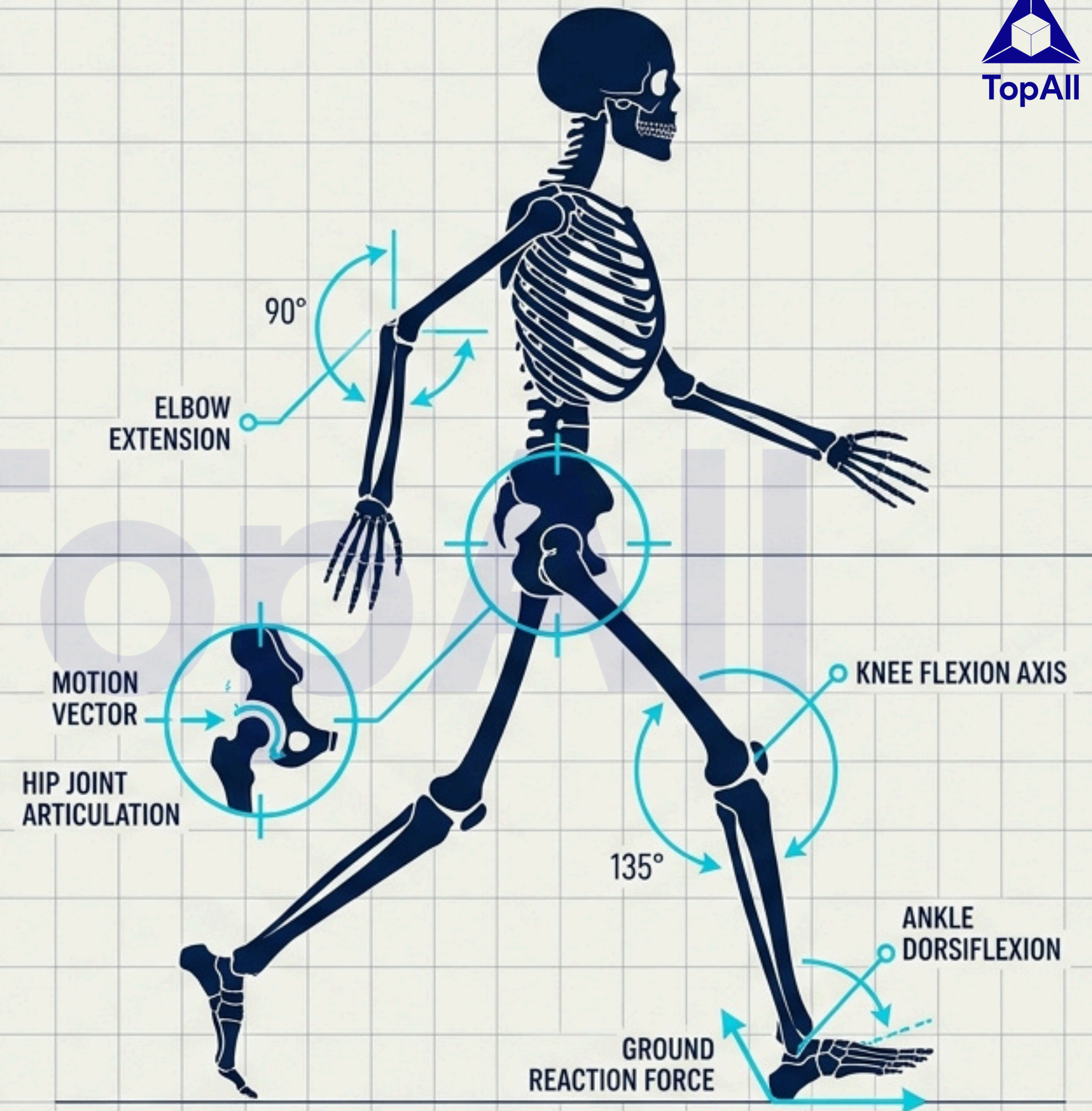


THE FRAMEWORK THAT MAKES MOVEMENT POSSIBLE

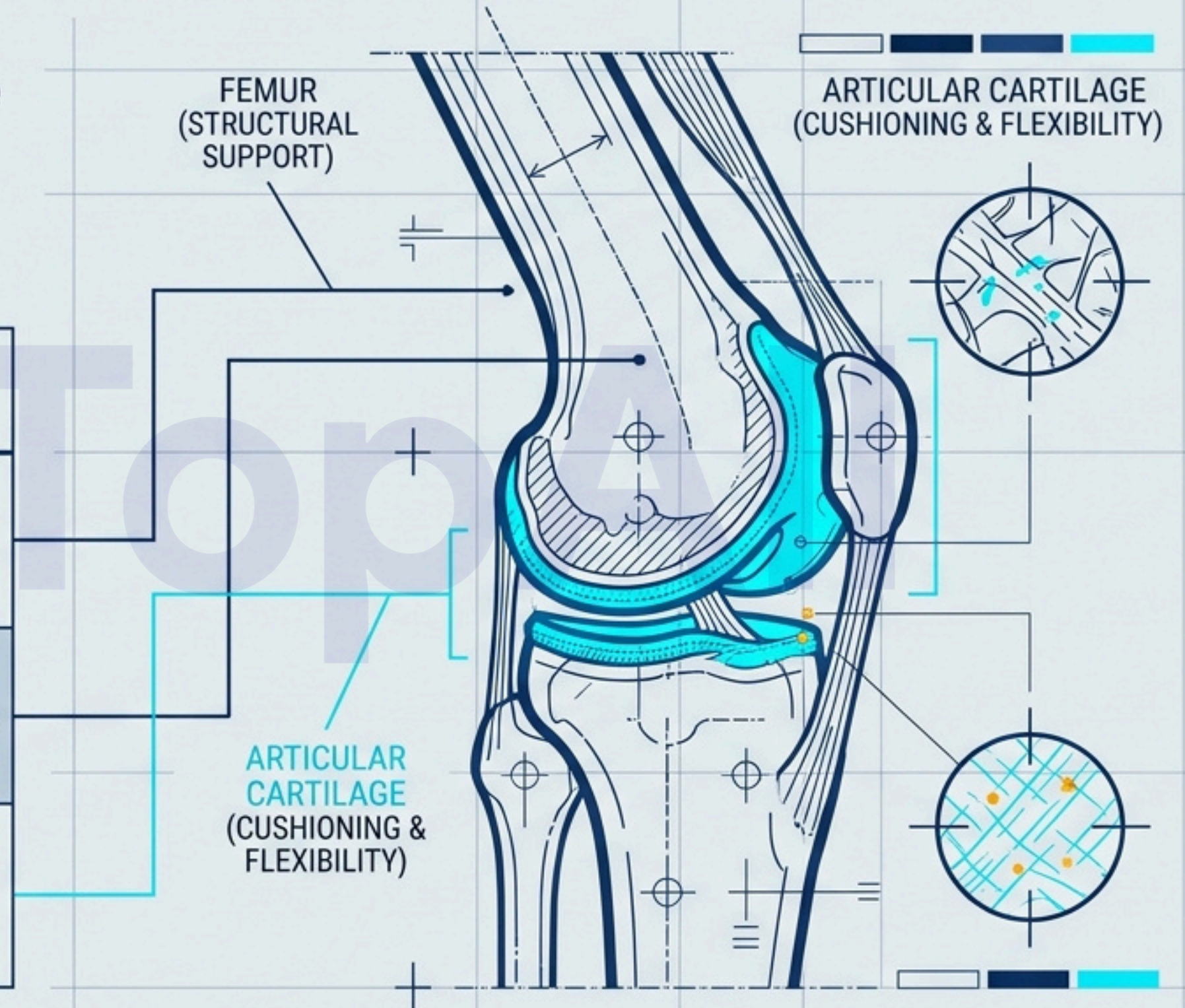
The Architecture and Anatomy
of the Human Skeletal System



The Dual Foundation of Movement

The skeletal system relies on two specialized connective tissues working in tandem. Together, they provide both rigid structural support and the necessary flexibility for joints to act as fulcrums.

