The algorithm of neurological examination of a newborn

according to the "Clinical protocol of medical care for a healthy child under 3 years of age" (order of the Ministry of Health of Ukraine dated March 20, 2008 No.149) and "Protocol of medical care for a healthy newborn child" (order of the Ministry of Health of Ukraine dated April 04, 2005 No.152)

	Actions	Normal reaction, that should be commented
1.	1) Wear gloves (without gloves, you will	- Good afternoon
	not be allowed to pass the exam!)	- Now I will evaluate the nervous system
	2) Greet the mother	state and primitive reflexes in your baby
	3) Explain, what you are going to do	
	Evaluation of the child's activity and behave	vior
2.	Ask the mother: How long does the baby	- The baby sleeps between feedings and
	usually sleep /stay awake?	wakes up when hungry
3.	Ask the mother: Is the baby calm, excited or	- The baby is calm after feeding
	sluggish?	
4.	Ask the mother: Is it easy to calm the baby	- If the baby starts to cry it is easy to calm
	when it cries?	him/her
	Checking the muscle tone of the baby lying	on his back
5.	1) Remove the nappy	- Lower limbs are flexed, that is, increased
	2) Check baby's muscle tone by looking at	flexor muscles tone
	its limbs	- The baby moves its limbs actively
		- The muscle tone is sufficient
	Checking primitive reflexes in a child in the	e supine position
	Kooting Kellex	Dath company of the second 1 1
0.	Check the rooting reflex:	- Both corners of the mouth go down when
	1) touch a finger to the baby's right corner	you touch The behaviour the beed toward the
	01 mounth 2) touch a finger to the heavy's left commer of	- The baby turns the head toward the
	2) touch a linger to the baby's left corner of	summetricel
	Spout (Lin) Defley	symmetrical
7	Check the spout reflex:	Vou con observe pouting or pursing of
/.	1) gontle ten beby's line near the midline	- Tou can observe pouring of pursing of
	1) gentie tap baby's nps near the midmle	Shout reflex is elicited
	Hand-mouth (Bahkin) Refley	- Shout renex is cherical
8	Check the hand-mouth (Babkin) reflex:	Baby:
0.	1) by your fingers (thumbs) symmetrically	- opens its mouth
	press to both baby's palms (to the ball of	- flexes its head:
	the thumb)	- bends arms (shoulders and forearms).
		- The hand-mouth (Babkin) reflex is elicited
	Palmar Grasp Reflex	
9.	Check the grasp reflex:	- Baby's fingers will reflexively grasp
	1) put your index fingers into baby's palms	doctor's index fingers
		- Palmar grasp reflex is lively and
		symmetrical
	Moro Reflex	
10.	Check the Moro reflex:	You can observe:
	1) Hit your palm on the table surface,	- symmetrical abduction of baby's arms at
	where the baby is lying	the shoulder and extension of arms at the
		elbow, with opening up of hand and
		curved fingers
		- followed by adduction of the arms and
		flexion of the forearm (i.e. an "embrace").
		- Moro reflex is lively and symmetrical
	Checking primitive reflexes in a child holded	l under the shoulders in an upright position
	with his back to the doctor	

11.	 Turn the baby to the side Lift the baby with both your hands under his shoulders with his back to yours so that four fingers of both your 	I'm starting to check primitive support and stepping reflexes*
	hands cover baby's chest in front and the thumbs support baby's head from the back / sides	
	3) Lift the baby in an upright position	
10	Support Reflex	Dahau
12.	1) touch a table surface with baby's feet	 Baby: first pulls both legs away from the surface; then tucks legs under; then straightens the legs pressing by them on the table surface. Support reflex is lively and symmetrical
	Stepping (automatic walking) Reflex	
13.	Check the stepping reflex:1) touch a flat surface with baby's one foot2) tilt its torso forward	 Baby takes steps on the table surface Stepping reflex is elicited
	Checking primitive reflexes in a child lying of	on the abdomen
14.	Place the baby on abdomen	I'm starting to check the protective and crawling reflexes*
	Protective reflex	
15.	Check the protective reflex:1) evaluate the position of the head of the baby lying on abdomen	 Baby: turns its head to the side; tries to lift it. Protective reflex is elicited
	Crawling Reflex	
16.	Check the crawling reflex:1) lightly press with your palm on the baby's soles2) check what the baby is doing	 The child is actively moving (crawling) forward with the inclusion of hands and feet Crawling reflex is elicited
17.	Make a conclusion	Everything is good, baby is activeAll reflexes are initiated well
18.	 Finish the examination 1) Put on the nappy (diaper) 2) Thank the mother 3) Ask if she has any questions 	Thank you!Do you have any questions?

