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PSYCHOMOTOR DEVELOPMENT OF A CHILD

Methodical recommendations
for students of the 3rd year of medical faculty

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LIST OF ABBREVIATIONS

CP – cerebral palsy

PMD – psychomotor development

CNS – central nervous system

INTRODUCTION

The nervous system begins to develop from the outer germ layer (ectoblast) in the third week of the intrauterine period. In a newborn child, there are almost as many nerve cells in the large hemispheres as in an adult, but they still have very simple structure, fusiform shape with a small number of processes, and their dendrites only begins to form. Myelination of nerve fibers is completed up to 3 years, and differentiation of cells of the cerebral cortex occurs mainly up to 7–8 years. Then the number of associative fibers increases and nerve connections are formed.

Thus, during early childhood and the preschool period, maturation of the cerebral cortex and the nervous system as a whole occurs. At this time, the mental and motor development of the child are closely linked, so the term "psychomotor development" (PMD) of the child is used in practice by pediatricians. Normal PMD is characterized by a clear sequence of occurrence in a child after birth of a complex of motor, behavioral, emotional, and speech skills with the participation of intensive development of the nervous system and, especially the cerebral cortex. Consequently, the assessment of the psychomotor sphere in a child differs significantly from that of an adult, since it is in a state of constant development.

Monitoring a child's PMD in the first years of life is of paramount importance. On the one hand, at this stage of development, the child's organism is the most vulnerable, but on the other hand has great plasticity, so it responds well to therapeutic and preventive measures. That is why healthcare providers need to have knowledge of the child's PMD, be able to monitor it, understand the risk factors that may contribute to violations of the development of the psychomotor sphere in order for differential diagnosis of abnormalities and to provide timely qualified assistance to children.

THE CONCEPT OF REFLEXES. UNCONDITIONAL REFLEXES OF NEWBORNS AND CHILDREN OF THE FIRST YEAR OF LIFE

Reflex ("reflexus" – reflection) – an automatic integral stereotypical reaction of the body to a certain stimulus, to changes in the external environment or internal state, which is carried out with the obligatory participation of the central nervous system.

All types of reflexes I. P. Pavlov have divided into two groups: unconditioned (innate) and conditioned (acquired). Unconditional reflexes – reactions of the body, carried out at the level of the spinal cord, brain stem and subcortical nuclei, are inherited and characteristic of all members of the species. They provide existence in the first moments after birth, adaptation of the body to constant environmental conditions, and then are the basis for the development of conditioned reflexes.

Groups of unconditional reflexes of children of the first year of life:

1. Unconditional reflexes that are present from birth and persist during life (permanent): swallowing, sneeze, cough, pupillary, corneal, tendon, etc.

2. Newborn reflexes that are present from birth and disappear within the first year (transient):

a) oral segmental automatisms: sucking, lips, palm-oral (Babkin's), search or rooting (Kusmaul's) reflexes;

b) spinal segmental automatisms: lower and upper grasping, plantar (Babinski's), defense, supporting, Moro's reflex, stepping, Kernig's, crawling (Bauer's), Galant's, Perez's reflexes.

c) myelocephalic reflexes: asymmetric and symmetric cervical tonic reflexes.

3. Righting reflexes that are absent in newborns and appear in infancy: lower and upper Landau reflexes, parachute reflex.

Unconditional reflexes of newborns and children of the first year of life

Reflex	Time of appearance / disappearance	The position of a child	Stimulation	Result
Oral segmental automatisms				
Sucking	birth / 3 months	supine	Mouth touched by object (a pacifier or finger)	Rhythmical sucking
Search or rooting (Kusssmaul's)	birth / 3–4 months	supine	Strike the skin in the cheek or mouth region without touching lips	Lips go down and the head is turned to the stimulated side
Lips	birth / 2–3 months	supine	Gently tap on lips using a finger	Lips are pulled out (forming a trunk)
Palm-oral (Babkin's)	birth / 2–3 months	supine	Press on the palms using your thumbs	The mouth opens and the head is bended
Spinal segmental automatisms				
Upper grasping	birth / 3 months	supine	Place a finger in child's hand	Child's fingers will flex around the doctor's finger
Lower grasping	birth / 3 months	supine	Press on the sole	Bends the toes
Plantar (Babinski's)	birth / 4–6 months (1 year)	supine	Scratch the sole on the external edge from heel to toes	Toes will be fanned out (extension)
Moro's	birth / 4 months	supine on the doctor's hands	1 variant Clapp with the both hands on the surface where child is lying in distance of 15 -20 cm from the child 2 variant Abruptly lower the child by 15-20 cm then lift to the initial level	Throws out arms and legs and then pulls them toward body
Kernig's	birth / 4 months	supine	Bend the leg of child in the knee and hip joints	It is not possible to extend the leg in the knee joint
Defense	birth / 2 months	on the abdomen	Put a child on the abdomen	Turns his/her head to the side
Crawling (Bauer's)	birth / 4 months	on the abdomen	Press your hand against child's feet	Raises his head and makes crawling movements, begins to actively push off with his feet from the doctor's palm

