


ОҢТҮСТІК-ҚАЗАҚСТАН <b>MEDISINA</b> <b>AKADEMIASY</b> «Оңтүстік Қазақстан медицина академиясы» АҚ	 <b>SKMA</b> -1979-	SOUTH KAZAKHSTAN <b>MEDICAL</b> <b>ACADEMY</b> АО «Южно-Казахстанская медицинская академия»
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**Methodological guidelines for students on teaching clinical skills in The center  
of practical skills  
(using action algorithms)**


**Specialty:** «General medicine» 6B10101

**Discipline:** «Basics of childhood diseases-1»

**Course:** 4<sup>th</sup> course

**Department:** Pediatrics-1

**Compiler:** Baltabaeva B.S.

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Considered at a meeting of the Department of Pediatrics-1

Protocol № 6 from 24.01.2023 year

Head of department, PhD                                   Kemelbekov K.S.

**1. Name of clinical skill:** Probe feeding of newborns.

**2. Learning objective:**


- To teach to correctly assess the degree of prematurity and severity of the condition to simulate a newborn in the gym;
- To teach students to work out practical skills on the technique of feeding newborns through the probe to automatism on simulators.
- Teach to choose the right way of feeding, which is determined by the severity of the child's condition, birth weight, gestational age;
- Use of enteral feeding in the maximum possible volume;
- Use only specialized formula milk for artificial feeding, intended for premature babies.

**3. Theoretical knowledge required for mastering skills:**

Indications. Unconsciousness of the child, mental disorders accompanied by complete refusal to eat, traumatic injuries of the oral cavity, lack of sucking or swallowing reflexes, prematurity of the III degree





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Contraindications for probe feeding:

- malformations of the gastrointestinal tract, requiring emergency surgical intervention;
- abdominal distention;
- lack of active peristalsis;
- pathogenic meconium.

A gastric tube of appropriate size, which must meet the following requirements: be made of thermolabile material with special surface treatment for reduction of sticking effect in the mucosa to have a standard adapter of the type "Luer" for connection with a syringe or dropper, the cover on the adapter, colour code adaptor, centimeter scale, radiopaque strip. The recommended size of the probe depending on body mass

Recommended probe sizes depending on the child's body weight:

body weight less than-1000 g-nasal-No. 4, oral-No. 6, less than 2500 g-nasal-No. 6, oral-No. 10. Syringe (10 and 20 ml depending on the age and weight of the child).

Possible complications during the procedure of feeding through a gastric probe:

1. Using a probe of inappropriate size.

\* Trauma of the nasal mucosa.

\* Development of bedsores in the nasal passage.

\* Hyperproduction of mucus with the development of secondary bacterial rhinitis.

2. "Tightening" of the probe in the oesophagus. At the same time, feeding by the free piston-free method is impossible, which is the main clinical criterion for the wrong position of the probe. However, if a dispenser or "piston" method is used, food will enter the esophagus, the following complications may develop:

• Injury of the esophagus

• Esophagitis

\* Vomiting with possible aspiration

In order to avoid such a complication, before each introduction of food, it is necessary to pull the piston on yourself and get the gastric contents.

3. Conducting a probe behind the pyloric flap into the duodenum. In this case, the food enters the small intestine, bypassing the stomach.

\* Irritation of the pyloric sphincter, which leads to vomiting (the possibility of aspiration), a decrease or increase in the tone of the sphincter.

\* Violation of the process of digestion, digestion and absorption.

#### **4. A list of trainers, simulators, mannequins models:**

1. Baby mannequin "Nursing Baby", without VitalSim<sup>o</sup>

2. Mannequin baby CriSis, luxury with ECG (Deluxe Infant CriSis Manikin with EGG)

3. Mannequin baby CriSis, luxury with ECG (Deluxe Infant CriSis Manikin with EGG

4. The list of medical products and equipment: simulator-1, gastric probe-1pc, glycerin - 1 PC, pink wipes 5-10, breast milk, phonendoscope-1pc, gloves-1 pair, adhesive plaster, 20 ml syringe, tray, centimeter tape.