Note:* not necessarily to say

Algorithm Of assessment of blood pressure (BP) of a child using tables of centile distribution of blood pressure indicators depending on gender, age and centile assessment of growth approved on meeting of propaedeutics of pediatrics department

Odessa national medical university

N⁰	Actions	Possible options for assessing anthropometric indicators:				
	Assessment of height using centile charts					
1.	Choose a centile chart to measure your baby's height based on gender and age					
2.	On the chart, indicate the point of intersection between the indicators of the child's age (vertical line) and his height (horizontal line).					
3.	Define the line (curve) or "track" between the lines (curves) where the intersection	5 centile	10 centile	25 centile	50 centile	
	point of height and age is. Comment the result	75 centile	90 centile	95 centile		
	Assessment of blood pressure by centile ta growth assessment *	able taking int	to account ag	e gender and	centile	
4.	Select a chart to evaluate your baby's blood pressure based on gender, age and centile height					
	Assessment of systolic BP	1				
5.	Find between which centiles the baby's systolic blood pressure is based on its centile in height					
6.	6. Comment the result of the assessment of systolic blood pressure (SBP) depending		<90 centile		$\geq 90 < 95$ -ro centile	
	on centile by height	$BP \ge 95$ -ro < (95-ro centile + 12 mmHg) OR 130 /80 - 139 /89		$H^{2} \geq (93-10 \text{ centrie})$ $+ 12 \text{ mmHg})$ $OR \geq 140 / 90 \text{ mmHg}$		
7.	Evaluate the result and comment the	Normal BP)	Elevated B	Р	
	assessment of the SBP	Stage I HT	N	Stage II HTN		
	Assessment of diastolic BP (DBP)					
8.	Find between which centiles the baby's diastolic blood pressure is based on its centile in height					
9.	Comment the result of the assessment of diastolic blood pressure (SBP) depending	<90 centile		≥90 < 95-го centile		
	on centile by height	BP \geq 95-ro BP \geq (92 < (95-ro centile		$BP \ge (95-r) + 12 mmH$ OR $\ge 140 / 100$	ro centile Ig) 90 mmHg	
10.	Evaluate the result and comment the	Normal BP	Normal BP		P	
	assessment of the DBP	Stage I HT	N	Stage II H7	ΓN	
11.	Make the conclusion and comment it	For example - Blood p OR - Systolic elevated	: pressure is no c and diastolic	rmal c blood pressi	ıre are	

* ANNEX. <u>https://www.cdc.gov/growthcharts/clinical_charts.htm</u> <u>https://www.nhlbi.nih.gov/files/docs/guidelines/child_tbl.pdf</u>

TABLE Updated Definitions of BP Categories and Stages

	For Children Aged 1–13 years	Children aged >13 years
Normal BP	$BP < 90^{th}$ centile	BP < 120/80 mmHg.
Elevated BP	BP $\ge 90^{\text{th}} < 95^{\text{th}}$ centile	BP 120/80 – 129 /80 mmHg
Stage I HTN	$BP \ge 95th$	BP 130 /80 – 139 /89 mmHg
	<95 th centile + 12 mmHg	
	OR 130 /80 – 139 /89 mmHg	
Stage II HTN	$BP \ge 95^{th}$ centile + 12 mmHg	$BP \ge 140 / 90 \text{ mmHg}$
_	$OR \ge 140 / 90 \text{ mmHg}$	

Complete blood count assessment algorithm in children, approved on meeting of propaedeutics of pediatrics department Odessa national medical university