Reflex	Time of appearance / disappearance	The position of a child	Stimulation	Result
Supporting	birth / 2 months	hold vertically under the armpits from the back, supporting the head with your index fingers	Put the baby on a hard surface	Rests on the entire surface of the feet, "stands" on half-bent legs, straightening the body.
Stepping	birth / 2 months	vertically in the support position	Tilt the child slightly forward	Begins to take steps on the surface
Galant's	birth / 3–4 months	on the side	Gently stimulate along the paravertebral lines from the neck to the buttocks using your fingers	Curve toward the stimulated side
Perez's	birth / 3–4 months	on the abdomen	Pass along the spinous processes of vertebra from coccyx up to neck using your fingers	Bends the trunk, upper and lower limbs, raise the head and pelvis, cries, sometimes urinates, defecates. The reflex causes pain, so it is examined last.
Myeloccephalic reflexes				
Symmetric cervical tonic	birth / 2 months	supine	Bend the head of the child	Flexion of upper extremities and extension of lower extremities
Asymmetric cervical tonic	birth / 2–3 months	supine	Turn the child 's head to the side so that the chin touches the shoulder	Extension of the limbs to which the head is turned, bending of opposite limbs
Righting reflexes				
Upper Landau	4 months / after 1 st year	on the abdomen	Put a child on the abdomen	Raises and holds the head, the upper part of the body, leaning on the plane using hands
Lower Landau	5–6 months / after 1 st year	on the abdomen	Put a child on the abdomen	Extends and raises the legs at the same time
Parachute	7–9 months / stable	hold the child's waist	Rotate his body quickly face forward (as if falling)	Extends the arms, hands, and fingers (defensive position)

Criteria for evaluating unconditional reflexes:

1. Presence or absence.
2. Symmetrical or not.
3. Time of appearance and disappearance.
4. The strength of the response, expressiveness (expressed, weakened, elevated).

ASSESSMENT OF A CHILD'S PSYCHOMOTOR DEVELOPMENT

The main criteria of psychomotor development (PMD) are:

- Motility – purposeful manipulative activity of the child.
- Static – fixing and holding certain parts of the body in the required position.
 - Sensory reaction – formation of appropriate reactions to light, sound, pain, touch.
 - Speech – expressive speech and language understanding.
 - Mental development – positive and negative emotions, formation of social age.

Features of PMD of the newborn

Motility is chaotic, a slight tremor may be present. There is physiological hypertonia of the muscle of extremities, expressed symmetrically (upper limbs bent at all joints and pressed to the chest, legs also bent at all large joints and slightly separated in the thighs).

The eyes are closed in newborn, but the child can see from the first day of life. The existence of vision can be checked by bringing light to the child's eyes. If the baby is not sleeping, she/he will turn her/his head to light. If the child is asleep, the reaction will be in the form of simulated blinking eyes. To check the vision, raise a bright object at a distance of 30–40 cm above the eyes of the child in a supine position and move it from one side to the other – the child must move her/his eyes in the direction of movement of the object, after 2–3 weeks of life, the child can fix the vision on a bright object.

A healthy newborn responds to a variety of strong sound stimuli. To assess hearing, clap your hands at a distance of 30-40 cm from the child's ear – newborns react with trembling, shuddering, opening their mouths and sucking, crying. At the end of the first month of life, a child is usually able to turn her/his head towards the sound.