	Bone	Cartilage
Matrix Hardness	Very Hard	Slightly Pliable
Primary Chemical Salt	Calcium Salts	Chondroitin Salts
Mechanical Role	Structural Support	Joint Cushioning & Flexibility





You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

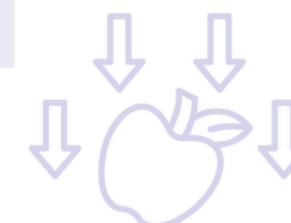
Practice Now



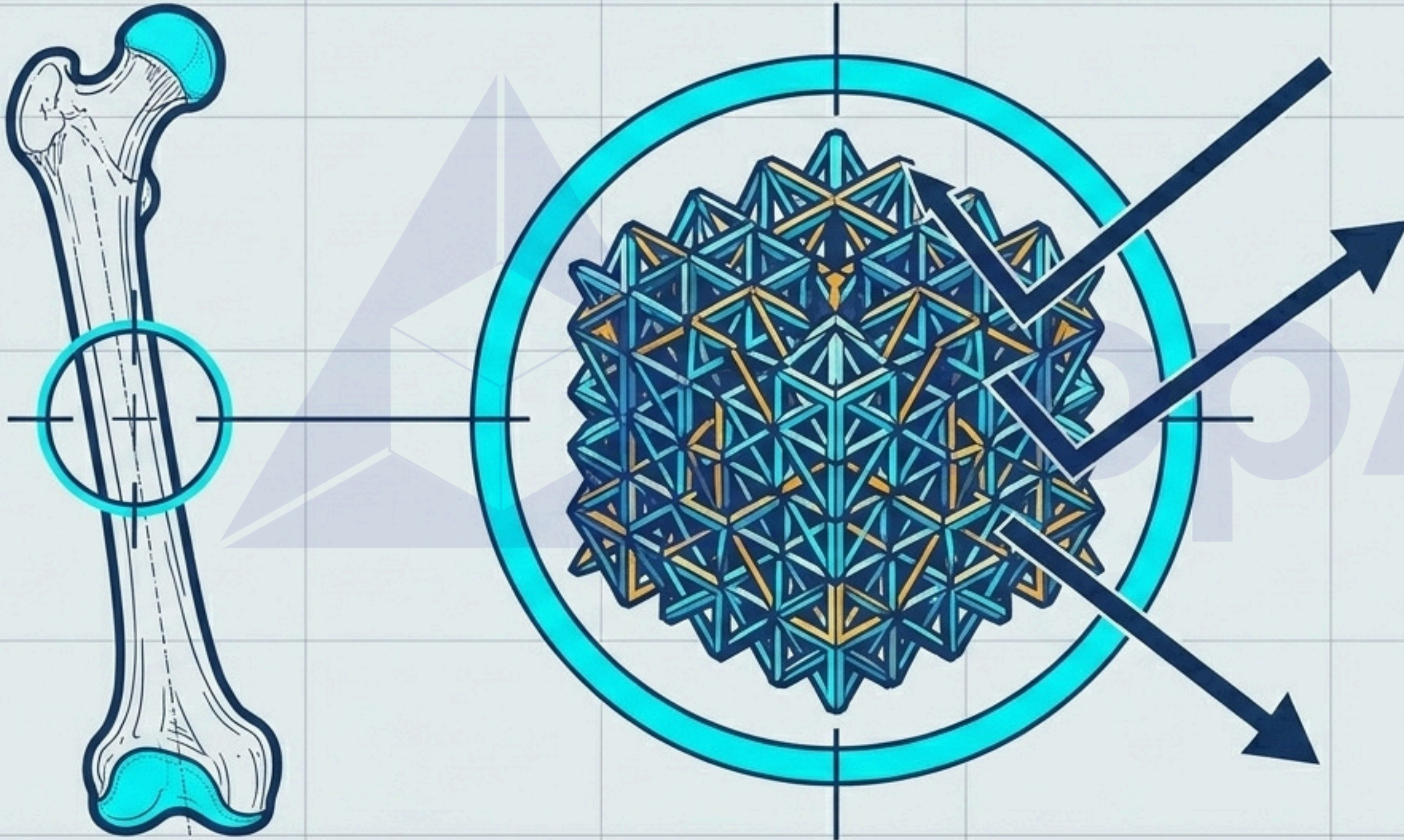