Using appropriate terms, say the result of the complete blood count and white blood differential assessment 1. 1) Greet the mother 2) Explain what you are going to do - Good afternoon - Now I'm going to assess your child's complete blood count test 2. Determine child's age and sex and assess the complete blood cells (RBC) - Child's age _ months / years 3. Evaluate RBC count Anemia (erythropenia) Normal Erytrocytosis 4. 1) Evaluate haemoglobin concentration 2) If present, assess the severety of anemia - Mild (1) - Severe (III) Normal Elevated 5. Evaluate colour index Hypochromia Normal activity anemia Hyperchromia 6. Define bone marrow regenerative activity according to anemia Normal activity anemia Anemia with high reticulocyte count 7. Evaluate ESR - Normal Elevated 4. Patelet concentration Thrombocytopenia Normal Leukocytosis 5. Evaluate colour index Hypochromia Normal Elevated 6. Define bone marrow regenerative activity according to anemia Normal Elevated Assessment of Whod dells (WBC) 9. Evaluate blated concentration Thrombocytopenia Norma		Actions	Possible evaluation options			
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10 Assess the presence and relative content of young leukocyte forms - Normal - Left shift 11 Assess the relative content of leukocytes in the WBC differential Relative: - Age-appropriate (normal) Relative: - - neutropenia 12 Describe detected hematologic syndromes For example: There are changes in the blood test: - <		Assessment of WBC differential	1			
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11 Assess the relative content of leukocytes in the WBC differential Relative: - neutropenia - neutropenia Age-appropriate (normal) Relative: - neutrophilia - lymphocytosis - eosinophilia - lymphocytosis - eosinophilia 12 Describe detected hematologic syndromes For example: There are changes in the blood test: - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome - Impectious - Infectious - Impectious - Impect		content of young leukocyte forms			- The presence	
Image: Note of the syndromesImage: Note of the syndromesNote of the syndromesNote of the syndromeNote of the					of blast cells	
11 Assess the relative content of leukocytes in the WBC Relative: Age-appropriate Relative: - neutrophilia differential - lymphopenia - lymphopenia - lymphocytosis - eosinophilia 12 Describe detected hematologic syndromes For example: There are changes in the blood test: - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome - Infectious-inflammatory syndrome	11		D 1 d			
12 Describe detected hematologic syndromes - neutropenia (normal) - neutrophilia 12 Describe detected hematologic syndromes For example: There are changes in the blood test: - anemia, probably with iron deficiency OR 12 Describe detected hematologic syndromes For example: There are changes in the blood test: 12 Describe detected hematologic syndromes - Anemia, probably with iron deficiency OR - Infectious-inflammatory syndrome - Infectious-inflammatory syndrome	11	Assess the relative content of	Relative:	Age-appropriate	Relative:	
differential - lymphopenia - lymphocytosis 12 Describe detected hematologic syndromes For example: There are changes in the blood test: - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome - Infectious-inflammatory syndrome		leukocytes in the wBC	- neutropenia	(normal)	- neutrophilia	
12 Describe detected hematologic syndromes For example: There are changes in the blood test: - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome		differential	- Tymphopenia		- lymphocytosis	
12 Describe detected hematologic syndromes For example: There are changes in the blood test: - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome - Infectious-inflammatory syndrome					- eosinopnilia	
12 Describe detected hematologic syndromes For example. There are changes in the bloba lest. syndromes - Anemia, probably with iron deficiency OR - Thrombocytopenia OR - Infectious-inflammatory syndrome	12	Describe detected hometologie	For arompla. There	are changes in the bl	- monocytosis	
- Thrombocytopenia OR - Infectious-inflammatory syndrome	12	syndromos	- Anamia probabby	with iron deficiency O	DOU IESI. R	
- Infectious-inflammatory syndrome		Synui Unics	- Thrombooytonenia	OR	Λ	
			- Infontocytopenia OK Infactious_inflammatory syndrome			
13 Thank the mother	13	Thank the mother				

