

# Peripheral Arthritis in Spondyloarthritis: Understanding a Key Manifestation

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## Introduction

Spondyloarthritis (SpA) is a group of chronic inflammatory rheumatic diseases that includes ankylosing spondylitis, psoriatic arthritis, reactive arthritis, and enteropathic arthritis. While SpA is often associated with axial involvement (spine and sacroiliac joints), many patients also develop peripheral arthritis, which affects joints outside the spine, such as the knees, ankles, wrists, and elbows. Peripheral arthritis can cause pain, swelling, and stiffness that interfere with daily activities and quality of life. Recognizing and managing this manifestation is crucial, as it provides diagnostic clues and significantly influences treatment strategies.

## What Is Peripheral Arthritis in Spondyloarthritis?

Peripheral arthritis in SpA refers to inflammation of joints in the arms or legs rather than the spine. Unlike rheumatoid arthritis, which typically presents with symmetrical joint involvement, SpA-related peripheral arthritis often has an asymmetrical and oligoarticular pattern, meaning it usually affects fewer than five joints and often on one side of the body.

It most commonly involves:

**Large joints of the lower limbs** (knees, ankles, hips).

**Smaller joints** in some cases (wrists, elbows, shoulders, or toes).

## Causes and Mechanisms

The exact cause of peripheral arthritis in SpA is not fully understood, but several contributing factors are recognized:

**Genetics:** A strong association exists with the HLA-B27 gene.

**Immune dysregulation:** Overactive immune responses trigger chronic inflammation at joints and entheses (sites where tendons/ligaments attach to bone).

**Microbiome and infections:** Gut inflammation and certain bacterial infections (e.g., after gastrointestinal or urinary tract infections) may contribute to disease onset.

**Mechanical stress:** Repeated strain at joints and entheses can trigger localized inflammation.

## Clinical Features

Peripheral arthritis in SpA often presents with:

**Joint pain and swelling**, most often in the knees or ankles.

**Morning stiffness** lasting more than 30 minutes, improving with movement.

**Asymmetry**, unlike other types of inflammatory arthritis.

**Intermittent flares**, with periods of worsening symptoms followed by partial remission.

**Association with enthesitis**, particularly at the Achilles tendon, plantar fascia, or patellar tendon.

Importantly, peripheral arthritis can occur alongside axial symptoms, dactylitis ("sausage digits"), psoriasis, or inflammatory bowel disease, helping clinicians identify the specific subtype of SpA.

## Diagnosis

Diagnosing peripheral arthritis in the context of SpA involves combining **clinical evaluation, imaging, and laboratory tests**:

**Clinical history and exam:** Pattern of joint involvement, presence of enthesitis or dactylitis, and family history.

**Imaging:** Ultrasound and MRI can detect early synovitis, enthesitis, and bone marrow edema.

**Blood tests:** HLA-B27 typing, inflammatory markers (ESR, CRP).

**Exclusion of mimicking conditions:** Such as rheumatoid arthritis, gout, or osteoarthritis.

## Treatment Approaches

The goal of treatment is to reduce inflammation, relieve symptoms, and prevent long-term joint damage.

## Pharmacological Management

**NSAIDs:** First-line therapy for reducing pain and stiffness.

**Conventional DMARDs:** Such as methotrexate or sulfasalazine, particularly effective for peripheral arthritis (though less so for axial disease).

**Biologic therapies:** TNF inhibitors and IL-17 inhibitors are highly effective in patients with persistent disease activity.

**Corticosteroid injections:** Provide local relief for inflamed joints.

## Non-Pharmacological Management

**Physical therapy:** Maintains mobility and strengthens supporting muscles.

**Exercise:** Low-impact activities like swimming, cycling, and stretching improve function.

**Patient education:** Understanding disease course and management helps with adherence and coping.

**Lifestyle measures:** Weight management, smoking cessation, and balanced nutrition support joint and overall health.

## Prognosis and Impact

With early diagnosis and modern treatment options, many patients with peripheral arthritis in SpA can achieve good disease control. However, untreated or poorly managed disease can lead to joint damage, reduced mobility, and impaired quality of life. Monitoring disease activity regularly and tailoring therapy to both axial and peripheral symptoms is essential for optimal outcomes.

## Conclusion

Peripheral arthritis is a frequent and impactful manifestation of spondyloarthritis, often presenting with asymmetrical involvement of large joints in the lower limbs. It reflects the systemic and diverse nature of SpA, extending beyond the spine. Prompt recognition, accurate diagnosis, and comprehensive treatment strategies—including NSAIDs, DMARDs, biologics, and supportive measures—are vital for preventing complications and improving patient quality of life. Understanding peripheral arthritis within the broader spectrum of SpA ensures more effective, individualized care for those living with this chronic condition.