The hot swollen joint & suspected infection

Investigate native-joint infection promptly and recognise sepsis early.

RECOVERY & COMPLICATIONS / ADULT TRAUMA

An acutely painful swollen native joint can be infected even without fever or a raised blood inflammatory marker.

01 Assess urgency

Check observations, mental state, perfusion and signs of organ dysfunction. Suspected sepsis needs prompt senior assessment and the local sepsis pathway. Obtain appropriate blood tests and cultures; do not let delayed joint sampling postpone urgent antimicrobial treatment.

02 Sample the joint

When septic arthritis is suspected, arrange prompt aseptic aspiration. Send fluid for bacterial identification, cell count and crystals. In a stable patient without sepsis, obtain diagnostic samples before empirical antibiotics when this can be done promptly.

03 Interpret with caution

Crystals do not exclude infection. A low synovial white-cell count or normal blood CRP cannot rule it out. Use the whole clinical picture, microbiology and imaging where needed; aspiration of a deep joint may require image guidance.

04 Control the infection

Involve orthopaedics and infection specialists early. Agree drainage or washout and empirical antibiotics, then tailor to cultures. Monitor pain, function and inflammatory trends; deterioration needs reassessment of source control.

WATCH POINT This guide concerns native joints. A painful prosthetic joint requires a dedicated prosthetic-joint infection pathway and specialist assessment.

DISCUSS WITH THE TEAM

Are diagnostic samples and source control being arranged without delaying treatment of sepsis?

READ THE SOURCES

[1] EBJIS SANJO guideline (2023), diagnosis and management of native-joint infection.
[2] NICE NG253 (2025), suspected sepsis in adults, initial assessment and treatment.

Educational summary for clinicians. Apply local protocols and patient-specific judgement.