Features of PMD of a child of the first year of life

Age (months)	Motility	Static	Sensory reaction	Speech	Emotions and social behavior
1	The physiological hypertonus of the muscles decreases, and the chaotic movements of the limbs fade away by the end of the month. Expressed unconditional reflexes: lip, sucking, grasping, Moro's, Babkin's, crawling.	Begins to hold the head for a few minutes in a horizontal position, lies on the abdomen at the end of the month.	Short-term examination of the external environment and auditory concentration appear.	The appearance of single sounds at the end of the month, utters vowel sounds in form of "a" and "e".	Reacts with discontent to strong sound and light stimuli. Seeing the face, stops for a moment.
2	Turns a head in different directions.	Begins to hold the head for a few minutes in a vertical position.	Prolonged visual reaction to moving objects and expressed concentration on sound.	Makes short sounds frequently.	Reacts with a smile to the conversation. Fixes the gaze on a face that is moving.
3	Most unconditional reflexes begin to disappear (Kusmaul's, lip, Babkin's, grasping). The child reaches for the toy. Muscle tone is normalized.	Holds a head well.	There is a concentration, an active reaction in response to sound stimuli and bright objects.	Makes long durated sounds often and r-r-r.	Reacts by smiling and joyful movements of arms and legs at the sight of the mother. Social smile.
4	Directed hand movements appear: grabs a toy better. Begins to turn from supine position to the abdomen. Most unconditional reflexes disappear (Moro grasping, crawling). Upper Landau reflex appears.	Makes attempt to press legs against the table if he/she supported by the armpits.	Begins to recognize the mother, look at the toy in own hands with interest.	Other sounds in melodic format appear, sounds with closed lips like m, b appear.	Laughs out loud in response to an emotional verbal appeal.
5	Turns from supine position to the abdomen, begins to turn from the abdomen to supine position. Moves towards the toy and grabs it.	Stands when supported in axillaries area and rests on the toe tips. Begins to sit with support.	Begins to recognize members of a family and express joy contacting with them.	Rhythmic prolonged sounds.	Shows happiness contacting with another child, takes a toy from her/his hands. Reacts to strict and tender intonations.
6	Actively turns from supine position to the abdomen and vice-versa. Plays with own legs (hand-foot coordination).	Begins to sit without support, tries to crawl.	Recognizes members of a family well.	Babbles. Begins to say separate syllables like ba-ba, ma-ma without understanding their sense.	Emotions are differentiated and adequate. Stretches out hands to be picked up.
7	Begins to crawl. Moves toys from one place to another, from hand to hand.	Sits with straight back. Begins to stand with support of the torso. Makes springy movements like as dancing.	Recognizes members of a family well.	Continues babbling.	Can play with unfamiliar people, repeats after actions other people. If tired begins to demand the attention of a mother.

Age (months)	Motility	Static	Sensory reaction	Speech	Emotions and social behavior
8	Takes playing cubes by both hands and holds them a short time.	Crawls on the abdomen, propelling hands forward. Independently sits and stands.	Can show "good bye" using hands and "yes" or "no" using a head.	Good babbling. Clearly articulates ba, ma, yes etc.	Adequate emotional reactions in response to communication. Observes the actions of other children.
9	Can play with different toys independently. Deliberately drops an item.	Can stand well with support.	Adequately responses on simple questions and requests such as "give me the doll", "sit down". Knows his/her name, responds to musical sounds by dance movements.	Clear doubling of syllables: ba-ba, ma-ma.	Easily comes into contact on the emotional, game, and verbal levels. Repeats the actions of other children.
10	The number of purposeful movements is increased: folds pyramid, puts the toy in special place etc. So-called "forceps grab" appears – child takes a small object by elongated index finger and the thumb.	Crawls on surfaces of different heights. Many children can stand on their own, supported by any object.	Reactions becomes more pronounced and enriched. Repeats the movements of adults "talking on the phone", "stirring a porridge".	Begins to say words which actually understands, has vocabulary consisted of few words.	There are variety of facial expressions and voice responses.
11	So-called "pliers grab" appears – child takes a small object with the pads of a curved index finger and thumb.	Crawls on the hand and knees, stands without support, does steps forward with the support of both his/her hands.	Fulfills simple requirements and requests. Knows the meanings of concepts "you can", "you can not", understands the prohibitions like "sit quietly" "do not take".	The number of monosyllabic words is replaced by two-syllable words. Uses simplified words like lyalya, tik-tok, kitty-kitty, aff-aff.	Waves his/her hand in farewell, happy at the arrival of other children. Selective attitude towards other children.
12	Expresses mimic movements.	Walks with the support of one arm or on his/her own.	Fulfills increasingly complex requirements and requests, understanding them. The number of reactions to the external environment increases.	Has vocabulary consisted of 8-12 words.	Hands another child a toy, accompanies this by laugh and babbling. Looks for toys that are hidden. Hugs parents at the request, seeks approval, confirmation of his/her success by a relative person.

