

# Welcome the 21<sup>st</sup> Edition of MedStudy's *Internal Medicine Core!*

This 21<sup>st</sup> edition represents the knowledge, expertise, and labor of love of superb physician educators from Internal Medicine residencies and teaching hospitals across the U.S. This edition has been extensively rewritten to ensure that the information is tightly-focused and clearly explains what you need to know, reflects current standards of care, and references the most recent practice guidelines.

This Core is the foundation of everything we teach at MedStudy. We take very great care in creating this content with each new edition, and the content in this Core informs what is within the rest of our products (Courses, Video Board Review, Q&As, Flashcards, the list goes on). This set of books will comprehensively cover what you need to know for the boards—we've made sure of it!

Think of your Internal Medicine Core as a series of well-crafted lectures given by the best teachers you've ever had—those teachers who had a knack for connecting with you and for clearly explaining obtuse concepts. These lectures are casual, yet concise, and focus on the medical knowledge needed to have a strong Internal Medicine practice and to easily pass your exams.

But casual, concise, and focused content is not enough—there's still a lot of material! How can you determine what, out of all this content, is the most important to know? And how in the world do you get it into your long-term memory?

## **First: How do you identify what's most important?**

Spoiler alert: We've already done it for you! Our writers and editors know what you need to know for exams and clinical practice—they teach it every day. They've identified this must-know, most-asked information from each main topic and have highlighted it in yellow. The Preview | Review questions at the beginning of each main topic quiz you on the highlighted material.

## **Second: How do you get this must-know information into long-term memory?**

The answer is the MedStudy Method. It combines the best evidence-based learning techniques to optimize and energize your study sessions. You'll retain and easily recall the medical information you need, whether you're seeing patients or taking the boards.

Personal Trainer brings the MedStudy Method into your learning sessions. It does the planning and tracking for you, taking you through the Preview, Study, and Spaced Retrieval steps for each concept.

We are truly honored to be part of your medical education. We wish you more balance in your life, more confidence in your practice, and a whole lot more fun.



Study Strong,

Robert A. "Tony" Hannaman, MD  
MedStudy's Founder and Editor in Chief

# Core Features Bring the Reading to Life

While you're reading these pages, it's meant to feel like you're sitting in a live lecture from your favorite professor.

