



Key Synovial Fluid Findings with Some Common Diagnoses

Diagnosis	Gross Appearance	Leukocytes (per mm ³)	Polymorphonuclear Cells (%)	Crystals	Culture and/or Gram Stain	Other Findings
Bacterial infection	Opaque or cloudy	Often but not always >100,000	>90	None (unless coincidental)	Positive	Bacteria
Gout and other acute crystal-induced diseases	Usually cloudy	2000 to 100,000	Often >80	Positive	Negative	
Osteoarthritis	Clear	<1000	<50	0 or CPPD	Negative	Fibrils
Rheumatoid arthritis	Cloudy	>5000	>50 usually	0	Negative	Cytoplasmic inclusions
Fracture	Bloody	Proportional to hematocrit	Up to 70	0	Negative	Fat
Nonfracture, mild trauma	Clear to bloody	<2000	<50	0	Negative	

CPPD = calcium pyrophosphate dihydrate.