Features of PMD of a child of the second year of life

Age	Understanding the language	Active language	Sensory development	Game	Move-ments	Skills	Emotions, social behavior
1 year 1 month – 1 year 3 months	Reacts to the approval or prohibition. Searches on request for a toy that was just played.	Says double or single syllables with meaning. Says meaningful words.	Orients in two contrasting sizes and shapes of objects: "big" and "small". Correlates and compares the properties of objects. Selects an object of the desired color of 2–3 colored balls.	Reproduces previously learned actions with objects in the game: feeds the doll, strings rings on a rod.	Walks for a long time, does not sit down, changes the position of the body, bends, turns.	Independently eats thick food with a spoon.	Empathy appears. Uses the word "no" when does not agree.
1 year 4 months – 1 year 6 months	Selects items based on certain attributes in verbal understanding.	Names objects and actions at the moment of interest.	Orients in 3–4 contrasting shapes of objects (ball, cube, brick, prism).	Displays individual actions in the game that he/she often observes. Carries a rope machine, builds a house of cubes.	Steps over a stick that is lying on the floor (without support).	Independently eats liquid food with a spoon.	Uses "Yes?". Begins to distinguish things belonging to different family members "grandma's glasses", "mom's bag". Begins to look at his/her image in the mirror, identifies it with himself/herself.
1 year 7 months – 1 year 9 months	Understands an adult's questions related to the events showed in the picture.	Indicates own actions with words and two-word sentences during the game.	Differentiates 3–4 forms of objects, focuses on the quantitative characteristics like "many" and "little".	Displays simple plot structures-overlaps such as "gates", "huts", "benches".	Steps over a stick or obstacle with a height of 5 cm.	Partially removes clothes with the help of an adult (shoes, hat).	Helps in simple work (according to the instructions). Simulates the actions of adults with household items.
1 year 10 months – 2 years	Listening to the stories of an adult understands (without showing) events that are familiar, imagines people.	Uses 3-word sentences with nouns and pronouns when communicating with adults.	Selects 3-4 contrasting colors based on the example, combines objects and their parts by shape, size, and color.	Plays a series of sequential actions in the game.	Steps over a stick or obstacle with a height of 10 cm high.	Partially puts on clothes (shoes, hat, socks).	Uses gestures extensively. Acute reaction to the absence of the mother. The child begins to describe own actions: "I sit down", "my toy".

Features of PMD of a child of the third year of life

Age	Active language grammar	Active language questions	Sensory development	Game	Move-ments	Skills	Emotions, social behavior
2 years – 2 years 6 months	Speaks more than 3 words in complex sentences.	Begins to use complex subordinate sentences.	Makes complex geometric shapes based on the sample. Selects various items of 4 main colors based on the sample.	The game has a plot character. The child reflects the relationship and sequence of actions from the surrounding life. Independently makes simple plot constructions and names them.	Steps over a 15 cm high stick or obstacle without support.	Can fully dress himself/himself. Eats carefully.	Knows the parts of his/her body and names them (head, eyes, nose). The child can report own condition.
2 years 6 months – 3 years	The questions like "what", "where?" appear.	The questions like "why?", "when?" appear.	Correctly uses geometric shapes for their intended purpose. Names 4 primary colors.	Elements of a role-playing game appear. Puts a toy in the game instead of himself/herself. Using plasticine, pencil depicts simple objects and names them. Plays with peers.	Steps over a 20 cm high stick or obstacle without support.	Dresses on his/her own, can pinch buttons, tie shoelaces with a little help from an adult. Uses a napkin.	Understanding and use of pronouns "I", "my", "you", "your" in speech appears. Has an idea of gender.

The conditions for the assessment of PMD:

- a child is examined undressed in a warm, well-lit room, premature child - on a changing table with heating, adhering to hygiene standards;
- the child should not be hungry, it is better to conduct an examination an hour after feeding;
- it is necessary to evoke positive emotions in the child in order to get an adequate assessment of the PMD. In case of severe anxiety, the examination should be postponed.