## Highlighted text

Indicates must-know content—including answers to Preview | Review Questions

## Bold text

Denotes important lists and defined terms

## Burgundy text

Emphasizes certain words the same way a great teacher would

## Preview | Review Questions

Contain the highest-yield questions for you to preview, study, and review

### PREVIEW | REVIEW

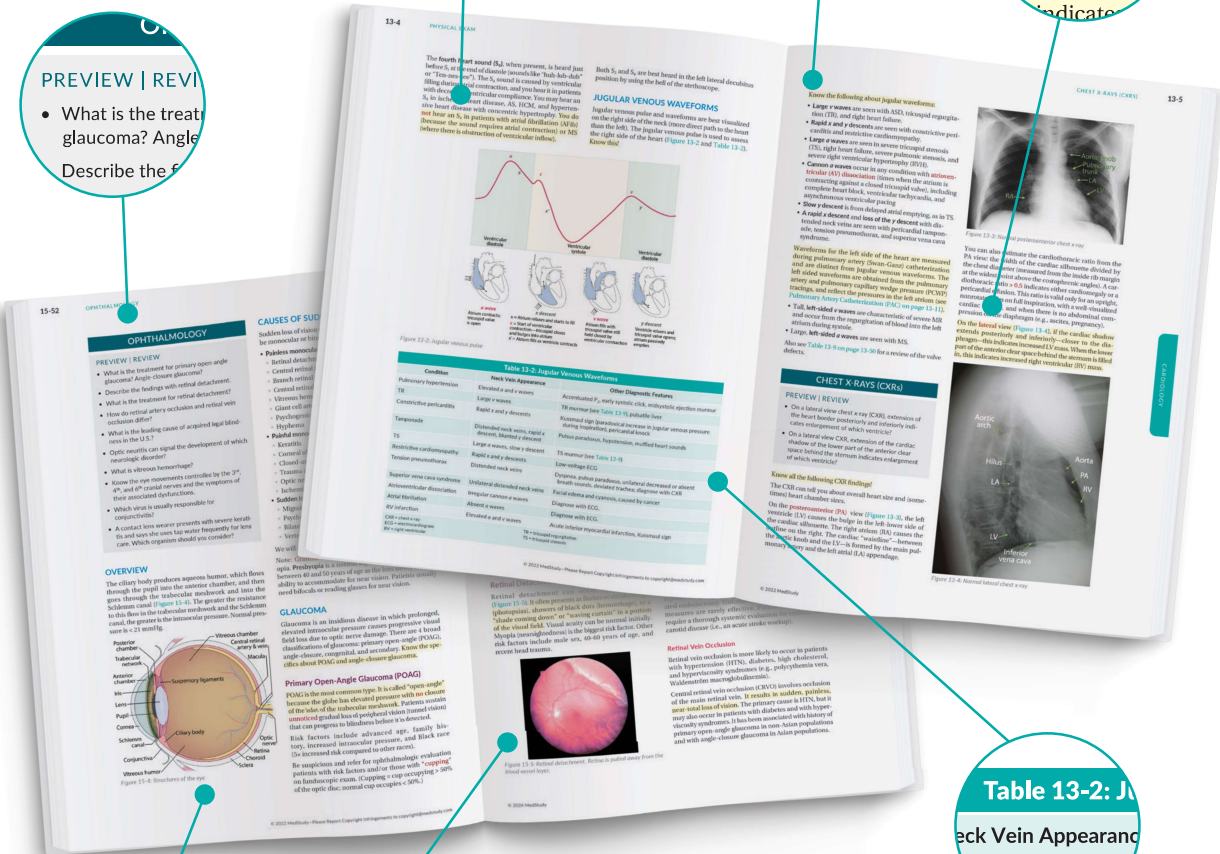
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- Describe the f

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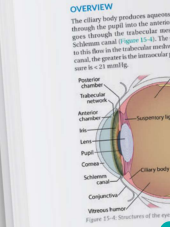
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### OPHTHALMOLOGY

- PREVIEW | REVIEW**
- What is the treatment for primary open angle glaucoma? Angle-closure glaucoma?
  - Describe the findings with retinal detachment.
  - What is the treatment for retinal detachment?
  - How do retinal artery occlusion and retinal vein occlusion differ?
  - What is the leading cause of acquired legal blindness in the U.S.?
  - Optic neuritis can signal the development of which autoimmune disorder?
  - What is vitreous hemorrhage?
  - How do eye movements controlled by the 3<sup>rd</sup>, 6<sup>th</sup>, and 8<sup>th</sup> cranial nerves and the symptoms of their associated dysfunction.
  - Which virus is usually responsible for conjunctivitis?
  - A contact lens wearer presents with severe keratitis. Do you and your eyes too water frequently for some cases. Which organism should you consider?



- CAUSES OF SUIC**
- Pulvises associated
  - Central retinal
  - Branch retinal
  - Central retinal
  - Stroke hem
  - Giant cell cell
  - Psychogen
  - Hypertens
  - Diabetic
  - Scleritis
  - Central
  - Chorioid
  - Trauma
  - Optic
  - Ischem
  - Sphinct
  - Mydri
  - Bilat
  - Yers
  - Virus

**GLAUCOMA**

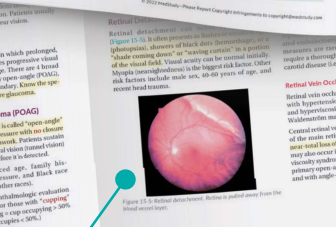
Glaucoma is an insidious disease in which prolonged elevation of intraocular pressure causes progressive visual field loss due to optic nerve damage. There are a broad field loss due to optic nerve damage. Primary open angle glaucoma, primary angle-closure glaucoma, and secondary. Know the types and risk factors for each.

