

PEDIATRICS

CATALOG OF MANUFACTURED PRODUCTS



SOLUTION
SCIENTIFIC AND TECHNICAL CENTER

000 STC «SOLUTION»

TIN: 1224006152, CHECKPOINT: 122401001, R/sch: 40702810329040003018

Bank: NIZHNY NOVGOROD BRANCH OF ALFA-BANK JSC

BIC: 042202824, Correspondent account: 30101810200000000824



Office 303, Absalyamova str., 36,
Kazan, Republic of Tatarstan, 420124,
Russian Federation



ntcreshenie.ru



8 (843) 562 0004



info@ntcreshenie.ru

DEAR PARTNERS!

The scientific and technical center «Solution» specializes in the development and manufacture of mannequins and medical simulators of any complexity for completing training centers, school classes, driving schools, medical educational institutions.

In assortment of the company there is a wide range of medical mannequins to test the ability of first aid for injuries, burns, any foreign objects in the upper respiratory tract, techniques, cardiovascular pulmonary resuscitation, simulators and training systems for different sections of medicine (cardiology, dentistry, proctology, gynecology, etc.)

Our specialists carried out extensive work on the study of world experience in the field of educational equipment for the training of health workers in various specialties, because of which our own samples of educational products were developed. Our products in quality and functional characteristics are equal to foreign analogues.

The use of training complexes in the process of training medical workers allows for practical training of the skills of conducting most basic medical procedures in conditions close to real ones, which is achieved through the use of modern materials that simulate human living tissue.

The product range of STC «Solution» is constantly updated with new developments and solutions for an effective educational process.

The company STC «Solution» offers its customers the development and manufacture of simulators of any complexity according to an individual project. If you could not find the right equipment in the company's assortment, our specialists will develop a unique product for you directly for your goals and objectives.

We hope for fruitful cooperation and ask you to inform us about your interest. We are pleased by your interest in our production.

With best regards,
Director of STC «Solution»
P. A. KASHIN



**STC «SOLUTION» offers cooperation in the production
and supply of SPECIALIZED EDUCATIONAL EQUIPMENT**

M1088

MODEL OF THE UPPER LIMB OF A NEWBORN FOR PRACTICING THE SKILLS OF INTRAVENOUS PROCEDURES

This simulator is a specialized stand with an anatomical model of a newborn's hand with superficial veins that installed on it. The simulators of the veins and surrounding tissues are structurally made taking into account functional mobility and elasticity, which simulates the realism of the procedure. The vessels are filled with a blood simulator to control the process, as well as to obtain a visual. If the blood collection procedure is performed correctly, liquid will appear in the syringe. When the needle enters the vein correctly, and the administration of drugs is carried out, the plunger with the syringe rod easily moves and increases the volume in the blood container. The pear, which is part of the simulator, creates pressure in the blood container.

The simulator is designed to practice the skills of intravenous injection of needles and catheters, infusion of solutions and medicines, as well as blood collection for analysis from a vein.



Dimensions: 220x125x320 mm



Weight: 2,5 kg

Equipment:

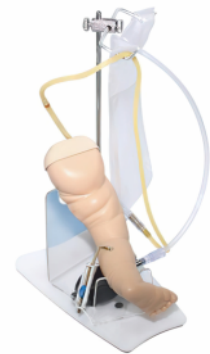
- model of the upper limb of a newborn;
- hand skin kit;
- passport of product;
- injection kit;
- stand with non-slip feet;
- user manual.
- a set of replaceable veins;

M1087

MODEL OF THE LOWER LIMB OF A NEWBORN FOR PRACTICING THE SKILLS OF INTRAVENOUS AND INTRAMUSCULAR INJECTIONS

This simulator is a specialized stand, with an anatomical model of the newborn's leg with superficial veins installed on it. The simulators of the veins and surrounding tissues are structurally made taking into account functional mobility and elasticity, that simulates the realism of the procedure. The vessels are filled with a blood simulator to control the process, to obtain a visual picture. If the blood collection procedure is performed correctly, liquid will appear in the syringe. When the needle enters the vein correctly, and the administration of drugs is carried out, the plunger with the syringe rod easily moves and increases the volume in the blood container. The pear, which is part of the simulator, creates pressure in the blood container. The simulator provides the possibility of performing intramuscular injections.

