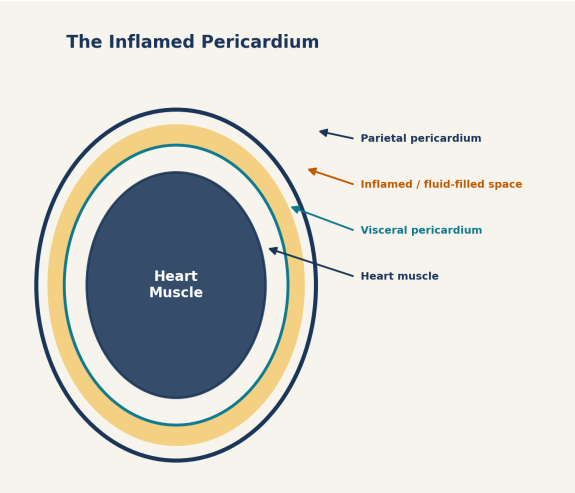
# Understanding Pericarditis

Inflammation of the heart's outer sac — acute, recurrent, and constrictive

**Sharp chest pain that gets worse lying down. Usually treatable. Sometimes recurrent.**




**Online:** https://go.riasalimd.com/pericarditis-guide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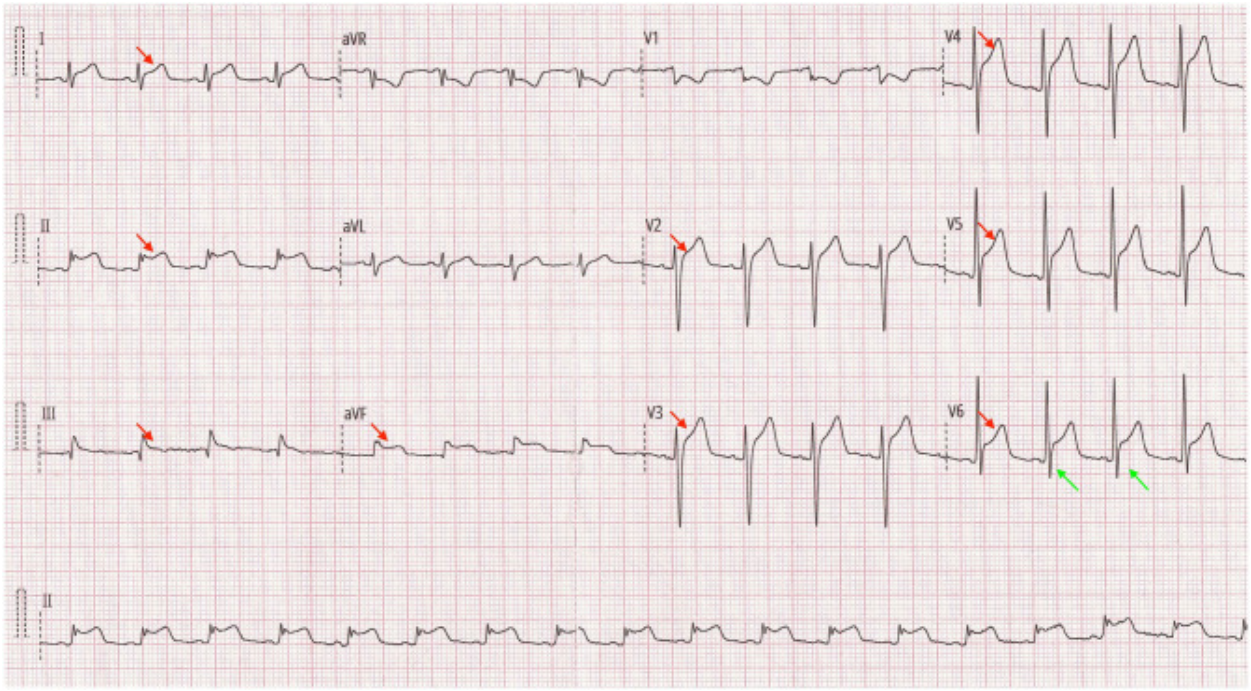
## Names & Terms You Will Hear

| Term | Meaning |
|---|---|
| Pericarditis | Inflammation of the pericardium — the two-layer sac around your heart. |
| Acute pericarditis | New episode lasting less than 4-6 weeks. |
| Recurrent pericarditis | Another flare after a symptom-free interval of 4-6 weeks or more. |
| Incessant pericarditis | Symptoms persist beyond 4-6 weeks without remission. |
| Constrictive pericarditis | Scarred, stiff sac that squeezes the heart — a long-term complication. |
| Myopericarditis | Pericarditis with mild heart-muscle inflammation (small troponin bump). Usually still benign. |
| Dressler's syndrome | Pericarditis 2-8 weeks after a heart attack or heart surgery — immune-mediated. |
| Idiopathic pericarditis | No cause found; in developed countries this is most cases — usually a recent viral infection. |