Normal lab values in children

1. Normal complete blood count values in children of different age

Analyte	Age						
-	1 day	4–5 days	6 months	1 year	4–5 years	6–12	>12 years
						years	
Hb g/L	180-240	150-200	110-140	110-140	115-140	115-140	B-130-160
							G-120-140
RBC x 10 ¹² /L	4,5-7,5	4,0-6,5	3,9–5,3	3,9–5,3	3,9–5,3	3,9–5,3	B - 4,0–5,0
							G -3,9–4,7
MCHC %	0,85-1,15	0,85-1,15	0,85-1,15	0,85-1,15	0,85-1,15	0,85-1,15	0,85-1,15
RTC ‰	5-50	5-50	5–20	5–20	5–20	5–20	5–20
PLT x 10 ⁹ /L	180-490	180-490	180-400	180-400	160-390	160-350	160-320
ESR mm/h	2-4	2-4	4-10	4-12	4-12	4-12	8-12
WDC - 109/I	0.20	0.14	6.12	5 10	5 12	4.10	4.0.5
WDC X 10 [°] /L	9-30	9-14	0-15	5-12	5-12	4-10	4-9,5
Band	1-10	1-5	1-5	1-5	1-5	1-5	1-4
neutrophils %							
Segmented	45-80	35-55(45)	20-40	20-40	35-55(45)	40-60	40-60
neutrophils %							
EOS %	1-5	1-5	1-5	1-5	1-5	1-5	1-5
BAS %	0-1	0-1	0-1	0-1	0-1	0-1	0-1
LYM %	15-35	35-55(45)	40-75	40-75	35-55(45)	30–45	30–45
MON %	2-10	2-10	2-10	2-10	2-10	2-10	2-10

2. Haemoglobin concentrations for the diagnosis of anaemia and assessment of severity (g/L) (WHO, 2011)

Age	Non-anemia	Anemia		
		Mild	Moderate	Severe
6 – 59 months	or higher	100 - 109	70 – 99	1
5 – 11 years	or higher	110 - 114	80 - 109	1
12 – 14 years	or higher	110 - 119	80 - 109	1
G	or higher	110 - 119	80 - 109	1
i				0
Boys 15 years and	or higher	110 - 129	80 - 109	1
older				0

Algorithm of assessment of 24-hour urine specific gravity test in children approved on meeting of propaedeutics of pediatrics department Odessa national medical university

	Actions	Possible variants of assessment				
-	Comment the results of each indication in 24-h	our specific gravity urine test using the				
	appropriate terms					
1.	Greet the mother	Good afternoon				
2.	Explain what you are going to do	Now I'm going to interpret the specific				
		gravity urine test to evaluate your baby's				
		kidney function				
3.	Determine child's age and assess the indicators	 - Age of child months / years 				
	according to normal ranges depending on age*	Boy / Girl				
4.	Calculate daytime diuresis (DD-1-4 samples) and					
_	record the result on the analysis form					
5.	Calculate nocturnal divisities (ND - 5-8 samples) and					
	record the result on the analysis form					
6.	Evaluate the ratio of daytime and nocturnal divisits to	- Normal (DD> ND)				
	determine if nocturia is present	- Nocturia ($DD \leq ND$)				
1.	Calculate 24-nour divises $(DD + ND)$ and record the					
0	Calculate the managements as of using exercised from the					
ð.	Calculate the percentage of urine excreted from the					
	Thurd make (F1) using proportion.					
	FI - 100 % 24 hour diurosis _ ¥9/					
	$X = 24$ hour diarasis $\times 100$. FI					
	$A = 24$ -nour interests ~ 100.11 Record the result on the analysis form					
9	Assess whether the 24-hour diversis is normal or not	- Norm				
7.	Assess whether the 2+ hour diffests is normal of not	- Polyuria				
10.	If 24-hours diuresis is 500 ml or less, calculate	- Norm				
	diuresis per 1 kg of body weight per day (24-hour	- Oliguria				
	diuresis: body weight)					
11	Descrid (un derline) the largest and high set uningra					
11.	Record (underfine) the lowest and highest urinary					
12	Assass fluctuations in the specific gravity of individual	Norm				
12.	Assess fluctuations in the specific gravity of mulvidual	- Nollil Hypostopurio				
	samples of unite	- Irypostenuria				
		- Hyperstenuria				
13	Indicate if changes in the kidney function are present	Detected				
15.	indicate if changes in the kickey function are present	- Normal kidney function				
		- Disturbed excretory function				
		- Disturbed concentration function				
		- Disturbed hormone synthesizing				
		function				
14	Thank the mother and ask if she has any questions	- Thank you				
		- Do you have any questions?				
		,				
	1	1				