At prep.topall.app

Key Highlights

- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



Bone: The Rigid Support



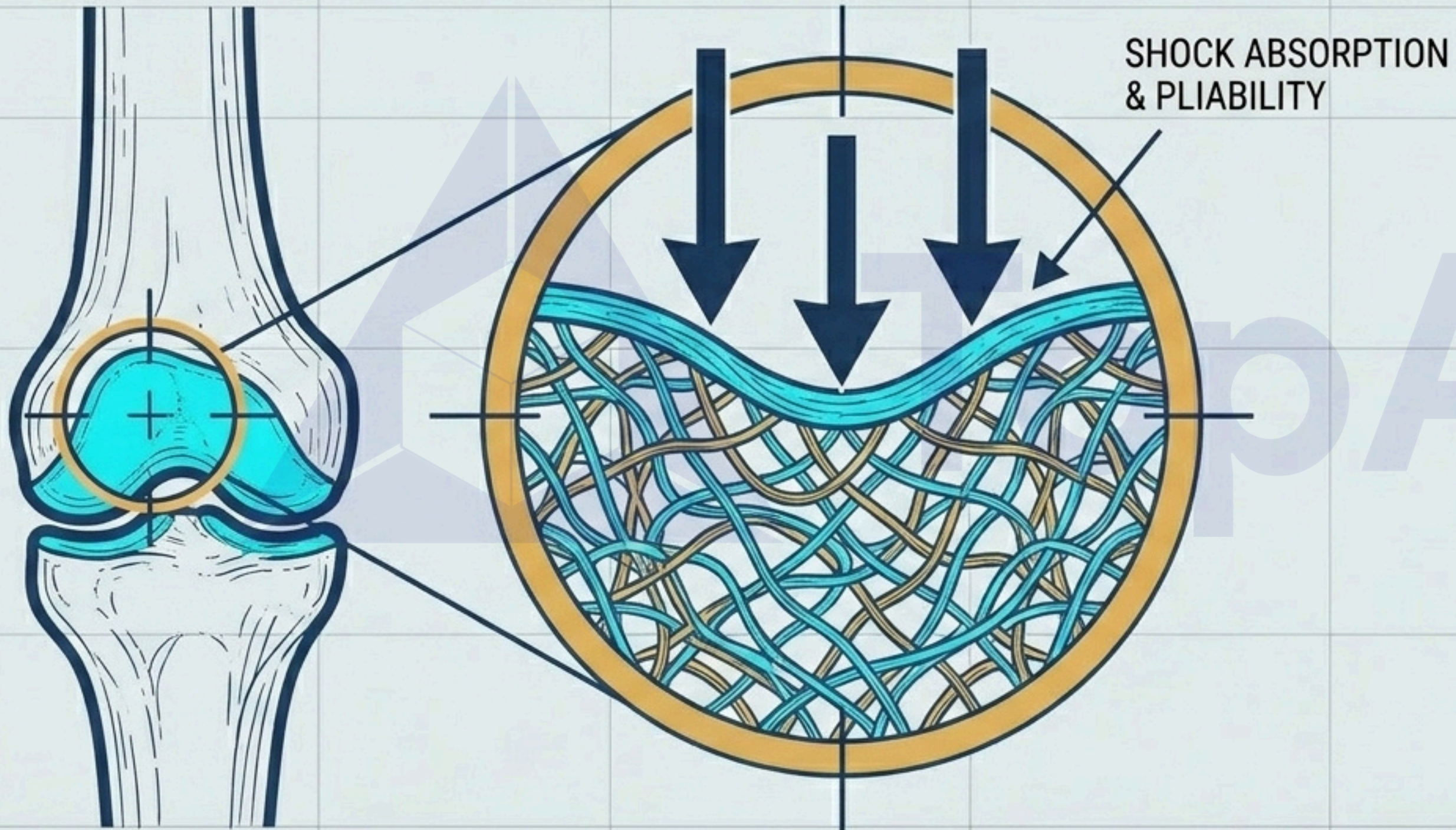
Material:
Specialized Connective
Tissue

Composition:
Bone Matrix

Key Hardening Agent:
Calcium Salts

Property:
Extremely hard matrix
designed to bear body
weight and resist
deformation.

