are kept still in their orbits. In other cases fixation of the eyes is bad, or there are restless, uncontrolled movements of the eyes. Boys, 348; girls, 264.

49. *Head Balance Asymmetrical or Drooped*.—In the normal the head is held erect. It may be inclined to one side or drooped. Boys, 94; girls, 274.

50. *Hand Balance Weak*.—In this type of balance the wrist is slightly drooped, the palm is contracted laterally, and the digits are slightly bent. Boys, 1,234; girls, 805.

51. *Hand Balance Nervous*.—When the arms are held out the wrist droops, the palm is slightly contracted laterally, the thumb and fingers are extended backwards beyond the straight line at their junction with the palm. Boys, 253; girls, 365.

52. *Finger Twitches*.—When the hands are held out for inspection, there may be twitching movements of the digits in flexion, or extension, or laterally. Boys, 145; girls, 144.

53. *Lordosis*.—When the hands are held forwards, an alteration in balance of the spine may appear, with an arching forward in the lower part of the back, while the upper part of the spine between the shoulders is thrown back. Boys, 36; girls, 112.

¶ 54. *Other Abnormal Nerve Signs* less frequently observed. Signs grouped for convenience of primary arrangement as being less frequent in occurrence than those given earlier, but not necessarily of less importance. Boys, 468; girls, 287.

55. *Deaf, or Hearing Defective*.—Children deaf, or partially deaf. Tests for hearing cannot be used in a school inquiry. Boys, 12; girls, 15.

56. *Grinning, or Over-smiling*.—Over-smiling or grinning may be spontaneous, or may occur on any stimulation to effort. The lines formed in the naso-labial region of the face may be fine or coarse; there may be a duplicate or triplicate naso-labial groove partly depending upon the thinness or thickness of the skin; permanent skin creases may result. Boys, 19; girls, 14.

57. *Mouth Open or Jaw Drooped*.—The jaw may be drooped, or the mouth may be open with the teeth closed. This should not be recorded as a nerve sign if it is probably due to obstruction of the respiratory passages. Boys, 233; girls, 110.

58. *Over-Mobile*.—Constant spontaneous movements. Among children in the infant school, and in some over 7 years, spontaneous movement is normal; it is most common in the fingers. Boys, 4; girls, 9.

59. *Response in Action Defective*.—Response in action following a command or in imitation may be accurate or uncertain, prompt or slow. There may be an interval between the command and the response, or the action may be continued unduly long. Response may be better when stimulated through the eye or through the ear respectively. Boys, 56; girls, 62.

60. *Speech Defective*.—Stammering (spasm), or defect in articulating certain sounds. Speech may be nearly absent; it may be indistinct. As a mental defect, the question asked may be repeated without a reply. Boys, 105; girls, 52.

61. *Statuesque or Immobile*.—Without any spontaneity, immobile except under stimulation to action. Boys, 4; girls, —.

62. *Tremor*.—A uniform rapid movement with but slight displacement of the parts moving. Boys, 15; girls, 14.

63. *Miscellaneous Abnormal Nerve Signs*.—Under this heading are included eye cases, 71, 72, and the paralytic cripples. Boys, 67; girls, 45.

C. *Nutrition Low, Thin, Pale, Signs of Delicacy.*—This was registered to any child seen to be pale, thin, or delicate. No inquiries were made as to the feeding of the children. Nutrition of the limbs and face was observed, as well as colour in the face and lips. Cases: Boys, 749; girls, 770.

D. *Dull Mentally, or so Reported by the Teachers.*—In every case registered the teacher's opinion concerning the child's mental capacity was asked and written down; those reported as below average ability in school were registered as dull. After the children presenting visible defects had been picked out, the teachers were invited to present any other pupils known by them to be mentally dull. All grades of mental dulness were registered under this heading—see Groups D., 76, 77, 78. Total of dull children: boys, 2,072; girls, 1,632.

E. *Defects of Eyes.*—When the eyes were looked at obvious defects were noted, but no tests were used as to acuteness of vision or errors of refraction, and the ophthalmoscope could not be used in the schools. Ophthalmia was not registered, but some of its late effects are recorded under "Disease of Cornea," "Eye Lost by Disease," 68, 70. Boys, 774; girls, 715.