The simulator is designed to practice the skills of intravenous injection of needles and catheters, infusion of solutions and medicines, as well as blood collection for analysis from a vein. The simulator is made of materials that tactilely resemble the tissues of the human body.



Dimensions: 320x230x130 mm



Weight: 0,6 kg

Equipment:

- model of the upper limb of a newborn;
- a set of skin for the lower limb (1 pc.);
- injection syringe (2 pcs.);
- dry blood concentrate (5 g.);
- a set of replaceable veins (1 pc.);
- a specialized stand;
- artificial blood container;
- passport of product;
- user manual.

M1003

ARM SIMULATOR FOR PRACTICING THE SKILLS OF INTRAVENOUS PROCEDURES (CHILD 5-8 YEARS)

The simulator is a precisely executed model of the upper limb of a child (5-8 years old) of a person with superficial veins, mounted on a base (stand).

The material used in the manufacture, fully imitates the skin and subcutaneous fat of a person. Imitators of veins and surrounding tissues are made taking into account functional mobility and elasticity, and provides a «sense of failure» of the needle during intravenous injection. The needle holes remain invisible even after repeated insertion into the same place.

The hand model makes it possible to practice several skills at once:

- blood sampling;
- injection;
- infusion.

The simulator has several points for blood sampling, injection and infusion. The veins on the arm are well palpable, due to this, you can quickly learn the skills to perform manipulations on the upper limb.

The simulator is great for group classes, respectively, all materials are replaceable. The network of veins and arteries is shown on the base, which contributes to the study of the anatomy of the upper limb.



Dimensions: 600x130x100 mm



Weight: 1,5 kg

Equipment:

- base (stand);
- capacity for dilution of blood;
- spare veins;
- passport of product;
- anatomical model of the upper limb;
- pressure pear;
- injection kit;
- user manual.
- talc;
- spare skin;

M1083

SIMULATOR OF THE BASICS OF TRANSPORT IMMOBILIZATION AND X-RAY DIAGNOSTICS

This simulator is a manikin of a teenager of 11-12 years old, that has the mobility of large joints. The design of the simulator allows you to create pathological mobility throughout the upper and lower extremities.

The simulator is designed for practical training in the relevant sections of traumatology, radiology for the acquisition of the following skills:

- technique (methods) of placing the patient in the course of obtaining X-rays;
- patient transport and movement;
- applying splints and bandages;
- practicing the skills of describing radiographs.



Dimensions: 1200x400x200 mm



Weight: 14 kg

Equipment:

- manikin (torso, head, upper and lower limbs);
- set of radiographs;
- passport of product.

M1044

CHILD CARE TRAINING MODEL

This model is a model of a child and it is designed to practice nursing care. The upper and lower limbs are mobile in the main joints. The physical properties of the model materials are close to the natural values.

On the simulator, you can practice:

- inhalation;
- washing your hair and face;
- working with the nebulizer;
- washing the ears and eyes, instilling drops;
- feeding through the mouth and nasal probe;
- suction of sputum from the oral cavity;
- gastric lavage;
- intramuscular and subcutaneous injections into the deltoid muscle;
- intramuscular injections into the thigh;
- intramuscular injections into the gluteal muscle;
- enema setting;
- oral care;
- catheterization, bladder lavage;
- change of clothes.



The simulator is intended for use by students of universities and medical colleges in the course of accreditation.