**Primary Open-Angle Glaucoma (POAG)**

POAG is the most common type. It is called "open angle" because the angle has developed pressure with no change in the angle of the trabecular meshwork. Factors within the angle that lead to increased pressure are not understood. That can progress to blindness before it is detected.

Risk factors include advanced age, family history, increased intraocular pressure, and black race. POAG is asymptomatic and subtle for ophthalmologic evaluation. Patients with risk factors and/or those with "cupping" on funduscopic exam. (Cupping = cup occupying >50% of the optic disc; normal cup occupies <20%)

Condition	Neck Vein Appearance	Other Diagnostic Features
Pulvises hypertension	Elevated x and y waves	Accelerated E, wide QRS, ST, mild ST-T changes
Constrictive pericarditis	Rapid x and y waves	TS normal (see Table 13-2); paradoxical splitting of S2; normal JVP
Dissecting aortic aneurysm	Large v waves, rapid x and y waves	Dissecting aortic aneurysm; widened mediastinum; widened aortic knob; widened trachea; widened aortic arch
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**CHEST X-RAYS (CXR)**

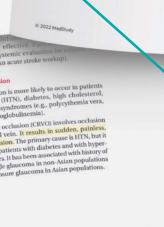
**PREVIEW | REVIEW**

- On a lateral view chest x-ray (CXR) extension of the heart border posteriorly and inferiorly indicates enlargement of which structure?
- On a lateral view CXR, extension of the cardiac shadow of the lower part of the anterior clear space behind the sternum indicates enlargement of which structure?

**Know all the following CXR findings!**

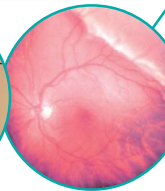
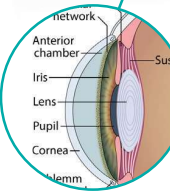
The CXR can tell you about overall heart size and (sometimes) heart chamber sizes.

On the posteroanterior (PA) view (Figure 13-2), the left heart border (LV) causes the bulge in the left lower side of the heart shadow. The right atrium (RA) causes the bulge in the right. The cardiac "widowhood" between the RA and the LV is formed by the main pulmonary artery and the left atrial (LA) appendage.



**Table 13-2: Jugular Vein Appearance**

Large v waves and rapid x and y waves



## Medical images & figures

Include diagnostic scans and x-rays, photos, ECGs, and exquisitely drawn figures

## Tables & charts

Synthesize the most relevant related information

# Effortlessly apply evidence-based learning techniques to your Core review

There are 3 phases of learning you must go through in order to lock the information you're studying into long-term memory.

## THE 3 LEARNING PHASES ARE:

- 1 Preview before you study.** Recall everything you can about each concept. You're literally priming your brain to better absorb the material the next day.
- 2 Study & seek understanding.** Try to completely understand each concept as you read through the study units. Don't memorize!
- 3 Practice spaced retrieval.** After you study, go back through the Q&As at specific intervals in time to retrieve the information. This is the key to solidifying it in your long term memory!

We get it. It sounds complicated. But we make it easy with Personal Trainer. You simply set your goals and timeline, and Personal Trainer takes care of all the details.

## Hit your goals with confidence

Personal Trainer fuses evidence-based learning techniques with MedStudy content to bring you a smart study plan that adapts with you throughout your learning journey.

## THE STUDY BOARD: ONE PAGE TO MANAGE IT ALL

**STUDY**  
Explore new topics each week

**STUDY & seek understanding**  
Try to completely understand each concept as you read through each study unit. Don't memorize!

**Practice spaced retrieval**  
After studying, topics appear in this column at specific intervals. Recall everything you can about the topic before you review the answer.

**Preview before you study**  
Recall everything you can about each topic. You're priming your brain before you study these topics tomorrow.

**PREVIEW**  
Prime your brain for the next study session

**SPACED RETRIEVAL**  
Lock it into long-term memory

Log into your MedStudy account to set up your Personal Trainer.