* ANNEX. Normal ranges of laboratory indicators in children

1. Indicators of 24-hour urine specific gravity test for children

1. Daily diuresis

- Norm:
 - ► Approximately 0.8 2.0 liters
 - \succ 65-80% of the fluid intake per day
 - Significant fluctuations in the amount of urine during the day in individual samples 0 300 ml
 - Polyuria increase in 24-hour diuresis of more than 2.0 liters or more than 80% of the daily fluid intake
- **Oliguria -** 24-hour divresis less than 500 ml or ≤ 12 ml / kg / 24-hours
- Daytime diuresis (DD) outweighs nighttime approximately 2: 1 or 2/3 3/4 of 24-hour dieresis
- **Nocturia** nocturnal diuresis equal to daytime diuresis (DD: ND = 1: 1) in children older than 2 years (up to 2 years is the norm) or nocturnal diuresis prevails on daytime diuresis (DD <ND) at any age may be a sign of a violation concentration of kidney function
- 2. Specific gravity:

Normal concentrational function of kidney:

Fluctuations in specific gravity during the day within 1 008 - 1 025

AND

- at least in one sample the specific gravity should be not less than 1 018, <u>in children under 5</u> years not lower than 1 012
- **Isostenuria** inability of the kidneys to produce concentrated and diluted urine specific gravity of urine approximately the same as primary urine (about 1,010), fluctuations in all portions per day 1 009-1013
- **Hypostenuria** urine specific gravity is constantly low with small fluctuations of 1 008 and below is also a sign of impaired renal concentration, most often in diabetes mellitus
- **Hyperstenuria** increased specific gravity of urine in all samples higher than 1 030 the result of increased level of dense substances in the urine due to dehydration, or due to increased reabsorption of water in the renal tubules in vascular insufficiency, or due to increased glucose level in the urine

Algorithm of urinalysis result assessment in children approved on meeting of propaedeutics of pediatrics department Odessa national medical university

	Actions	Possible variants of assessment
	Comment the result of each	urinalysis test indicators using the appropriate terms
1.	Greet the mother	
2.	Determine child's age and gender and	
	assess child's indicators of	
	urinanalysis according to his/her age	
	and gender *	
	Gross and chemical examination	
3.	Urine colour	- Light yellow
		- Dark brown
		- "Coca-cola"
4.	Assess the transparency of urine	- Transparent
		- Cloudy
5.	Assess the pH	- Neutral
		- Acidic
		- Alkaline
6.	Assess protein level	- Norm
		- Proteinuria
7.	Assess glucose level	- Norm
		- Glucosuria
8.	Assess the level of ketones	- Norm
		- Ketonuria
9.	Assess the nitrite level	- Norm
		- Nitrituria
	Microscopic examination	
10.	Assess the number of red blood cells	- Norm
		- Hematuria
11.	Assess the number of leucocytes	- Norm
		- Leucocyturia
12.	Assess the presence of the epithelium	
	and its type	- Squamous epithelial cells few- norm
		- Transitional-pathological
		- Renal tubular-pathological
13.	Assess the presence of casts and its	- Norm
	type	- Cylindruria: hyaline, granular, epithelial, erythrocytic,
		leukocyte, waxy
14.	Assess the presence of crystals and	- Norm
	their appearance	- Crystaluria, Uraturia, Oxalaturia
15.	Assess the presence of bacterias	- Norm
		- Bacteriuria
16.	Make a conclusion about changes in	Example:
	the urinanalysis and determine which	- Urinary syndrome: leukocyturia, erythrocyturia,
	clinical nephrological syndrome it	bacteriuria OR
	represents	- Nephritic syndrome OR
		Nephrotic syndrome
17.	Tell what kind of disease these	Example:
	changes are characteristic of	Urinary tract infection OR
		Glomerulonephritis
18.	Thank the mother and ask if she has	
	any questions	

рН	5,0-7,5
Protein	< 0,033 g/l
Glucose	Norm-absent
Ketones	Norm-absent
Bilirubin	Norm-absent
Nitrites	Norm-absent
Hemoglobin	Norm-absent
Ervthrocytes	< 2 /hpf
Leucocytes	
- Boys	< 5 /hpf
- Girls	< 10 /hpf
Squamous epithelial	
cells	
- Girls	< 5 /hpf
- Boys	< 3 /hpf
Transitional epithelial cells	< 1 /hpf
Renal tubular epithelial cells	Norm-absent
Casts	Norm-absent
Bacteria	Norm-absent
Crystals	Norm-absent
Mucus	Norm-small amount

