



جامعة الإسراء
ISRA UNIVERSITY



FACULTY OF NURSING

Educational Models and Equipment in Nursing Skills
Laboratories

Examples of Educational Models and Equipment in Nursing Skills Laboratories



Full-body nursing training mannequin

A full-body mannequin

A life-size nursing training mannequin is used to practice basic and advanced nursing skills such as patient positioning, hygiene care, injections, and vital signs assessment.



A musculoskeletal model

A musculoskeletal model

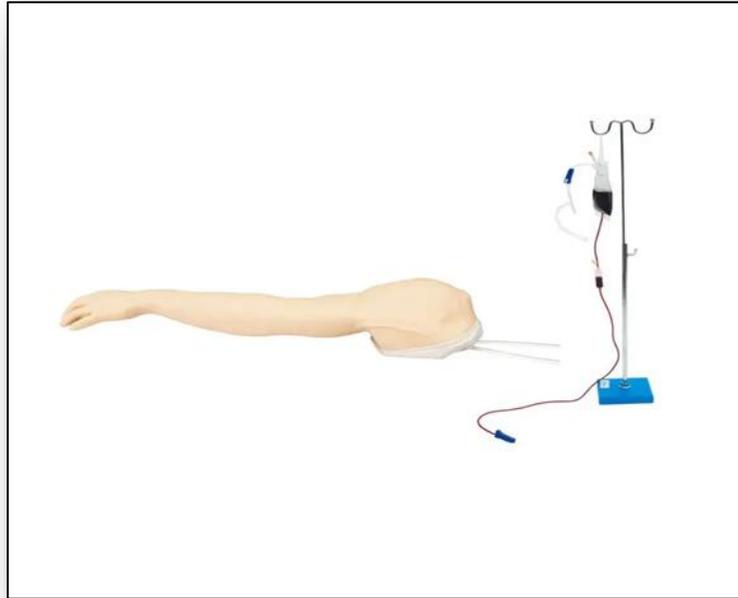
It is a framework that describes the body's bones, joints, muscles, and connective tissues and how they work together to support and move the body. It is used to assess patient movement, understand biomechanical problems, and identify risks for musculoskeletal disorders.



A CPR training doll

A CPR training doll

A CPR training doll is a life-like replica of a human used for practicing cardiopulmonary resuscitation and first aid techniques. They are designed with realistic features to simulate human anatomy, providing tactile feedback for chest compressions and artificial respiration.



Injection training hand models

Injection training hand models

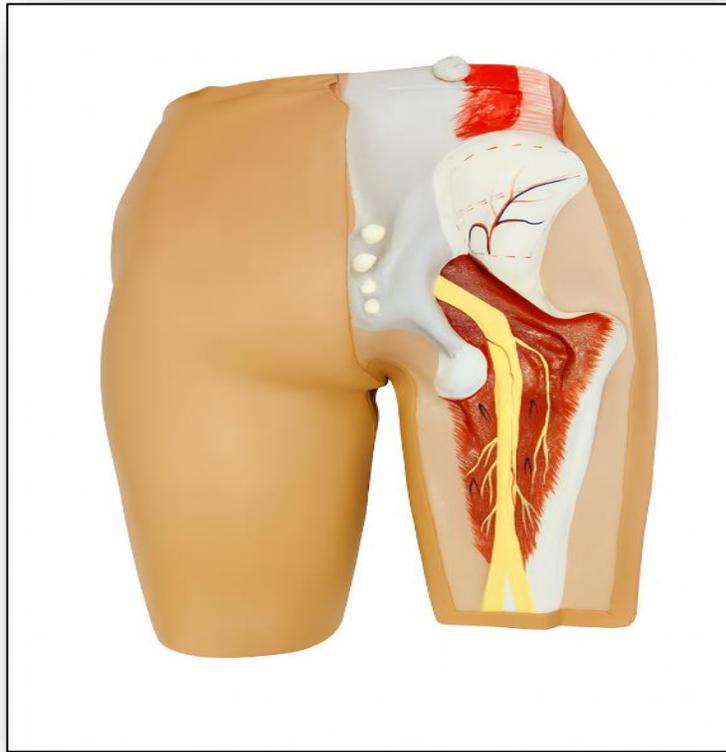
Injection training hand models are realistic, durable simulators used primarily to teach venipuncture and intravenous cannulation skills, such as IV insertion and blood sampling. They feature lifelike, soft skin with palpable veins and are designed to withstand repeated use with standard IV needles (22–24 gauge). These models can be filled with water or simulated blood to allow learners to practice correct vein access and confirm successful venipuncture.



