

## Reactive Arthritis



PLAY PICMONIC

### Pathophysiology

#### Type III Hypersensitivity Reaction

[Hiker-sensitive-crying on \(3\) Tree](#)

Reactive arthritis is a part of type III hypersensitivity, an abnormal immune response characterized by an immune complex-mediated reaction, classified as a seronegative spondyloarthropathy that occurs after an infection, typically involving the gastrointestinal or genitourinary tract. The exact pathogenesis remains unclear, but it is thought to involve the following mechanisms: infectious trigger and molecular mimicry, HLA-B27 association, immune complex-mediated damage, inflammatory cell infiltration.

#### HLA-B27

[\(HLA\) Hula Bee \(27\) Bomber](#)

It is found that 60-85% of reactive arthritis patients have a positive HLA-B27. Patients who are negative for HLA-B27 commonly present positive for cross-reacting antigens such as B42, B40, B22, and B7.

### Etiologies

#### Campylobacter jejuni

[Camping-scene in June](#)

Reactive arthritis can occur in 1 to 5% patients infected with *Campylobacter jejuni*. A study reported that the pathogenesis of gram-negative presents from the similarity of the organism peptide with the peptide for the binding site of the B27 molecule

#### Chlamydia trachomatis

[Chlamydia-clam](#)

Among the pathogens that cause reactive arthritis, Chlamydia is the most endemic cause. Chlamydia is a common cause of sexually transmitted infection (STI).

#### Salmonella

[Salmon](#)

Patients with Salmonella infection can develop diarrhea and abdominal symptoms 8-72 hours after exposure. It is caused by consuming undercooked meat, poultry, eggs, or unpasteurized milk. Incidence of Salmonella-induced reactive arthritis can occur 5 to 14 per 100,000 persons.

#### Yersinia enterocolitica

[Ear-scientist with Intestine-castle](#)

Erythema nodosum and reactive arthritis are the most common post-infectious sequelae in patients infected with *Yersinia enterocolitica*.

#### E. coli

[E coal-eye](#)

Reactive arthritis is common with gastroenteritis. However, E. coli is rarely associated with reactive arthritis. E. coli is gram-negative, facultatively anaerobic, and rod-shaped.

## Shigella

[She-Jello](#)

Shigella is a gram-negative, facultatively anaerobic, nonmotile, and non-spore-forming rod that can cause diarrhea. It is associated with reactive arthritis, especially in developed countries.

## Triad

### Arthritis

[King-Arthur](#)

Arthritis is the most common symptom, which is described as joint pain and swelling and happens suddenly. A small number of joints (three or fewer) involves in this process, the knee, ankle, or joints of the feet. It commonly occurs around 1-4 weeks after an event of infection, such as diarrhea.

### Urethritis

[U-wreath-on-fire](#)

Urethritis can be experienced in reactive arthritis patients with mucopurulent discharge and is sometimes seen with gross hematuria due to hemorrhagic cystitis. It is commonly symptomatic in males and not in females.

### Conjunctivitis

[Convict-eye-on-fire](#)

Reactive arthritis is characterized by triad symptoms, including conjunctivitis, urethritis, and arthritis.