

OUR PRIZE COMPETITION.

GIVE AN ACCOUNT OF THE DEVELOPMENT OF A NORMAL INFANT FROM BIRTH TO 12 MONTHS OF AGE.

We have pleasure in awarding the Prize this month to Miss Maggie Neal, S.R.N., R.M.N., Kent County Mental Hospital, Maidstone.

PRIZE PAPER.

THE DEVELOPMENT OF A NORMAL INFANT FROM BIRTH TO 12 MONTHS OF AGE.

Weight.—The average weight of a new-born baby is about 7 lb.

During the first few days weight, possibly up to 8 oz. is lost. After this the weight should rise again, reaching the birth weight within ten days.

After this the infant will gain in weight from $\frac{3}{4}$ oz., to 1 oz. daily during the first six months, and thereafter at the rate on an average of one third ounce ($\frac{1}{3}$ oz.) per day.

By the end of the period 4-6 months, the weight should have doubled the birth weight, and by the end of 12 months the weight should be three times the birth weight. A bottle-fed baby usually gains more slowly than a breast-fed infant.

Length.—The average length at birth is from 19 $\frac{1}{2}$ -20 $\frac{1}{2}$ in.

During the first year the infant grows in length about 8 in.

Development of the Senses.—Taste appears to be present from birth.

Sight.—A baby is able to distinguish light from darkness very soon after birth.

At the end of the first month an infant will generally try to follow a bright light or shining object.

He should recognise his mother's face at three months and other objects at six months and by the end of 12 months will be able to gauge distance, so as to make a successful attempt to reach these objects.

Hearing.—A normal infant should be able to hear loud noises during the second week of life, though all infants are "deaf" at birth, it is thought.

Development of Motor Functions.

Movements are at first (1) *aimless*, just an expression of energy—for example: Kicking, opening and closing the hands, movements of the head; (2) *Reflex*, as thinking, sneezing, crying; (3) *Instinctive and purposive*, as sucking, holding on to a finger placed in the infant's palm, by curling of his or her fingers round it, this, as a purely instinctive movement is lost soon after birth; (4) *Voluntary*—acquired during the first year, as grasping, holding up the head at three to four months old, sitting up, supported, at six to eight months old. Creeping at nine months, sitting unsupported at 12 months and possibly standing with support or without at 9, 10, 11 or 12 months. Walking, in a forward baby, may be possible at 12 months of age.

Speech.—Is ushered in by the instinctive "cry," which later on, as a result of experience, becomes purposive and is used to proclaim his discomforts and desires and discontents. With reference to the progress in the forming of words, children vary a good deal.

Syllables like Da, Ba, Ta being first attempted in imitation of those sounds he hears, and as imitation plays a great part in this acquirement the environment must be recognised as a deciding factor in the rate and accuracy with which the infant responds.

As a rule the more intelligent the infant the quicker the rate, and the wider the scope of this faculty. Syllables being joined to form words, and words being used in sequence to make sense. The baby at this stage usually speaks of himself in the third person.

Sleep.—At first the baby sleeps 20 hours out of the 24 and by the end of 12 months 16 hours. The healthy baby sleeps with the eyes and mouth closed, and has a tranquil expression.

Dentition.—The teeth usually appear bilaterally—the lower central incisors appearing about six months old and the upper central incisors and lateral incisors next and by the end of the year the lower lateral incisors, making in all eight teeth by 12 months old.

The Head.—The circumference at birth is from 13 to 13 $\frac{1}{2}$ in., gaining 3 in. in the first six months, and measuring by the end of 12 months about 18 in. The anterior fontanelle not yet closed.

The mouth is somewhat dry at first, but the secretion of saliva increases after the early months, both in quantity and enzyme content (for starch).

The stomach capacity has been given by Professor Holt as 1 $\frac{1}{2}$ oz. at birth, increasing to 9 oz. by the end of the 12 months.

Defecation occurs from two to four times daily during the first month—later reducing to two stools per day on an average.

Micturition may occur immediately after birth, but may be delayed for 24 hours. The bladder of the infant acts as an automatic flushing cistern—emptying itself when the internal pressure is sufficient to provoke the reflex. Later some voluntary control is acquired and the baby learns to give warning, if carefully trained.

The Mental State.—The normal infant responds to his or her environment, and appears tranquil, happy, eager, curious and disappointed in turns. The infant sleeps well, takes nourishment with evident enjoyment, laughs when pleased and crows and gurgles with delight, cries if hungry or angry and generally becomes more self-assertive during the first 12 months. A healthy baby is usually good tempered and happy, very trusting and appealing and though a great responsibility, as the instinct of self-preservation develops later, the baby will repay the guardian a thousand times for all the love and care bestowed on him.

HONOURABLE MENTION.

Honorable mention must be made of the paper sent in by Miss Winifred Moss, the County Hospital, Bedford.

Miss Moss gives the following interesting information on several points:—

The teeth are in the jaws at birth, but are usually undeveloped, and the cubbing of the milk teeth usually begins with the appearance of the lower central incisors between the ages of six and eight months. Some babies, however, cut their first tooth at four or five months, while others, equally healthy, show no teeth till nine or ten months, or even as late as one year. There is often a long interval between the first tooth and the next one, while the presence of teeth at birth

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