



**MG29985 | HUMAN EAR WITH PATHOLOGY, 1.5
TIMES ENLARGED**



Nasco
HEALTHCARE





Enlarged anatomical model (1.5x actual size) representing the most common pathologies of the external, middle, and inner ear. Includes detailed representations of mucus, secretory otitis media, cholesteatoma, and eczema, as well as a comparison between a healthy eardrum, a perforated eardrum, and an eardrum with myringitis bullosa.

Applications:

Ideal for teaching ear anatomy and pathologies, training healthcare professionals, and as a support tool for patients. Encourages learning and comparative analysis of anatomical structures.

Technical Differentiators:

- * Enlarged representation (1.5x).
- * Detailed modeling of pathologies.
- * Visual comparison of different eardrum conditions.
- * Comes with an interactive 3D anatomical model with augmented reality.

3D Technology and Augmented Reality:

Our anatomical models offer an innovative visual complement through information cards that activate 3D models viewable in augmented reality (AR). This exclusive interactive platform stimulates learning, allowing for comparative analysis of anatomical structures and offering



opportunities for continuing education in anatomy, physiology, and pathophysiology.

Technical Specifications:

* Scale: 1.5 times actual size.

* Represents pathologies of the external, middle, and inner ear.

Main Structures:

eczema: A chronic inflammatory skin condition characterized by itchy rashes, redness, flaking, and, in some cases, blister formation. In the context of the external ear, eczema can affect the ear canal and the skin around the ear, causing discomfort and intense itching.

otitis media with effusion: An inflammatory condition of the middle ear characterized by the accumulation of fluid in the tympanic cavity, without signs or symptoms of acute infection. This fluid can be serous, mucous, or purulent and can cause a feeling of fullness in the ear, hearing difficulty, and, in children, delayed speech development.

mucus: A viscous and sticky substance produced by the mucous membranes lining the respiratory tract, gastrointestinal tract, and other organs. In the context of the middle ear, mucus can accumulate due to infections, allergies, or eustachian tube dysfunction, contributing to the development of otitis media with effusion.

eardrum blisters: Small fluid-filled vesicles that form on the surface of the eardrum, usually as a result of a viral or bacterial infection, such as bullous myringitis. These blisters can cause intense pain, temporary hearing loss, and, in some cases, eardrum rupture.

perforated eardrum: A rupture or hole in the tympanic membrane, which separates the external ear canal from the middle ear. It can be caused by infections, injuries, sudden pressure changes, or insertion of objects into the ear. Perforation of the eardrum can lead to hearing loss, tinnitus, and an increased risk of infections.

healthy eardrum: The intact and functional tympanic membrane, which vibrates in response to sound waves and transmits these vibrations to the ossicles of the middle ear. A healthy eardrum is essential for normal hearing and protects the middle ear from infections and injuries.

cholesteatoma: An abnormal skin growth in the middle ear, usually caused by eustachian tube dysfunction or a perforation of the eardrum. Cholesteatoma can damage the structures of the middle ear, including the ossicles, and lead to hearing loss, dizziness, and recurrent infections.

adenoid: Lymphoid tissue located in the nasopharynx, behind the nose and above the soft palate. Adenoids help protect the body against infections, but they can enlarge and cause



nasal obstruction, snoring, mouth breathing, and recurrent otitis media.

Other structures can be verified directly on the physical piece or in the interactive 3D model.

Customizable Skin Tones:

This anatomical model offers the option of choosing between three skin tones to better represent human diversity and meet different educational and clinical needs. It is possible to choose between light skin, intermediate tone, and dark skin, providing greater realism and inclusion during training and demonstrations.

Smart Tags:

Designed to provide comprehensive training in the healthcare field, with interactive simulations covering ear exams. This solution assists in the development of diagnostic skills in different clinical scenarios, allowing professionals and students to explore and improve their skills with greater safety and accuracy.

Ear exams: Conduct 9 realistic diagnostic exams.

- AOM
- Chronic
- Ear Ventilation
- Earwax
- Foreign Object
- Normal
- Otitis Externa
- Pseudomembrane
- Tympanosclerosis

Virtual Patient Monitor: Provides an immersive and realistic training environment for healthcare students. It allows instructors to customize parameters for various vital signs, empowering students to interpret signals, develop critical thinking, and enhance their clinical reasoning skills through realistic scenarios.

Customizable Vital Signs

- Blood Pressure
- SpO2
- Heart Rate

ECG Interpretation: Train on 18 diverse ECG scenarios, including: Atrial Fibrillation, Ventricular Tachycardia and Heart Blocks. The monitor also simulates synchronized pulses with ECG for truly realistic cardiology training.

ECG Patterns

- Sinus Rhythm
- Atrial Extrasystole



- Atrial Flutter
- Atrial Fibrillation
- Paroxysmal Supraventricular Tachycardia (PSVT)
- Ventricular Extrasystole
- Ventricular Tachycardia (VT)
- Ventricular Fibrillation (VF)
- First-Degree Atrioventricular Block (AVB)
- Second-Degree Atrioventricular Block
- Third-Degree Atrioventricular Block (Complete Block)
- Long QT Syndrome
- ST Segment Elevation
- ST Segment Depression
- T Wave Inversion
- Left Ventricular Hypertrophy (LVH)
- Right Ventricular Hypertrophy (RVH)
- Wolff-Parkinson-White Syndrome (WPW)

Breathing Patterns

- Normal
- Dyspnea
- Apnea
- Cheyne-Stokes
- Biot
- Kussmaul

About Anatomical Models:

They are developed with resin replication technology, addressing the scarcity of natural anatomical pieces for teaching and research. They present all the essential morphological characteristics with excellent cost-benefit, resistance, manual painting, and numbering for precise identification of structures.

List of all visible structures:

- eczema
- otitis media with effusion
- mucus
- bullae on the eardrum
- perforated eardrum
- healthy eardrum
- cholesteatoma
- adenoid