It is important to know that not all children have the same rate of PMD. After evaluating the expressiveness of all 5 criteria of PMD, unconditional reflexes, it is necessary to compare the obtained results with the age of the

child. Long-term illness and insufficient upbringing can lead to an acceptable lag of all parameters of PMD at only one stage. Such a delay in the development of the nervous system is considered functional.

Acceptable delay of PMD by age: during 1st year of life - for 1 month, during 2nd year of life – 3 months, during 3rd year – 6 months. Delayed PMD at two or more stages indicates pathological developmental delay and possible encephalopathy. In the normal development of a child under 2 years of age, all criteria must be developed to the end. If such development does not occur after 2 years, then a specific diagnosis is made depending on the symptoms (oligophrenia, hydrocephalus, epilepsy, etc.).

Tactics of a doctor according to results of an assessment of PMD of a child

Evaluation result	Tactic
Indicators of PMD correspond to the age of a child	Further observation. Care counseling.
The lag of skills in a child by 1 month in the first year of life was revealed.	Care counseling for the purpose of developing and conducting remedial classes. Re-examination in 1 month. If the detected delay persists during re-examination it is necessary to consult a pediatric neurologist.
The lag of skills by 3 months in children aged 1 to 2 years.	Care counseling for the purpose of developing and conducting remedial classes. Re-examination in 1–3 months. If the detected delay persists during re-examination it is necessary to consult a pediatric neurologist.
The lag of skills by 6 months in children aged 2 to 3 years.	Care counseling for the purpose of developing and conducting remedial classes. Re-examination in 2–6 months. If the detected delay persists during re-examination it is necessary to consult a pediatric neurologist.

DISORDERS OF PSYCHOMOTOR DEVELOPMENT

Delayed PMD may be a symptom of many diseases: cerebral palsy, epilepsy, hydrocephalus, genetic diseases (Down syndrome), congenital CNS abnormalities, tumors and pathologies of cerebral vessels, mental illness, etc.

Pediatric cerebral palsy (CP) is a pathology that results from organic brain damage carried during the prenatal period or during the incomplete process of forming the main brain structures, which causes a complex combination of neurological and mental disorders.

The risk factors for cerebral palsy:

- Low birthweight (less than 2500 grams).
- Premature birth (less than 37 weeks of pregnancy).
- Multiple births.

- Infections during pregnancy (chickenpox, rubella, cytomegalovirus, toxoplasmosis, bacterial infections).
- Severe jaundice.
- Chronic diseases of the mother (thyroid disease, mental illness, etc).
- Complicated labor and delivery (detachment of the placenta, rupture of the uterus, problems involving the umbilical cord can lead to asphyxia which cause brain damage).
- Brain infections at an early age (encephalitis, meningitis).
- Head and brain injuries.
- Bleeding in the brain (intracranial hemorrhage).

All children with cerebral palsy have problems with motor activity and posture, but of varying degrees of severity: some – can walk a little awkwardly, but independently, others – need special means for movement, and in severe cases – not able to walk at all. Other symptoms may include seizures, difficulty in sucking and subsequently chewing and swallowing, problems with hearing, vision, speech, spine diseases (scoliosis), joints diseases (contractures), and decreased intelligence.

Depending on which brain area is damaged, the following types of cerebral palsy are distinguished:

1. Spastic. It is characterized by spasticity or high muscle tone, the most common type of the disorder. There are several types of spastic CP depending on which areas of the body are affected :

- Spastic diplegia/diparesis. It involves muscle stiffness that is predominantly in the legs and less severely affects the arms and face, although the hands may be clumsy. Difficulties in walking may occur because the tight muscles of the hips and legs cause low extremities to turn inward and cross in the knees (like scissor).

- Spastic hemiplegia/hemiparesis. It typically affects the arm and hand on one side of the body, but can also include the leg. The arm and leg of the affected side are frequently shorter and thinner.

- Spastic quadriplegia/quadruparesis is the most severe form of cerebral palsy and is often associated with moderate-to-severe intellectual disability. It is caused by widespread damage to the brain or significant brain malformations. Children will often have severe stiffness in their limbs but a floppy neck. They are rarely able to walk. Speaking and being understood are difficult. Seizures can be frequent and hard to control.