An infant CPR training doll

An infant CPR training doll

An infant CPR training doll is a realistic, life-size manikin designed to simulate an infant for practicing cardiopulmonary resuscitation (CPR) and basic first aid skills. It is constructed from durable, realistic materials such as PVC and features anatomically accurate structures to support correct performance of chest compressions, rescue breaths, and airway obstruction management. These manikins allow learners to practice essential techniques, including head tilt–chin lift, and may include features such as visible chest rise or feedback sensors to indicate correct hand placement and appropriate compression depth.



Intramuscular injection doll

Intramuscular injection doll

An intramuscular injection doll is a realistic medical training model designed to teach and practice intramuscular injection techniques. These models typically feature replaceable, lifelike silicone skin and underlying muscle layers that simulate human tissue. They are designed with anatomical landmarks to help learners identify correct injection sites and practice safe needle insertion while avoiding nerves and blood vessels.



• **Human torso anatomical model**

Human torso anatomical model

A human torso anatomical model with organs is a physical, often life-sized or scaled, educational model used to study human anatomy. The torso can be opened to reveal internal organs and is typically designed with removable parts to allow detailed examination of structures such as the heart and lungs. These models support hands-on learning and enhance understanding of organ location and anatomical relationships.



Full-body nursing simulation mannequin

Full-body nursing simulation mannequin

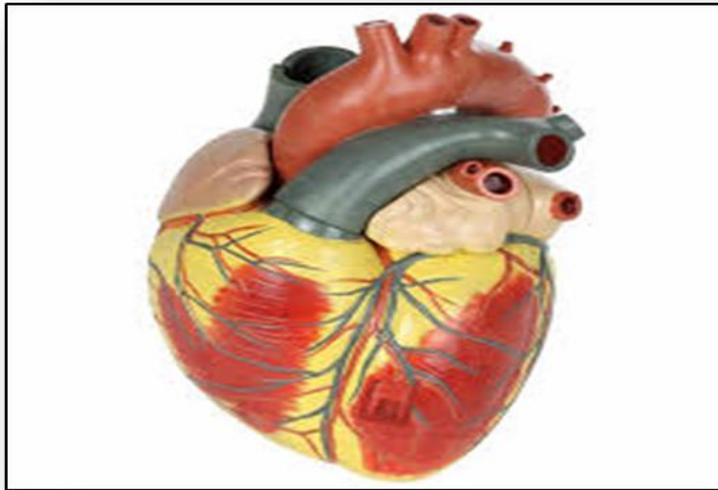
A full-body nursing simulation mannequin is a life-sized, human-like simulator used in healthcare education to provide a safe and realistic training environment for nursing students. These mannequins can vary in realism from low-fidelity (simple and task-focused) to high-fidelity, which can mimic human physiology and display a range of vital signs like heart rate, blood pressure, and oxygen saturation. They help students practice essential skills like communication, critical thinking, and technical procedures such as injections, catheterization, and emergency response, ultimately preparing them for real-world patient care.



Lung model

Lung model

The lung model for education is an anatomical tool that demonstrates the structure and function of the respiratory system, available in both detailed, multi-piece models for studying anatomy and simpler models that show how the lungs work through mechanics like a diaphragm. Detailed models are often life-size and may be detachable to reveal internal structures, suitable for medical and high school settings, while demonstration models with a clear chest cavity and rubber diaphragm are better for hands-on, basic science classes.



Heart model

Heart model

A heart model is a physical or representation of the heart's anatomy, used for educational and clinical purposes. Models range from simple representations to complex, life-size, or enlarged versions that separate into multiple parts to show internal structures like the four chambers, four valves, and major blood vessels. Advanced models may even display common pathologies, making them valuable for teaching and patient education respiratory mechanics, and the effects of diseases like smoking-related illnesses.



A full-body pregnant woman model

A full-body pregnant woman model

A full-body pregnant woman model for education is a realistic anatomical simulator designed for training in midwifery and nursing. These models feature anatomical details like a full-size pelvic cavity and flexible joints for demonstrating various childbirth positions, including normal and abnormal ones. Many are made of soft, realistic materials, some have exchangeable parts for practicing different procedures, and they can simulate vital signs like fetal heartbeat.



Adult female nursing mannequin

Adult female nursing mannequin

A full-body women's doll is a life-size, realistic mannequin used to train healthcare professionals in a wide range of clinical skills. These dolls feature lifelike joints for realistic positioning and detailed anatomical structures, allowing for practice in areas such as basic patient care (washing, dressing), and catheterization. Some high-fidelity models include features for specific procedures, including stoma care, intubation, and even simulating trauma wounds.