## What Is Pericarditis?

- Your heart sits inside a two-layer sac called the **pericardium**. A normal sac holds 15-50 mL of slippery fluid that lets the heart glide.
- When the sac gets inflamed, the layers rub. That rubbing causes a sharp, stabbing chest pain that is usually **worse when you lie down and better when you lean forward**.
- Doctors diagnose pericarditis when at least 2 of these are present: typical chest pain, a **friction rub** on the stethoscope, **diffuse ST-elevation or PR-depression on EKG**, or a new **pericardial effusion** on echo.
- Most acute pericarditis in the US is **idiopathic** (no cause found) or follows a viral illness (Coxsackie, echovirus, COVID-19). Worldwide, tuberculosis is still common.
- Pericarditis can come with **extra fluid in the sac (effusion)**. A small effusion is usually safe; a large one can compress the heart (tamponade) and is an emergency.
- About **30% of patients have a recurrence** without colchicine. Colchicine cuts recurrence in half (ICAP, COPE, CORP-2 trials).




*A real 12-lead EKG from a patient with acute pericarditis. Red arrows mark the diffuse, concave ST-segment elevation across many leads (not just one artery's territory, the way a heart attack looks) — this widespread pattern, together with PR-segment depression, is one of the classic diagnostic clues. Image: Li et al., Frontiers in Cardiovascular Medicine 2020 (CC BY 4.0).*

## Why It Matters

- Acute pericarditis pain mimics a heart attack, sends patients to the ED, and is often misdiagnosed in both directions.
- Getting the diagnosis right matters because treatment is very different from a heart attack — and so is the prognosis (usually excellent).
- Without colchicine, recurrence is common. Each recurrence raises the risk of further recurrences. Early, full-dose colchicine breaks that cycle.
- Steroids early on (without a clear immune indication) **increase** recurrence and are reserved for true NSAID/colchicine failures.
- Rarely, untreated or scarring pericarditis becomes **constrictive** — a stiff sac squeezing the heart, with symptoms of right-sided heart failure. This requires pericardiectomy.

## Risk Factors

Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

| Risk Factor | Why It Increases Risk |
|---|---|
| Recent viral infection | Coxsackie, echovirus, influenza, and now COVID-19 are common triggers. Often the trigger is never identified. |
| Recent heart attack or heart surgery | Pericardial inflammation 2-8 weeks later (Dressler's syndrome) is immune-mediated. |
| Autoimmune disease | Lupus, rheumatoid arthritis, scleroderma, vasculitis, and familial Mediterranean fever can all cause pericarditis. |
| Kidney failure (uremic pericarditis) | Toxins built up in advanced kidney disease can inflame the sac. Improves with dialysis. |
| Cancer (lung, breast, lymphoma) | Tumor seeding of the pericardium or radiation effects. Often presents as a large effusion. |
| Tuberculosis | Major worldwide cause; rare in the US except in immigrants and immunocompromised hosts. |
| Recent cardiac procedure (catheter ablation, pacemaker) | Up to 1-2% of ablations have post-procedure pericarditis. |
| Radiation to the chest | Can scar the pericardium over years; raises constrictive-pericarditis risk. |

## Treatment Options

- **First-line: NSAIDs + colchicine.** The standard combo per ICAP/COPE trials. Either ibuprofen 600 mg three times a day or aspirin 750-1000 mg three times a day, tapered over 2-4 weeks.
- **Colchicine 0.5 mg twice a day** (or once a day if under 70 kg or kidney issues) for **3 full months** on a first episode. Cuts recurrence by ~50%.
- **Recurrent episode.** Repeat NSAID course, plus **colchicine for 6+ months** (CORP-2 dosing). The longer course matters.
- **Steroids are NOT first-line.** They actually increase recurrence in viral/idiopathic disease. Reserved for autoimmune cases, NSAID failure, or when NSAIDs are contraindicated (pregnancy, severe kidney disease).
- **IL-1 blockers (anakinra, rilonacept)** for steroid-dependent or multi-recurrence patients. RHAPSODY (2021) showed rilonacept dramatically cuts recurrence.
- **Acetaminophen + opioids** are NOT enough — they relieve pain but do not treat inflammation. NSAIDs are doing the actual work.
- **Restrict strenuous exercise** until symptoms resolve, EKG changes settle, and inflammation markers (CRP) normalize — typically 3 months for athletes, less for non-athletes.
- **Constrictive pericarditis** -> pericardiectomy at an experienced center if symptomatic and refractory.
- **Cardiac tamponade** (large effusion compressing the heart) -> emergency drainage (pericardiocentesis).

## Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

| Option | Risks | Benefits | Alternatives |
|---|---|---|---|
| NSAID + colchicine (3 months) | GI upset, ulcers (NSAID); diarrhea (colchicine, dose-dependent); rare kidney effects; drug interactions with statins. | Standard of care. ~50% reduction in recurrence. Most patients fully recover. | NSAID alone (higher recurrence); steroid (higher recurrence). |
| Repeat NSAID + extended colchicine (6+ months) for recurrence | Same side effects; longer exposure. | Breaks the recurrence cycle. CORP-2 evidence base. | Add low-dose steroid; IL-1 blocker. |
| Low-dose prednisone (last-resort or autoimmune cases) | Weight gain, bone loss, glucose elevation, mood changes; higher recurrence rate. | Works fast for pain. Useful when NSAIDs are not safe. | Stick with NSAID/colchicine; add IL-1 blocker. |
| IL-1 blocker (rilonacept or anakinra) | Injection-site reactions, infection risk; cost. | Steroid-sparing for multi-recurrent disease. RHAPSODY showed dramatic recurrence reduction. | Long-term colchicine + low-dose steroid; pericardiectomy in extreme cases. |
| Pericardiectomy (surgical removal of the sac) | Open-heart surgery: mortality 5-10% in best centers; long recovery. | Curative for chronic constrictive pericarditis. The only definitive option once scarring is fixed. | Continued medical therapy; symptomatic management. |
| No treatment (NSAIDs only without colchicine) | 30% or higher recurrence rate. More ED visits. | Avoids colchicine GI effects. | Add colchicine. |

## Common Misconceptions

| Myth | Reality |
|---|---|
| "My chest pain has to be a heart attack." | Pericarditis pain is sharp, pleuritic (worse with deep breath), worse lying down, and better leaning forward. Heart-attack pain is usually heavy pressure, not pleuritic, and not positional. The EKG patterns also differ — diffuse ST elevation with PR depression is pericarditis, not a heart attack. |
| "Just put me on steroids — they work the fastest." | Steroids feel good in week one and cause trouble for months. Multiple studies show early steroids **increase** recurrence in viral/idiopathic pericarditis. NSAIDs + colchicine is slower to relieve pain but produces fewer recurrences. |
| "I should stay in bed for weeks." | Mild activity is fine and probably helpful. Only **strenuous exercise and competitive sports** need to wait until inflammation markers (CRP) normalize. |
| "Once it is gone, it can't come back." | About 30% of untreated patients recur. Even with treatment, 15-20% have a recurrence. That is why colchicine is given for a full 3-6 months, not just until pain resolves. |
| "Colchicine is just for gout." | Colchicine is one of the most important medications in modern pericarditis care. The ICAP, COPE, and CORP-2 trials all showed it cuts recurrence by about half. We dose it 0.5 mg once or twice daily for 3-6 months. |
| "Pericarditis means I will get heart failure." | Constrictive pericarditis is uncommon (less than 1% of acute viral cases). Most patients recover fully with no long-term cardiac problems. |

## Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

| Where / What | What Can Happen |
|---|---|
| Pericardial effusion | Extra fluid in the sac. Small effusions are common and usually safe. Large effusions can compress the heart. |
| Cardiac tamponade | An emergency — fluid compresses the heart, dropping blood pressure. Needs immediate drainage (pericardiocentesis). |
| Recurrent pericarditis | 30% rate without colchicine; ~15% with. Most respond to repeating the NSAID/colchicine course. |
| Constrictive pericarditis | Scarred, stiff sac. Causes leg swelling, fatigue, ascites — looks like right-sided heart failure. May need pericardiectomy. |
| Myopericarditis | Mild heart-muscle involvement (small troponin bump). Usually still benign but requires more exercise restriction. |
| Atrial fibrillation | Sometimes triggered during the acute inflammatory phase. Often resolves once inflammation settles. |

## Points to Know

If you remember nothing else, remember these key points.

