

# Osmosis is the learning platform that brings faculty and students back together.

Built on a foundation of evidence-based learning science research, Osmosis's study tools and comprehensive materials help students:

- Stay organized
- Study more efficiently
- Retain information longer

With Osmosis, you can augment your curricular resources to **better engage your students** in learning medicine. Improve learning outcomes with educational tools that support flipped classrooms, increase collaboration, and promote adaptive, self-guided study.

Contact us at [partnerships@osmosis.org](mailto:partnerships@osmosis.org)

The screenshot displays the Osmosis interface with several components:

- Notes Panel (Left):**
  - AUTONOMIC NERVOUS SYSTEM**
    - Part of peripheral nervous system (PNS); regulates basic visceral processes necessary to homeostasis
    - Autonomic nervous system (ANS) affects visceral organs, glands, involuntary muscles → regulates heart rate, respiration rate, digestion, urination, salivation, sexual arousal, etc.
    - Divided into two systems:
      - Sympathetic, parasympathetic
      - Unlike somatic nervous system, in ANS:
        - Neurotransmitters synthesized, stored, released in various sites (analogous to presynaptic nerve terminals in somatic nervous system)
        - Target organ's tissue can be innervated by multiple postganglionic neurons
        - Postreceptor receptors widely scattered on target organ
    - NEURONS**
      - Two neuron types in both sympathetic, parasympathetic systems
      - Pre-ganglionic, postganglionic
    - SYMPATHETIC NERVOUS SYSTEM**
      - ANS component; controls visceral functions requiring fast responses (e.g., fight or flight)
      - Ganglia close to spinal cord → short preganglionic fibers, long postganglionic fibers
      - Pre-ganglionic neurons**
        - Located thoracolumbar spinal cord's intermediate horn (T1-L2)
        - Cholinergic neurons → release ACh
      - Postganglionic neurons**
        - Located close to spinal cord
        - Paravertebral ganglia (cervical, thoracic, costal/lumbar, sacral/lumbar, pelvic ganglia)
        - Prevertebral ganglia (aortic, sacrococcygeal, superior mesenteric, inferior mesenteric ganglia)
        - Chromaffin cells of adrenal medulla (modified sympathetic ganglia)
  - Diagram (Center):**
    - SPINOCEREBELLAR TRACT**
    - Labels include: IPSILATERAL CEREBELLAR CORTEX, SYNAPSE ON NEURONS IN CEREBELLAR CORTEX, DORSAL SPINO-CEREBELLAR TRACT, DORSAL ROOT GANGLION, 1<sup>ST</sup> ORDER NEURONS, VENTRAL SPINO-CEREBELLAR TRACT, SUPERIOR CEREBELLAR PEDUNCLE, INFERIOR CEREBELLAR PEDUNCLE.
  - Text Box (Right):**

It is thought that the neurotransmitter \_\_\_\_\_ is increased during a migraine aura which causes vasoconstriction, and then its levels fall just before the migraine headache.
  - Practice Question (Bottom):**

A 68-year-old man comes to the clinic because of tremor at rest, slowed movement, stooped posture, and a shuffling gait. These symptoms have been getting progressively worse over the past 18 months. Which of the following amino acids is the precursor for the neurotransmitter that is deficient in this patient?

Elimination tool

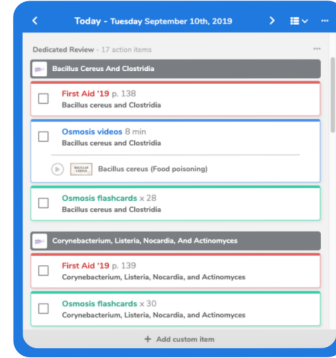
    - A Glucosamine
    - B Glutamate
    - C Glycine
    - D Tryptophan
    - E Tyrosine
  - Summary Box (Bottom Right):**
    - 1200+ Videos
    - 2000+ High-Yield Notes
    - 16000+ Pre-made Flashcards
    - 8300+ Board-style Practice Questions

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## 1800+ Medical Topics

### Including:

- Anatomy
- Biochemistry
- Biostatistics & Epidemiology
- Cardiology
- Cell Physiology
- Clinical Reasoning
- Dermatology
- Embryology
- Emergency Medicine
- Endocrine
- Gastrointestinal
- Genetics
- Hematology & Oncology
- How to Learn in the Health Professions
- Immunology
- Metabolism
- Microbiology
- Musculoskeletal
- OB/GYN
- Neurology
- Pediatrics
- Psychiatry
- Renal
- Reproductive
- Respiratory
- Surgery



## Customizable Study Tools

The personalized Osmosis **Study Schedule** helps students know exactly what and when to study for class and board exams.

The Osmosis **Quiz Builder** allows students to create quizzes using both Osmosis flashcards and questions and their own materials.

Osmosis's built-in **Spaced Repetition** feature ensures that students review content exactly when they need to for deeper understanding and long-term memorization.



## Trusted by Institutions Across the Globe

Osmosis is relied on by medical and allied health institutions **around the world**, including the University of Michigan, UCLA, Weill Cornell Medical College-Qatar, and the University of Arizona. In addition, Osmosis videos have been watched by more than **1.1 million current and future clinicians**, and the Osmosis learning platform is used by over **680,000 students worldwide**.

“Osmosis teaches faculty how today’s health professional students learn to become tomorrow’s health professionals. If you want to remain relevant as an educator — and have fun growing while you do — then I strongly encourage you to engage fully with the teaching and learning power of the Osmosis platform.”

— Dr. Amin Azzam  
Clinical Professor at UC Berkeley, UCSF Joint Medical Program

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