Dimensions: 570x280x140 mm



Weight: 3 kg

Equipment:

- baby dummy;
- abdominal wall (2 pcs.);
- replacement stomach (2 pcs.);
- sanitary napkins (100 pcs.);
- lubricant;
- the diaper;
- body;
- gastric tube;
- catheter;
- nebulizer;
- transport bag;
- passport of product
- user manual.

M1067

IMITATION OF THE RESPIRATORY TRACT AND LUNGS (FOR CHILDREN)

It is a model of the respiratory system that reproduces the airways and lungs. It is easily replaced. The model serves as an expendable material for cardio-pulmonary resuscitation simulators. The one-way valve reduces the risk of cross-infection in group activities. When it is using correctly, the model provides inflating and excursion of the chest.



Dimensions: 225x70 mm



Weight: 0,05 kg



Equipment:

- imitation of the respiratory tract and lungs (children's);
- passport of product.

T1008

BABY TRAINING SIMULATOR FOR DEVELOPING FOREIGN BODY REMOVAL SKILLS

The training mannequin imitates a child's body and allows you to develop skills to remove a foreign body from the upper respiratory tract in children under the age of 1 year.

The training simulator is designed to equip educational medical classes and centers for the accreditation of specialists – pediatrician, life safety rooms and allows training in conditions that are close to real due to high-quality imitation of human anatomy and the structure of the upper respiratory tract.

Recommended for equipping medical training centers, Driving schools as part of the Federal Target Program «Improving Road Safety», Humanitarian and Digital Education Centers «Growth Point» as part of the Modern School project.

The training simulator is made of high-quality wear-resistant PVC, ABS plastic and polyurethane, which ensures comfortable operation and a long service life of the product.



Dimensions: 580x340x160 mm



Weight: 2,8 kg

Equipment:

- mannequin (torso, head, upper and lower limbs);
- transport bag;
- polyethylene foam mat;
- transport bag;
- passport of product;
- user manual;
- methodological recommendations.

T1016

BABY TRAINING SIMULATOR FOR CPR PRACTICING

The training mannequin imitates a child's body and allows you to develop skills for cardiopulmonary resuscitation.

The training simulator is an anatomical model of a child up to one year old, designed to develop cardiopulmonary resuscitation skills with the ability to control the exercises performed using the built-in light-dynamic unit.

The mannequin has a realistic movable connection of the body with the head, as well as upper and lower limbs. The design of the body includes parts and nodes in the form of anatomical landmarks (chest, xiphoid process of the sternum) for correct resuscitation.

The simulator is designed to acquire knowledge and skills necessary for the following complex of resuscitation measures:

- performing closed-chest cardiac massage (automatic control the position of the hands, the effort and rhythm of the impact on the victim's chest);
- performing rescue breaths: mouth-to-mouth respiration.

The control of the corresponding exercises is provided by the built-in unit informing with the help of a light and sound indication about the correctness of the ventilation of the lungs in terms of volume, depth of compression and the position of the hands.



Dimensions: 570x280x140 mm



Weight: 2 kg

Equipment:

- baby training simulator;
- passport of product;
- body;
- user manual.
- transport bag;

M1082

CHILD MODEL FOR MASTERING THE SKILLS OF PEDIATRIC CARE

This manikin is intended for practicing practical skills (within the framework of the primary accreditation program in the specialty «Pediatrics» for the station «Preventive Examination of the Child»), care and preventive examination. The head and neck, large joints of the limbs are mobile. The facial mask, limbs and ventral part of the torso are made of materials that visually and palpationally imitate the skin of the human body.

The design of the simulator provides for the development of the following skills of care and inspection:

- washing the ears and eyes, instilling drops;
- suction of sputum from the oral cavity;
- gastric lavage;
- intramuscular and subcutaneous injections into the deltoid muscle;
- injections into the lateral broad thigh muscle;
- catheterization, bladder lavage;
- change of clothes;
- breast circumference measurement;
- oral care;
- feeding through the mouth and nasal probe;
- intramuscular injections in the buttocks;
- stoma care;
- enema setting;
- testicular palpation;
- head circumference measurement;
- height and weight measurement.