2. Athetoid. Characterized by slow and uncontrollable writhing or jerky movements of the hands, feet, arms, or legs. Hyperactivity in the muscles of the face and tongue makes some children grimace or drool. They find it difficult to sit straight or walk. Some children have problems hearing, controlling their breathing, and/or coordinating the muscle movements required for speaking.

3. Ataxic. This type affects balance and depth perception. Children with ataxic CP will often have poor coordination and walk unsteadily. They have difficulty with quick or precise movements (writing or buttoning a shirt) or a hard time controlling voluntary movement (reaching for a toy).

4. Mixed types.

The first manifestations of cerebral palsy can be seen immediately after birth, and the obvious signs are already occurred in infancy, which will manifest in the lag of PMD.

LIST OF THEORETICAL QUESTIONS THAT STUDENTS HAVE TO LEARN

1. Groups of unconditioned reflexes of newborns and children of the first year of life.
2. Criteria for evaluating unconditioned reflexes.
3. Criteria of PMD.
4. Features of a child's PMD depending on age.
5. Cerebral palsy and other disorders of PMD.

EXAMPLES OF TEST TASKS FOR SELF-CONTROL

1. Which of the following reflexes does not belong to the group of oral segmental automatisms?
 - A. Sucking.
 - B. Lips.
 - C. Hand-mouth (Babkin).
 - D. Plantar (Babinski).
 - E. Rooting (Kussmaul).
2. What group of reflexes does the symmetrical tonic neck reflex belong to?
 - A. Oral segmental automatisms.
 - B. Spinal segmental automatisms.
 - C. Myelocephalic reflexes.
 - D. Righting reflexes.
 - E. Unconditional reflexes that are present from birth and persist during life (permanent).
3. Rooting reflex (Kussmaul):
 - A. Present from birth, disappears in 1–2 months.
 - B. Present from birth, disappears in 3–4 months.
 - C. Present from 3–4 months, disappears after 1 year.

- D. Present from birth, preserved throughout life.
- E. Present from 3 months, disappears at 4 months.
- 4. When does the defence reflex disappear?

- A. 1 month.
- B. 4 months.
- C. 2 months.
- D. After 1 year.
- E. 5 months.

5. The doctor evaluates the child's PMD status. He runs his thumb and forefinger along the paravertebral lines in the direction from the neck to the buttocks, causing the baby's trunk to bend outwards. What reflex did the doctor check?

- A. Symmetrical tonic neck reflex.
- B. Defence reflex.
- C. Moro reflex.
- D. Perez reflex.
- E. Galant reflex.

6. When does the child start to hold the head in an vertical position?

- A. 1 month.
- B. 2 months.
- C. 3 months.
- D. 4 months.
- E. From birth.

7. When does a child start to have a "forceps grab"?

- A. 3 months.
- B. 6 months.
- C. 7 months.
- D. 10 months.
- E. 12 months.

8. What is not typical for a 7-month-old child?

- A. Hand-foot coordination is present.
- B. "Forceps grab" is present.
- C. There are no oral automatisms.
- D. Sits with a straight back.
- E. Upper and lower Landau reflexes are present.

9. When does a child start using first words that he/she understand and enter into a dialogue?

- A. 4 months.
- B. 5 months.
- C. 7 months.
- D. 8 months.
- E. 10 months.

10. The child has muscular rigidity in the right extremities. What type of cerebral palsy does a child have?

- A. Athetoid cerebral palsy.
- B. Spastic diplegia.
- C. Ataxic cerebral palsy.
- D. Spastic hemiplegia.
- E. Spastic quadriplegia.

11. During the examination of the 4-month-old girl, the doctor found the absence of muscle hypertonia, a positive Babinski and upper Landau reflexes. The child keeps the head well in the vertical position, does not sit, recognizes the mother, makes melodic sounds like rr,m,b. Evaluate the child's PMD.

12. During the examination of the 9-month-old boy, the doctor found out that he turns from his back to the abdomen, sits with support, does not turn to his name, makes melodic sounds, emotions are not differentiated. Evaluate the child's PMD.

13. The child is 1 year and 10 months. She started to hold her head in vertical position from 2 months, to sit from 6 months, stand with support from 7,5 months. She has been walking independently since 11 months. Now the child says separate short sentences, plays with toys and other children, walks up the stairs. Evaluate the child's PMD.

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Навчальне видання

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