### 5. Algorithm of execution skills

№	Algorithm of execution skills	Execution		
		Yes	No	Note
1	Wash and dry hands thoroughly, put on gloves.			
2	Measure the length of the insertion probe - from the earlobe to the tip of the nose and from the tip of the nose to the xiphoid process. To make a label on the probe			
3	To dial into the syringe the required amount of milk.			
4	Give the patient the correct position-lying on his side			
5	Take the probe with your right hand, pre-moistening			

	the end of the probe in glycerin			
6	Insert the probe slowly through the nose or mouth to the mark.			
7	Make sure the correct introduction of the probe into the stomach (no choking, no wheezing during auscultation).			
8	Attach a syringe to the probe with the typed milk and make a slow introduction of milk			
9	Disconnect the syringe, close the end of the probe with a plug.			
10	Fix the probe with a band-aid on the child's cheek.			

## 6. Tasks

### Task 1

The child was born from the fourth pregnancy, the second birth in the period of 27 weeks of gestation. Pregnancy proceeded against the background of toxicosis in the 2nd half, toxoplasmosis, fetal-placental insufficiency, anemia of medium degree. Body weight at birth 1050 grams, length 32 cm Diagnosed at birth: "RDS II degree." To 14 day life marks lethargy, muscular hypotension, oppression reflexes innate automatism, regurgitation, the absence of dynamics masses bodies, sucking reflex is missing. The skin is dry, icteric. In the lungs breathing weakened in all fields, no wheezing. There is a tendency to tachycardia, the rhythm is correct. The abdomen is soft, distended, peristalsis active.

Preliminary diagnosis: Bilateral pneumonia. Perinatal CNS lesion. Neonatal jaundice.

Your actions?

Demonstrate probe feeding on the simulator


### Tests:

1. The length of the probe in the gastric method is:

- A) 10-30 cm
- C) 30-50 cm
- C) 50-70 cm
- D) 60-80 cm
- E) 100 cm

2. The length of the probe in the duodenal method is:

- A) 10-30 cm
- C) 30-50 cm
- C) 50-70 cm
- D) 60-80 cm

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E) 100 cm

3. The length of the probe inserted through the nose, a newborn with a body weight of 1000 g:

A) 13-21 cm

B) 21-26 cm

(C) 23-24 cm

D) 30-40 cm

E) 40-50 cm

4. The length of the probe inserted through the nose, a newborn with a body weight of 2000 g:

A) 13-21 cm

B) 21-26 cm

(C) 23-24 cm

D) 30-40 cm

E) 40-50 cm

5. The length of the probe, introduced through the nose, a newborn with a body weight of 2500-3500 g:

A) 13-21 cm

B) 21-26 cm

(C) 23-24 cm

D) 30-40 cm

E) 40-50 cm

6. The length of the probe inserted through the nose, a newborn with a body weight of 4000-5000 g:

A) 13-21 cm

B) 21-26 cm

(C) 23-24 cm

D) 30-40 cm

E) 40-50 cm

7. The inner diameter of the probe, administered to a newborn with a body weight of 1000 g:

A) 0.64 mm

C) 0.81 mm

(C) 1 mm

D) 2 mm


E) 3 mm

8. The inner diameter of the probe administered to a newborn with a body weight of 2500-3500 g:

A) 0.64 mm

C) 0.81 mm



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(C) 1 mm

D) 2 mm

E) 3 m


## 7. Literature:

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9. Lucas A., Fewtrell M. S., Morley R. et. al. Randomized trial of nutrient-enriched formula versus standard formula for post discharge preterm infants. Pediatr. 2001; 108 (3), p. 703-711.


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### **13. Standards of correct answers for the assessment material:**

Answers: 1-B, 2-C, 3-A, 4-B, 5-C, 6-D, 7-B, 8-C.

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