Dimensions: 570x280x140 mm



Weight: 3 kg

Equipment:

- baby dummy;
- abdominal wall (2 pcs.);
- removable stomach (2 pcs.);
- sanitary napkins (100 pcs.);
- lubricant;
- the diaper;
- body;
- gastric tube;
- catheter;
- libra;
- height meter;
- measuring tape;
- transport bag;
- passport of product;
- user manual;
- methodological recommendations.

T1031

FIRST AID ROBOT SIMULATOR «TOSHA-01»

Robot simulator is designed as a model of a teenager 8-10 years old. A face mask with a valve and replaceable airways eliminate the risk of cross-infection during group classes. The set of materials gives maximum realism in the moment of performing chest compressions and measures to press the wings of the nose during a ventilator.



Functional features:

Compliance of anatomical landmarks necessary for teaching resuscitation skills:

- angle of the lower jaw and laryngeal cartilage, sternocleidomastoid muscles;
- clavicles, costal arches, xiphoid process.

The body of the simulator dummy includes various indicators that reflect the correct and erroneous actions of students:

- with sufficient strength and depth of compression, a pulse wave is recorded on the carotid artery and the corresponding indicator on the chest of the simulator lights up;
- if the ventilator is carried out correctly, the chest is raised and the corresponding indicator lights up;
- when the xiphoid process is «fractured», the red indicator lights up and a beep sounds;
- when a «rib fracture» occurs, the red indicator lights up and a beep sounds;
- the effectiveness of resuscitation is determined by the «narrowing of the pupils» and the appearance of a pulse on the carotid artery.

Simulator Dummy Modes:

1. «Clinical death» with the display of correct and incorrect actions-training

When chest compressions are performed correctly, a pulse wave appears on the carotid artery, a green indicator lights up. If the ventilator is performed correctly, a chest excursion occurs and the indicator light lights up. In the case of effective resuscitation actions in the allotted time-2 minutes (if no mistakes were made), an independent pulse appears on the carotid artery and the pupils «narrow». This condition persists for one minute, then it changes to the initial state of «clinical death». This mode is also displayed in the software.

2. «Clinical death» without displaying correct and incorrect actions-exam

In this mode, there is no LED indication and display of actions in the software.

Effective resuscitation measures can be judged by the appearance of a pulse wave on the carotid artery.



Dimensions: 580x280x210 mm



Weight: 7,5 kg

Equipment:

- robot simulator;
- AA batteries (4 pcs.);
- traumatic tourniquet;
- a computer program that provides visualization, monitoring, and evaluation of the student's actions when providing first aid to the victim;
- passport of product;
- USB cable for connecting to a computer;
- transport bag made of wear-resistant fabric;
- first aid kit;
- user manual.

T1032

FIRST AID ROBOT SIMULATOR «TOSHA-02»

Robot simulator is designed as a model of a teenager 8-10 years old. The upper and lower limbs of the dummy are mobile in the main joints, which makes it possible to practice the skills of transporting victims and providing first aid for dislocations and fractures. A face mask with a valve and replaceable airways eliminate the risk of cross-infection during group classes. The set of materials gives maximum realism in the moment of performing chest compressions and measures to press the wings of the nose during a ventilator.



Functional features:

Compliance of anatomical landmarks necessary for teaching resuscitation skills:

- angle of the lower jaw and laryngeal cartilage, sternocleidomastoid muscles;
- clavicles, costal arches, xiphoid process.

The body of the simulator dummy includes various indicators that reflect the correct and erroneous actions of students:

- with sufficient strength and depth of compression, a pulse wave is recorded on the carotid artery and the corresponding indicator on the chest of the simulator lights up;
- if the ventilator is carried out correctly, the chest is raised and the corresponding indicator lights up;
- when the xiphoid process is «fractured», the red indicator lights up and a beep sounds;
- when a «rib fracture» occurs, the red indicator lights up and a beep sounds;
- the effectiveness of resuscitation is determined by the «narrowing of the pupils» and the appearance of a pulse on the carotid artery.