Cartilage: The Pliable Cushion



Material:
Specialized Connective
Tissue

Composition:
Cartilage Matrix

Key Pliability Agent:
Chondroitin Salts

Property:
Slightly pliable matrix
designed to reduce
friction and absorb
impact where bones
articulate.

The Complete Assembly: 206 Bones

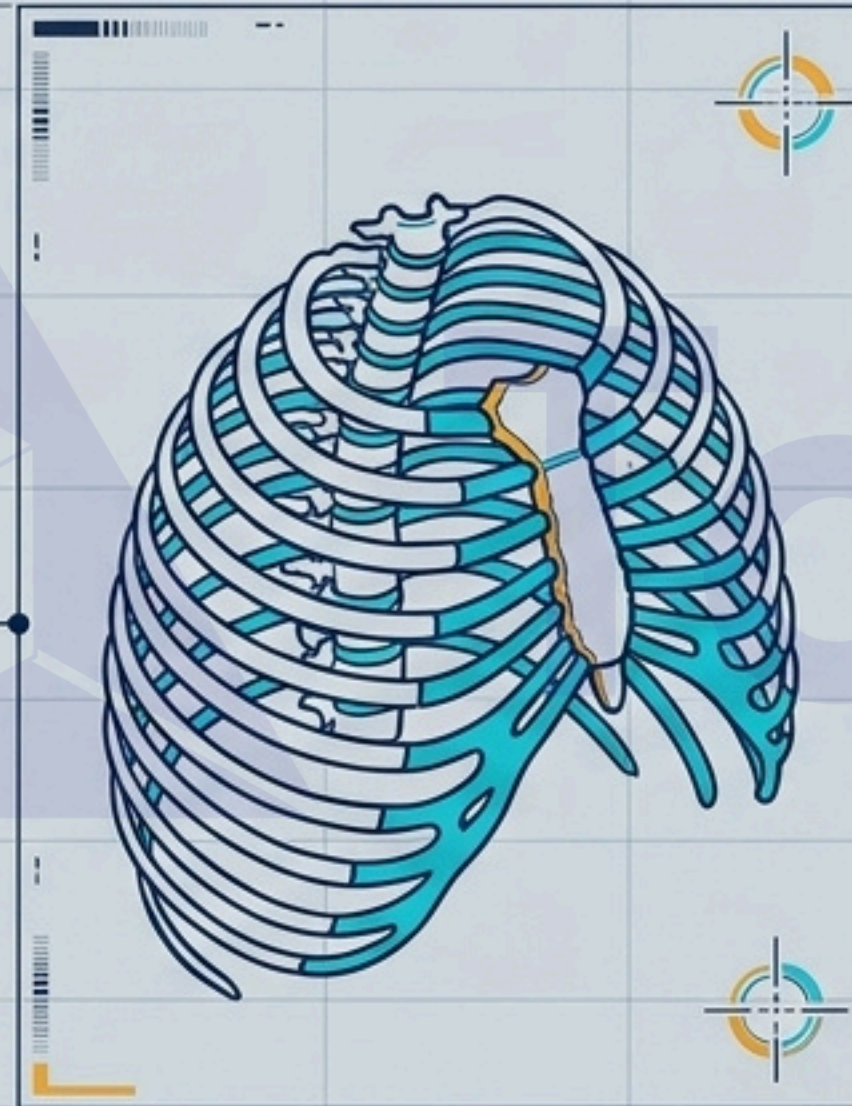
In human adults, the bone and cartilage matrices are organized into a highly precise framework of 206 individual bones, divided into two distinct functional divisions.