- The classic clue: **sharp chest pain that is worse lying flat and better leaning forward**.
- First-line treatment is **NSAID + colchicine for 3 months**. Not steroids.
- About 30% recur without colchicine; closer to 15% with. Finish the full colchicine course even if you feel better.
- Strenuous exercise and competitive sports wait until your CRP normalizes (often 3 months in athletes).
- Watch for **shortness of breath, fast heartbeat, or low BP** — these can mean tamponade and need immediate care.
- If you have a second episode, a third, or are dependent on steroids, ask about **IL-1 blockers (rilonacept / anakinra)**.

## When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- **Call 911** for crushing chest pressure, fainting, severe shortness of breath, or signs of shock (cold sweat, gray color) — possible tamponade or heart attack.
- **Call 911** for chest pain with one-sided weakness, slurred speech, or vision loss — stroke symptoms.
- **Call our office** if your chest pain worsens despite NSAIDs and colchicine for 1 week.
- **Call our office** for fever above 101°F or chills, especially if persistent — may signal bacterial or autoimmune cause.
- **Call our office** for new leg swelling, abdominal swelling, or weight gain — possible constrictive pericarditis.
- **Call our office** if colchicine causes severe diarrhea — we will adjust the dose.
- **Call our office** before any new medication or supplement — colchicine has important drug interactions.

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## Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- AHA — What is Pericarditis? - Patient-facing overview from the American Heart Association.
- Mayo Clinic — Pericarditis - Plain-language symptoms, diagnosis, and treatment overview.
- Cleveland Clinic — Pericarditis - Includes recurrent-disease pathway and pericardiectomy info.
- 2015 ESC Pericardial Diseases Guideline (clinician-facing but readable) - Definitive treatment and duration guidance.
- Myocarditis Foundation — Pericarditis Patient Resources - Patient-oriented resources and community support, includes pericarditis content.

# Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.


- 2015 ESC Guidelines for the Diagnosis and Management of Pericardial Diseases *[Guideline]*
  Definitive guideline for diagnosis, NSAID + colchicine first-line, recurrence management, constriction work-up.
- ICAP trial — colchicine for acute pericarditis (Imazio et al, NEJM 2013) *[Clinical Trial]*
  Landmark RCT: colchicine cuts recurrent/incessant pericarditis by ~50%. Anchors first-line therapy.
- COPE trial — colchicine for acute pericarditis (Imazio et al, Circulation 2005) *[Clinical Trial]*
  Earlier RCT establishing colchicine benefit; supports duration recommendations.
- CORP-2 trial — colchicine for multiple recurrences (Imazio et al, Lancet 2014) *[Clinical Trial]*
  RCT for recurrent pericarditis; supports 6+ months of colchicine after >1 recurrence.
- RHAPSODY trial — rilonacept for recurrent pericarditis (Klein et al, NEJM 2021) *[Clinical Trial]*
  IL-1 blocker evidence base for steroid-dependent / refractory recurrent pericarditis.
- Anakinra for recurrent pericarditis — AIRTRIP RCT (Brucato et al, JAMA 2016) *[Clinical Trial]*
  Supporting IL-1 blocker evidence (anakinra) for refractory recurrent pericarditis.
- AHA/ACC/HRS expert consensus on acute pericarditis (Adler et al review) *[Review]*
  Concise modern review of acute and recurrent pericarditis management.
- Constrictive pericarditis — clinical review (Welch, Heart 2018) *[Review]*
  Diagnostic imaging (CMR) and pericardiectomy indications for the complications section.
- Pericardial involvement post-COVID-19 (Diaz-Arocutipa et al) *[Original Research]*
  Emerging viral etiology context; included in causes table.
- Mayo Clinic — Pericarditis *[Patient Education]*
  Lay-language symptom and diagnosis framing.
- AHA Patient Education — What is Pericarditis? *[Patient Education]*
  Trusted-resources section.

# About This Guide

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**Reviewer note:** Reviewed against Mayo Clinic, AHA, and Cleveland Clinic pericarditis pages. Ours adds: explicit colchicine-dosing and duration based on ICAP/COPE/CORP-2 trials, the evidence-based reason steroids are NOT first-line, the RHAPSODY trial position for IL-1 blockers, and a clear constrictive-pericarditis red-flag list.

## Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

# Take This Guide With You

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