Simulator Dummy Modes:

1. «Clinical death» with the display of correct and incorrect actions-training

When chest compressions are performed correctly, a pulse wave appears on the carotid artery, a green indicator lights up. If the ventilator is performed correctly, a chest excursion occurs and the indicator light lights up. In the case of effective resuscitation actions in the allotted time-2 minutes (if no mistakes were made), an independent pulse appears on the carotid artery and the pupils "narrow". This condition persists for one minute, then it changes to the initial state of "clinical death". This mode is also displayed in the software.

2. «Clinical death» without displaying correct and incorrect actions-exam

In this mode, there is no LED indication and display of actions in the software.

Effective resuscitation measures can be judged by the appearance of a pulse wave on the carotid artery.



Dimensions: 1200x400x200 mm



Weight: 15 kg

Equipment:

- robot simulator;
- AA batteries (4 pcs.);
- traumatic tourniquet;
- a computer program that provides visualization, monitoring, and evaluation of the student's actions when providing first aid to the victim;;
- passport of product;
- USB cable for connecting to a computer;
- transport bag made of wear-resistant fabric;
- first aid kit;
- user manual.

T1021

FIRST AID ROBOT SIMULATOR «TOSHA-03»

Robot simulator is designed as a model of a teenager 8-10 years old. The dummy makes it possible to practice the skills of transporting victims and providing first aid for dislocations and fractures. A face mask with a valve and replaceable airways eliminate the risk of cross-infection during group classes. The set of materials gives maximum realism while performing chest compressions and during measures to press the wings of the nose during a ventilator.



Functional features

Compliance with anatomical landmarks necessary for teaching resuscitation skills:

- angle of the lower jaw and laryngeal cartilage, sternocleidomastoid muscles;
- clavicles, costal arches, xiphoid process.

The body of the simulator dummy includes various indicators that reflect the correct and erroneous actions of students:

- with sufficient strength and depth of compression, a pulse wave is recorded on the carotid artery and the corresponding indicator on the chest of the simulator lights up;
- if the ventilator is carried out correctly, the chest is raised and the corresponding indicator lights up;
- when the xiphoid process is «fractured», the red indicator lights up and a beep sounds;
- when a «rib fracture» occurs, the red indicator lights up and a beep sounds;
- the effectiveness of resuscitation is determined by the «narrowing of the pupils» and the appearance of a pulse on the carotid artery;
- in a state of «coma», the simulator must be turned over on its stomach within 30 seconds, if this does not happen, «the teenager dies»: the pulse on the carotid artery disappears, the pupils dilate and the voice accompaniment informs about this;
- in case of incorrect handling of the «damaged limb» when applying a splint to the ankle joint and lower leg, the voice accompaniment reports «pain» and a red glow of the «damaged» limb appears;
- if the «bleeding from the femoral artery» is not stopped within 2 minutes, the pulse on the carotid artery disappears.

Simulator Dummy Modes:

- «Clinical death» with the display of correct and incorrect actions-training;
- «Clinical death» without displaying correct and incorrect actions-exam;
- «Coma»;
- «Fracture of the shin bones»;
- «Clinical death and bleeding from the femoral artery»;
- «Bleeding from the femoral artery»;
- «Precardial stroke».



Dimensions: 1200x400x200 mm



Weight: 15,5 kg

Equipment:

- robot simulator;
- AA batteries (4 pcs.);
- traumatic tourniquet;
- a computer program that provides visualization, monitoring, and evaluation of the student's actions when providing first aid to the victim;;
- passport of product;
- USB cable for connecting to a computer;
- transport bag made of wear-resistant fabric;
- first aid kit;
- user manual.



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8 800 201 32 31