A full-body infant mannequin

A full-body infant mannequin

A full-body infant training mannequin is a realistic, lifelike model with movable joints used for practicing infant care skills like bathing, changing diapers, and holding.



A female pelvic bone model

A female pelvic bone model

A female pelvic bone model is a life-size anatomical replica of the female pelvis, typically including the two hip bones, sacrum, coccyx, and two lumbar vertebrae. Key features often include a movable symphysis pubis, a U-shaped sciatic notch, and a wider, shallower basin shape that reflects the differences in female anatomy, particularly for childbirth. Some models feature removable parts or include anatomical inserts for studying internal organs like the bladder, uterus, and rectum.



Enema administration simulation model

Enema administration simulation model

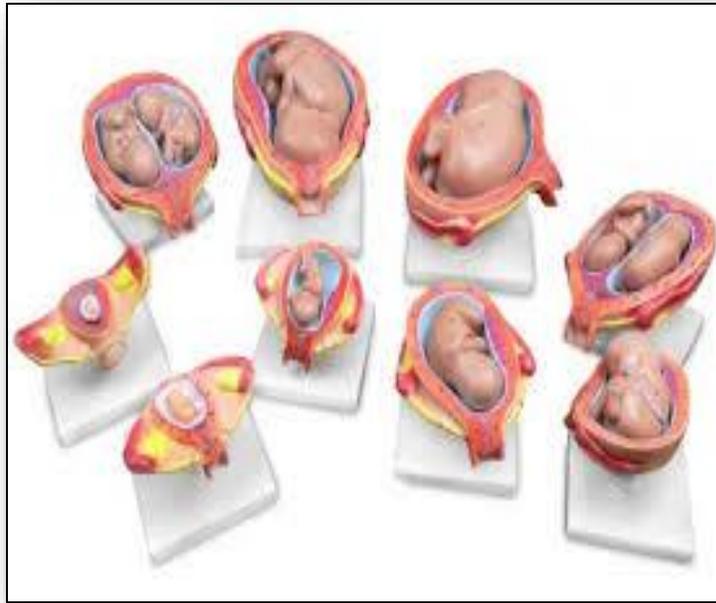
The enema administration simulation model is a lifelike training tool for healthcare professionals to practice administering enemas safely and realistically. These models feature an adult-sized lower torso with realistic skin, a flexible buttocks area for proper positioning, and a transparent intestine with simulated feces for visual training. They are designed to be used with water-soluble jellies or glycerin and often include a reservoir and drainage system for fluid management



A pelvic examination model

A pelvic examination model

A pelvic examination model is a training tool for medical professionals, featuring realistic internal and external anatomical structures of the female pelvis. They are used to practice various procedures like bimanual exams, speculum exams, and the insertion of devices like IUDs. Key features include durable, high-quality materials, sometimes interchangeable components for different scenarios (like normal or abnormal cervixes), and a tactile feel that mimics human tissue.



Fetal models in different stages

Fetal models in different stages

Fetal models illustrate key developmental milestones: in the first trimester, models show early organ formation and the transition from embryo to fetus (around 9-10 weeks); the second trimester shows development of limbs, features, and the ability to move, with the sex becoming identifiable on ultrasound; and the third trimester models depict significant growth, maturation of lungs and nervous systems, and preparations for birth, including the fetus turning to a head-down position



Pelvic skeleton anatomical model

A pelvic skeleton model is an anatomical teaching model that displays the bony components of the human pelvis, including the hip bones and sacrum, and is used for studying pelvic anatomy and bone relationships.



A five-year-old child mannequin

A five-year-old child mannequin

This manikin simulates a five-year-old child and features rotatable arms and legs with jointed elbows and knees, as well as an articulating head. It is designed to provide comprehensive training in both basic and advanced pediatric patient care procedures. Students can practice bathing and bandaging, ophthalmic exercises, oral and dental hygiene using the articulating jaw with teeth and tongue, tube feeding and gastric suction, intramuscular injections in the upper thigh and deltoid, tracheotomy care, male and female catheterization, and enema administration.

A five-year-old child mannequin is a realistic training tool for nursing students, designed to simulate a young patient and allow practice of various medical procedures. Key features include realistic anatomy, interchangeable body parts, The dolls have flexible joints for realistic positioning



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A one-year-old child mannequin

A one-year-old child mannequin

A one-year-old child mannequin is a realistic training tool for nursing students, designed to simulate a young patient and allow practice of various medical procedures. Key features include realistic anatomy, interchangeable body parts, The dolls have flexible joints for realistic positioning.