

Introduction to Rheumatology

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Key concepts, common diseases, diagnostic approach, and management basics

1. What Is Rheumatology?

Aspect	Description
Definition	Medical specialty focused on the diagnosis and treatment of musculoskeletal and systemic autoimmune diseases.
Scope	- Joint, tendon, ligament, muscle, bone, and cartilage disorders - Systemic connective tissue diseases (e.g., lupus, vasculitis) - Metabolic bone diseases (e.g., osteoporosis, gout) - Pediatric rheumatic conditions (juvenile idiopathic arthritis).
Goal	Preserve function, relieve pain, prevent organ damage, and improve quality of life.

2. Core Principles

- Pattern Recognition** – Identify typical symptom clusters (e.g., symmetric polyarthritis, morning stiffness).
 - Holistic Assessment** – Evaluate joints **and** extra-articular manifestations (skin, eyes, kidneys, lungs).
 - Early Intervention** – Initiate disease-modifying therapy promptly to limit irreversible damage.
 - Multidisciplinary Care** – Collaborate with physiotherapists, occupational therapists, ophthalmologists, nephrologists, etc.
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3. Common Rheumatic Diseases

Category	Representative Disorders	Hallmark Features
Inflammatory Arthritis	- Rheumatoid arthritis (RA) - Psoriatic arthritis (PsA) - Ankylosing spondylitis (AS)	- Synovitis, joint swelling, morning stiffness >30 min (RA) - Enthesitis, axial involvement (AS)

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Category	Representative Disorders	Hallmark Features
Crystal-Induced Arthropathies	- Gout - Calcium pyrophosphate deposition disease (CPPD)	- Sudden monoarticular pain, tophi (gout) - Chondrocalcinosis on imaging (CPPD)
Systemic Autoimmune Connective-Tissue Diseases	- Systemic lupus erythematosus (SLE) - Systemic sclerosis (SSc) - Dermatomyositis	Multiorgan involvement, autoantibodies (ANA, anti-dsDNA, anti-Scl70)
Vasculitides	- Giant cell arteritis (GCA) - Granulomatosis with polyangiitis (GPA)	Vessel inflammation + ischemic symptoms, elevated ESR/CRP
Metabolic Bone Disease	- Osteoporosis - Osteomalacia	Low bone mineral density, fragility fractures
Pediatric Rheumatology	- Juvenile idiopathic arthritis (JIA) - Kawasaki disease	Disease onset <16yr, growth-related issues

4. Diagnostic Approach

4.1 History & Physical Examination

Step	What to Ask / Examine
Symptom chronology	Onset, duration, pattern (continuous vs. episodic)
Pain characteristics	Location, severity, morning stiffness, relief factors
Systemic clues	Fever, rash, photosensitivity, oral ulcers, dry eyes/mouth
Family & occupational history	Genetic predisposition, repetitive strain
Functional impact	ADL limitation, work ability
Physical exam	Joint count (swollen/tender), range of motion, enthesitis, skin lesions,