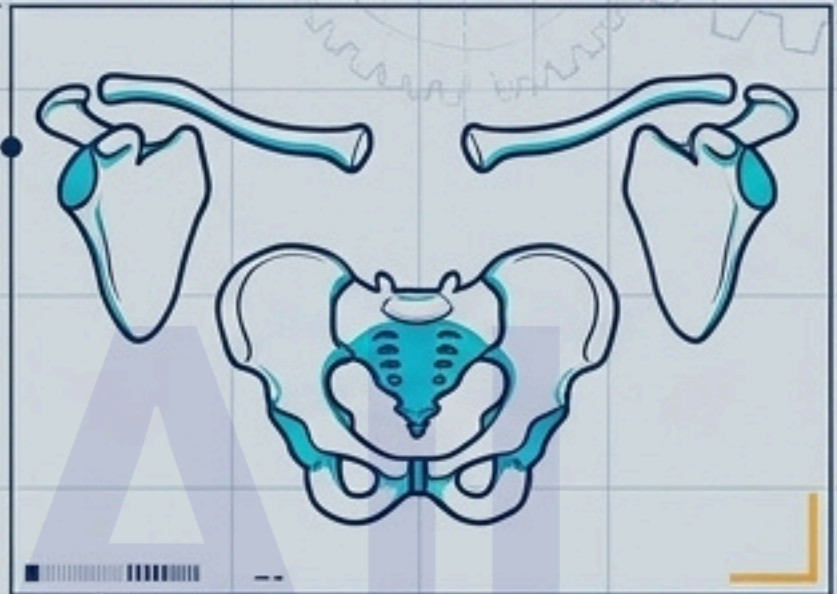
SKULL
ASSEMBLY



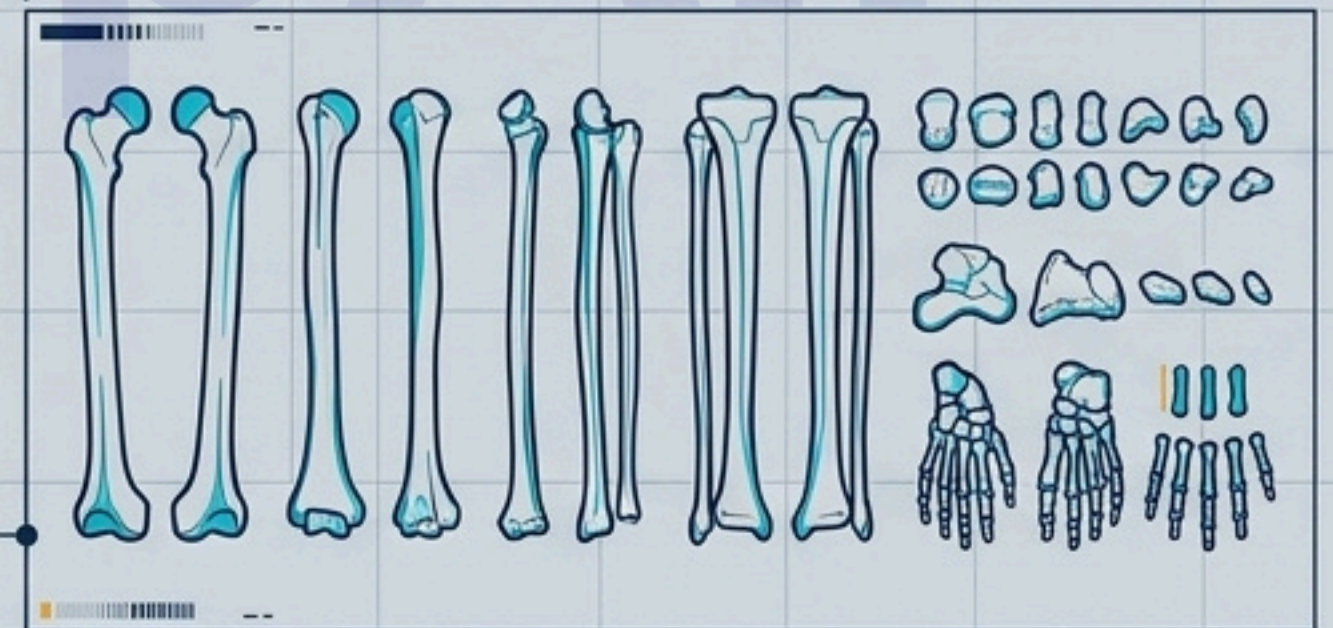
VERTEBRAL
COLUMN



RIB CAGE
ELEMENTS

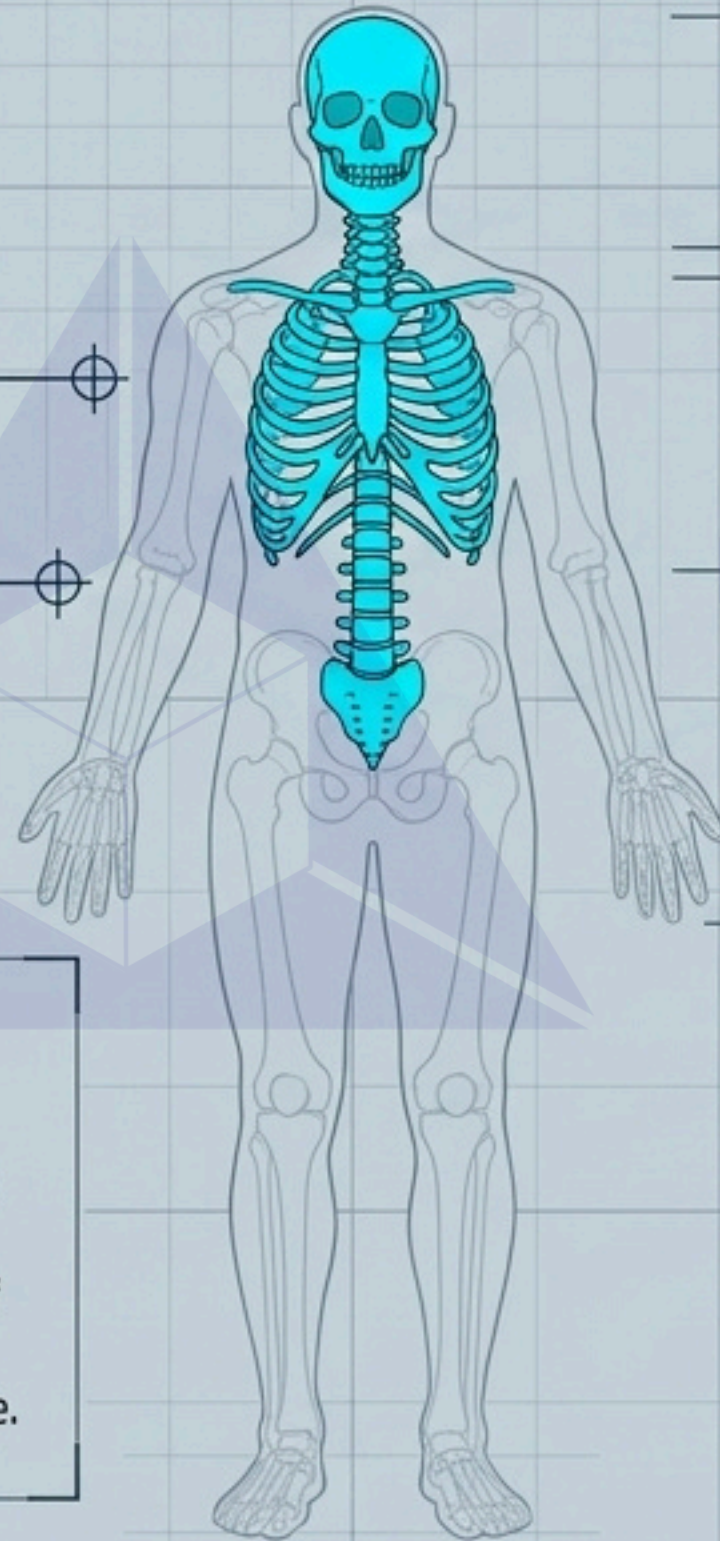


APPENDICULAR
GIRDLES



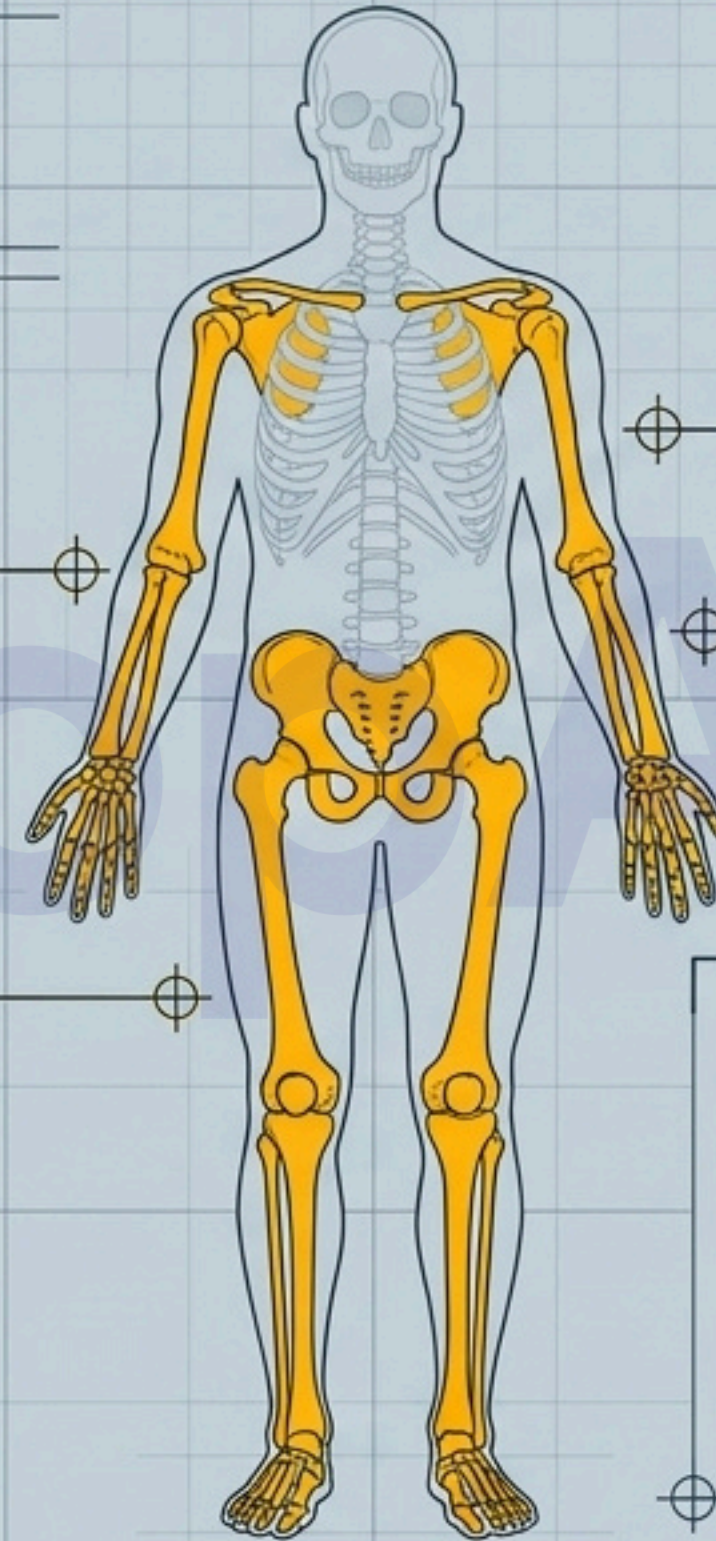
LIMB STRUCTURES

Two Systems, One Framework



THE AXIAL SKELETON

- **Bone Count:** 80 Bones
- **Location:** Distributed along the main axis of the body.
- **Primary Function:** Protection of vital organs (brain, spinal cord, heart/lungs) and structural core.



THE APPENDICULAR SKELETON

- **Bone Count:** 126 Bones
- **Location:** The limbs and their respective girdles.
- **Primary Function:** Articulation and locomotion (movement through the environment).



You've Learned the Theory.

Now Let's Test It.

Reading notes gets you knowledge.

Practicing MCQs gets you marks.

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Jump in while the concept is still fresh in your head

4.5L+
MCQs

1.5L+
Students

AI Powered
In-Depth Analysis