The First Year of Life

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DEVELOPMENT SURVEILLANCE AT
8 MONTHS

8 months	Normal	Doubtful	Abnormal
Alertness			
Squint			
Vision			
Hearing			
Prone			
Sitting			
Held standing			
Grabbing			
Hips			
Testes			

The mother should be asked whether she has any problems and whether the infant has had any illnesses since the last examination. She is also asked whether the infant is making sounds and the details of his diet, in particular whether he is chewing solids.

As at 6 weeks, the infant's alertness and interest are checked. His head circumference and weight should be measured and plotted on the growth chart.

Vision

Eye movements should be noted, and if a squint is suspected the position of the light reflex in each cornea should be observed. If there is a squint the reflex will be in a different position in each eye. One eye is covered with a card which is gradually moved away sideways. If the eye that is being uncovered moves there is a squint. If a squint is seen or suspected any time after 6 months the infant should be seen by an ophthalmologist.

Near vision may be tested by placing a wooden brick or pellet of paper about 20 cm in front of the infant and watching whether he reaches out to grab it. Testing distant vision is time consuming at this age and is usually performed only at specialist clinics.

Distant vision

At 6-9 months normal babies will watch rolling balls down to 0.6 cm in diameter at a distance of 3 metres (10 feet). The mother sits in a low chair with the child on her lap facing outwards. The examiner is at a distance of 3 metres and well to one side. He calls the infant's name and throws the ball in the air to attract attention and then rolls the first ball slowly along the floor across the infant's line of vision for about 4 metres. The balls are rolled in turn from the largest to the smallest.

The same series of graded balls can be mounted on rigid sticks and presented from behind a screen. The screen has a slit in it so that the examiner can observe the infant's response. Under 9 months it is difficult to secure attention for mounted balls under 2 cm in diameter.

Motor development

From the prone position the infant should get up on his wrists. When pulled from the supine position he should be able to sit spontaneously for a minute or two. Normal children can sit without help by the age of 8 months. The infant should also be able to take his weight on his legs when he is held standing.

If a cube is placed in front of the infant he should grab it with his whole hand. This test should be tried for both the right and the left hand and the infant should transfer the object from one hand to the other. If an infant performs all these tests normally but is not sitting spontaneously he should be seen again two months later.

Abduction of the hips also needs checking. A dislocated hip will show reduction of abduction and a proximal displacement of the lower buttock crease. Bilateral dislocation is hard to detect clinically but radiographs of the hip will confirm the diagnosis at this age.

Hearing

The test sound is made at a distance of 18 in (45 cm) from the infant's ear, on a level with the ear, but slightly behind him so that he does not see the test object. The sounds used are those of crinkling paper (hard toilet paper), a high pitched rattle (Nuffield rattle), a small hand bell, and a spoon being gently stroked round the inside of a cup. Voice sounds include pssss, phth (for high tones), and oooo (for low tones).

To ensure that the infant is not moving his head towards the sound by chance a second stimulus should be provided to one side, and while he is moving towards that the test sound should be made from the other direction. An abrupt change in the direction of head movement shows that the response is genuine. If this test is used at younger ages, between 3 and 7 months, the infant may not move his head, but he should move his eyes, and this can be seen by an observer in front of him. The speed with which an infant responds to the sound is a useful indication of his alertness.

The room where the test is performed must be quiet. It should ideally have a carpet and be removed from the waiting area and sounds of traffic. The commonest reasons for a child failing to respond to the test sounds are lack of interest, tiredness, distraction by other objects, and lack of familiarity with the test sounds. It is important to explain to the mother that these are far more likely reasons for lack of response than deafness and that the test will be repeated by the same person one or two months later. If the infant fails to respond at the second visit he should be seen by an audiologist.

High-tone deafness cannot be excluded by these tests and if there is a high suspicion of deafness—for example, if the infant had a very high plasma bilirubin concentration in the neonatal period, has rubella syndrome, or has a family history of deafness—he should be seen by an audiologist even if the results of these simple tests appear normal. Pure tone audiology may be needed, and the audiologist may have to see the child several times before a hearing defect can be completely excluded.

Pattern of development

Normal children sit unaided by the age of 8 months. African children tend to advance in most aspects of development faster than other children up to the age of about 7 months. In some families one aspect of development—for example, sitting, walking, or speech—may be unusually early or late, the development in all other fields being normal.

Finding that an infant is not sitting by a certain age does not necessarily mean that he is abnormal, as he may have a variation of normal development. These children fall into a group who are late in reaching a developmental milestone, and it is reasonable that they should be referred for further examination to exclude more sinister problems.

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