



CARING FOR HEARTS

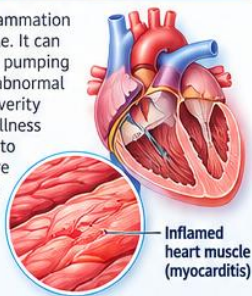
Understanding Myocarditis and Long-Term Management

Myocarditis is inflammation of the heart muscle (myocardium). The inflammation can affect the heart's ability to pump blood effectively and may cause abnormal heart rhythms (arrhythmias). It can range from a mild illness with complete recovery to severe disease.



What Is Myocarditis?

Myocarditis is inflammation of the heart muscle. It can reduce the heart's pumping ability and cause abnormal heart rhythms. Severity ranges from mild illness with full recovery to severe heart failure or life-threatening arrhythmias.



Common Causes



Viral infections
(e.g., Coxsackie virus, adenovirus, influenza, COVID-19, Epstein-Barr virus, parvovirus B19)



Other infections
(bacterial, fungal, Lyme disease)



Autoimmune conditions
(e.g., lupus, rheumatoid arthritis, vasculitis)



Drug or toxin exposure
(certain medications, recreational drugs, rare vaccine-associated reactions)

Symptoms

Infants and Young Children



- Poor feeding
- Rapid breathing
- Irritability
- Excessive sleepiness
- Poor growth

Older Children and Adults



- Chest pain
- Shortness of breath
- Fatigue
- Dizziness
- Palpitations
- Fainting (syncope)
- Exercise intolerance

Severe Cases May Include:



Heart failure symptoms



Fluid retention



Serious arrhythmias



Cardiogenic shock

How Is Myocarditis Diagnosed?



Medical history and physical examination



Electrocardiogram (ECG)
May show ST-T wave abnormalities, premature beats, heart block, or ventricular arrhythmias.



Blood tests
Troponin, BNP or NT-proBNP, inflammatory markers.



Echocardiogram
Evaluates heart function, ventricular size, and pericardial effusion.



Cardiac MRI
Most useful noninvasive test for diagnosis.



Endomyocardial biopsy
Reserved for selected severe or unclear cases.

Treatment of Myocarditis

Treatment depends on severity.



Supportive Care
Rest, adequate hydration, and monitoring.



Heart Failure Medications
ACE inhibitors or ARBs, beta blockers, diuretics, mineralocorticoid receptor antagonists.



Arrhythmia Management
Antiarrhythmic medications and implantable devices in selected patients.



Advanced Therapies
Severe cases may require intravenous medications, mechanical circulatory support, or heart transplantation.



Immunomodulatory Therapy
Used selectively in autoimmune myocarditis, giant cell myocarditis, or specific biopsy-proven conditions.

Activity and Sports Restrictions

Patients with definite or probable myocarditis should generally avoid:



- Competitive sports
- Vigorous exercise
- High-intensity training for at least 3–6 months after diagnosis.

Before returning to sports, patients typically require:

- ✓ Normal heart function on echocardiogram
- ✓ Normal or near-normal cardiac MRI findings
- ✓ No significant arrhythmias on monitoring
- ✓ Normal exercise testing
- ✓ Normalized cardiac biomarkers



Long-Term Follow-Up

Even after symptoms improve, some patients may develop persistent ventricular dysfunction, dilated cardiomyopathy, arrhythmias, or exercise intolerance.



First Year

- ✓ Regular cardiology visits
- ✓ ECGs
- ✓ Echocardiograms
- ✓ Holter monitoring (if indicated)



Beyond One Year

Frequency depends on:

- Recovery of heart function
- Presence of scar tissue on MRI
- Arrhythmia burden
- Symptoms

Prognosis



Excellent Prognosis

- Many children and adults
- recover completely with normal heart size, normal heart function, and no long-term restrictions.



Intermediate Prognosis

- Some patients recover but
- may have mild ventricular dysfunction, residual scar tissue, or occasional arrhythmias.



Higher-Risk Group

Patients with severe ventricular dysfunction, persistent MRI abnormalities, ventricular tachycardia, or need for mechanical support require lifelong cardiology follow-up.

Warning Signs

Seek immediate medical attention for:



Chest pain



Fainting (syncope)



Rapid or irregular heartbeat



Severe shortness of breath



New swelling of the legs or abdomen



Sudden decrease in exercise tolerance



Dr. Shabih Alhadheri, MD
Advanced Pediatric Cardiology

1478 W Elliot Rd, Suite 102, Gilbert, AZ 85233

480-855-1339

www.apcardio.com