1.Indicators of urinalysis in children

Algorithm			
for the clinical examination and evaluation of meningeal symptoms in children			

№	Actions	Possible variants of evaluating the meningeal symptoms			
	Great the mother and avalain what you are	Good afternoon now I'm coin	a to examine the signs of		
1	going to do	moning col irritation in your child			
1	going to do	Moningoal symptoms			
			nogativa (normal)		
	Delnate a large fontanel	positive	negative (normal)		
\mathbf{r}	Palpate a large fontanel in infant commonting	Positive symptom bulging	Normal pagative symptom: a		
2	all your actions and results:	tonsed and pulsing large	large fontenal at the level of		
	1) palpate the large fontenal on the upper	fontanal	skull bongs no tension and		
	part of the head in the area bounded by	Tomaner	pulsation		
	two parietal and frontal bones		pulsation		
3	To investigate the following symptoms place				
5	the patient in supine position with less				
	commenting all your actions				
	Check for nuchal rigidity				
1	Check for nuchal rigidity commenting all your	Positive symptom:	Normal negative symptom:		
4	actions and results:	r ostrve symptom.	flexion is free and painless		
	1) At one time:	- pain - difficulty and	nexion is nee and paintess		
	- slightly pressing fix the chest of the child	sometimes even			
	lying supine with your right (dominant)	impossibility due to			
	hand:	neck muscle tension			
	- place the left hand under the child's head	(neck muscles			
	2) try to flex head forward - towards the	rigidity)			
	chest	ingraity)			
	Check The Brudziński neck sign				
5	Check The Brudziński neck sign commenting	Positive symptom: forced	Normal -negative symptom:		
C	all vour actions and results:	("protective") flexion of both	no leg flexion		
	1) At one time:	hips and knees	6		
	- slightly pressing, fix the chest of the child	l			
	lying supine with your right (dominant)				
	hand;				
	- place the left hand under the child's head				
	2) try to flex head forward - towards the				
	chest				
	3) look at child's legs				
	Check the Brudziński symphyseal sign				
6	Check the Brudziński symphyseal sign in	Positive symptom: flexion of	Normal -negative symptom:		
	child lying supine <u>commenting all your</u>	both hips and knees	no leg flexion		
	actions and results:				
	1) press on pubic symphysis with the				
	border of your hand				
	2) look at child's legs				
7	Check the Brudzinsky leg sign				
1	Check the Brudzinsky leg sign in child lying	Positive symptom: flexion of	Normal -negative symptom:		
	supine <u>commenting all your actions and</u>	the opposite leg	no flexion of the opposite leg		
	<u>10 necesivaly flay one his lac in the him</u>				
	1) passivery nex one ms leg in the mp				
	2) look at child's opposite log				
	Chack the Karnia's sign				
8	Check the Kernig's sign in child lying suring	Positive symptom.	Normal- negative symptom		
0	commenting all your actions and results:	- extension is painful and	- such movement is assy and		
	1) 1) place one hand on one knee of the	- it is not nossible to	nainless		
	child: support the shin of the same	completely bend the leg (the	- tibia extends to a straight		
	child, support the binn of the bund	angle between the thigh and	line with the hip (180 °)		

	 limb in the area of the Achilles tendon with the other hand; 2) passively bend the limb in the hip and knee at right angles (90 °): 	the shin when extending the leg is not more than 135 °)	
	3) straighten the limb in the knee		
	Check the Lesage's sign		
9	Check the Lesage's sign <u>commenting all your</u>	Positive symptom:	Normal- negative symptom:
	actions and results:	- tightening of the legs to	- legs move freely (bend and
	1) hold the infant under the armpits	the abdomen (flexion in the	extend)
	2) lift the infant holding his head from	hips and knees)	
	the back with your index fingers	-continued fixation in such	
	3) look at the infant's legs	a curved position	
10	Complete the examination: announce a		The child has no signs of
	conclusion and thank the mother		meningeal irritation.
			Thank you.

Notes: * -palpation of the large fontanel and verification of the sign of Lesage is performed in children under the age of 1 year; the Brudzinski and Kernig's signs are examined after 4 months of life, since in healthy children up to 3-4 months of age they are a physiological feature, which is associated with physiological hypertonicity of the muscles that flexes the upper and lower extremities.