64. *Squint.*—Under this heading are registered cases of organic squint, one eye being turned; also temporary or varying convergence when looking at an object 2 feet from the face, which probably indicates hypermetropia. Boys, 470; girls, 345.

65. *Using Convex Glasses.*—Evidence of hypermetropia. Boys, 141; girls, 226.

66. *Using Concave Glasses.*—Evidence of myopia or short sight. Boys, 39; girls, 55.

67. *Myopia not Using Glasses.*—Short sight ascertained on inquiry. Boys, 12; girls 11.

68. *Disease of Cornea.*—Inflammation, ulcers, white patches. It was not found convenient to record ophthalmia, but if disease of cornea were present this was registered. Boys, 52; girls, 46.

69. *Eye Lost by Accident.*—As stated on inquiry. Boys, 33; girls, 16.

70. *Eye Lost by Disease.*—Inquiry was made as to cause of loss of eye. Boys, 10; girls, 18.

71. *Nystagmus.*—Organic tremor of the eyes. This defect is also registered under "Other Nerve Signs. Miscellaneous. Bh 63." Boys, 20; girls, 11.

72. *Ptosis.*—Drooping of eyelid may be partial or complete in one eye or in both. Boys, 24; girls, 5. This defect is also registered under "Other Nerve Signs. Miscellaneous. Bh 63."

73. *Pupils Unequal.*—Inequality of size of pupils when the eyes are equally stimulated by light. Boys, 4; girls, 2.

74. *Cataract* may be congenital or the result of injury. Boys, 8; girls, 5.

75. *Miscellaneous and Congenital Defects of the Eyes.*—Including coloboma or defect in a portion of the iris. Unequal and asymmetrical pigmentation of irides and "tortoise-shell irides." Albinos destitute of all pigmentation. Excessive largeness of cornea. Congenital smallness of one eye. Congenital blindness from cause unknown. Congenital defects of the eyes are also registered under "Other Defects of Development. Miscellaneous. Af 42." Boys, 8; girls, 8.

F. *Cases of Rickets.*—When bent legs or pigeon breast indi-

cated rickets the fact was registered; conditions of the cranium were not accepted as evidence of rickets, but were registered under their respective headings (see Aa 2, 4, 5). Boys, 39; girls, 10.

G. *Exceptional Children*.—Children who on account of certain observed defects may at once be said to need individual consideration:

- |  |  |
|--|--|
| 76. Idiots.  | 89. Amputation of leg. Boys, 5; girls, 1.                                |
| 77. Imbeciles. Boys, 3; girls, 2.  | 90. Congenital absence of greater part of upper limb. Boys, 2; girls, 3. |
| 78. Children feebly gifted mentally. Boys, 50; girls, 51.                                  | 91. Congenital absence of hand.  |
| 79. Children mentally exceptional. Boys, 4; girls, 3.                                      | 92. Congenital defect of hand. Boys, —; girls, 2.                        |
| 80. Epileptics, and children with history of fits during school life. Boys, 20; girls, 35. | 93. Congenital absence of foot. Boy, 1.                                  |
| 81. Dumb. Boys, 4.   | 94. Club foot.   |
| 82. Children crippled, maimed, and paralysed.  | 95. Hemiplegia. Boys, 7; girls, 11.                                      |
| 83. Disease of hip. Boys, 11; girls, 3.  | 96. Paraplegia.  |
| 84. Disease of spine. Boys, 11; girls, 8.  | 97. Infantile palsy, upper limb. Boys, 1; girls, 3.                      |
| 85. Disease of upper limb. Boys, 7; girls, 3.  | 98. Infantile palsy, lower limb. Boys, 11; girls, 10.                    |
| 86. Disease of lower limb. Boys, 11; girls, 5.   | 99. Torticollis. Boys, 4; girls, 5.                                      |
| 87. Hand maimed. Boys, 2; girls, 1.  | 100. Blind, or nearly so. Girls, 3.                                      |
| 88. Amputation of arm. Boys, —; girls, —.  | 101. Chorea. Girl, 1.  |
|  | 102. Crippled by burn. Boys, 2; girls, 4.                                |
|  | 103. Heart disease. Boy, 1.  |

FRANCIS WARNER, *Honorary Secretary*.



