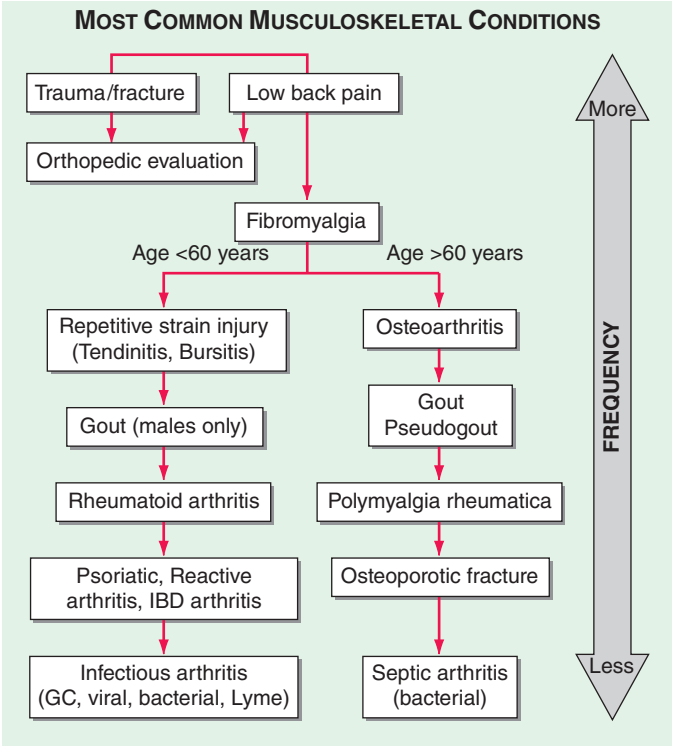

FIGURE 393-2 Algorithm for consideration of the most common musculoskeletal conditions. GC, gonococcal; IBD, inflammatory bowel disease.

These conditions are between 10 and 100 times more prevalent than other serious autoimmune conditions, such as SLE, scleroderma, polymyositis, and vasculitis.

CLINICAL HISTORY

Additional historic features may reveal important clues to the diagnosis. Aspects of the patient profile, complaint chronology, extent of joint involvement, and precipitating factors can provide important information. Certain diagnoses are more frequent in different *age* groups. SLE and reactive arthritis occur more frequently in the young, whereas fibromyalgia and RA are frequent in middle age, and OA and polymyalgia rheumatica are more prevalent among the elderly. Diagnostic clustering is also evident when *sex* and *race* are considered. Gout, spondyloarthritis, and ankylosing spondylitis are more common in men, whereas RA, fibromyalgia, and lupus are more frequent in women. *Racial predilections* may be evident. Thus, polymyalgia rheumatica, giant cell arteritis, and granulomatosis with polyangiitis (GPA; formerly called Wegener's granulomatosis) commonly affect whites, whereas sarcoidosis and SLE more commonly affect African Americans. *Familial aggregation* is most common with ankylosing spondylitis, gout, and Heberden's nodes of OA.

The chronology of the complaint is an important diagnostic feature and can be divided into the *onset, evolution*, and *duration*. The onset of disorders such as septic arthritis or gout tends to be abrupt, whereas OA, RA, and fibromyalgia may have more indolent presentations. The patients' complaints may evolve differently and be classified as chronic (OA), intermittent (crystal or Lyme arthritis), migratory (rheumatic fever, gonococcal or viral arthritis), or additive (RA, psoriatic arthritis). Musculoskeletal disorders are typically classified as acute or chronic based on a symptom duration that is either less than or greater than 6 weeks, respectively. Acute arthropathies tend to be infectious, crystal-induced, or reactive. Chronic conditions include noninflammatory or immunologic arthritides (e.g., OA, RA) and nonarticular disorders (e.g., fibromyalgia).

The *extent* or *distribution* of articular involvement is often informative. Articular disorders are classified based on the number of joints involved, as either *monarticular* (one joint), *oligoarticular* or *pauciarticular* (two or three joints), or *polyarticular* (four or more joints). Although crystal and infectious arthritis are often mono- or oligoarticular, OA and RA are polyarticular disorders. Nonarticular disorders may be classified as either focal or widespread. Complaints secondary to tendinitis or carpal tunnel syndrome are typically focal, whereas weakness and myalgia, caused by polymyositis or fibromyalgia, are more widespread in their presentation. Joint involvement in RA tends to be symmetric and polyarticular. By contrast, spondyloarthritis, reactive arthritis, gout, and sarcoid are often asymmetric and oligoarticular. OA and psoriatic arthritis may be either symmetric or asymmetric and oligo- or polyarticular. The upper extremities are frequently involved in RA and OA, whereas lower extremity arthritis is characteristic of reactive arthritis and gout at their onset. Involvement of the axial skeleton is common in OA and ankylosing spondylitis but is infrequent in RA, with the notable exception of the cervical spine.

The clinical history should also identify *precipitating events*, such as trauma (osteonecrosis, meniscal tear), drug administration (Table 393-2), antecedent or intercurrent infection (rheumatic fever, reactive arthritis, hepatitis), or illnesses that may have contributed to the patient's complaint. Certain comorbidities may have musculoskeletal consequences. This is especially so for diabetes mellitus (carpal tunnel syndrome), renal insufficiency (gout), depression or insomnia (fibromyalgia), myeloma (low back pain), cancer (myositis), and osteoporosis (fracture) or when using certain drugs such as glucocorticoids (osteonecrosis, septic arthritis) and diuretics or chemotherapy (gout) (Table 393-2).

Lastly, a thorough *rheumatic review of systems* may disclose useful diagnostic information. A variety of musculoskeletal disorders may be associated with systemic features such as fever (SLE, infection), rash (SLE, psoriatic arthritis), nail abnormalities (psoriatic or reactive arthritis), myalgias (fibromyalgia, statin- or drug-induced myopathy),

TABLE 393-2 DRUG-INDUCED MUSCULOSKELETAL CONDITIONS

Arthralgias	Quinidine, cimetidine, beta blockers, quinolones, chronic acyclovir, interferons, IL-2, nicardipine, vaccines, rifabutin, aromatase and HIV protease inhibitors
Myalgias/myopathy	Glucocorticoids, penicillamine, hydroxychloroquine, AZT, lovastatin, simvastatin, atorvastatin, pravastatin, clofibrate, amiodarone, interferon, IL-2, alcohol, cocaine, paclitaxel, docetaxel, imatinib mesylate, colchicine, quinolones, cyclosporine, tacrolimus, protease inhibitors
Tendon rupture/tendinitis	Quinolones, glucocorticoids, isotretinoin, statins, collagenase injections
Gout	Diuretics, aspirin, cytotoxics, cyclosporine, alcohol, moonshine, ethambutol, fructose-containing soft drinks
Drug-induced lupus	Hydralazine, procainamide, quinidine, phenytoin, carbamazepine, methyldopa, isoniazid, chlorpromazine, lithium, penicillamine, tetracyclines, TNF inhibitors, ACE inhibitors, ticlopidine
Drug-induced subacute lupus	Proton pump inhibitors, calcium channel blockers (diltiazem), ACE inhibitors, TNF inhibitors, terbinafine, interferons (α and β-1a), paclitaxel, docetaxel, HCTZ
Osteonecrosis	Glucocorticoids, alcohol, radiation, bisphosphonates
Osteopenia	Glucocorticoids, chronic heparin, phenytoin
Scleroderma	Vinyl chloride, bleomycin, baricitinib, pentazocine, organic solvents, carbidopa, tryptophan, rapeseed oil
Vasculitis	Allopurinol, amphetamines, cocaine (often levamisole adulterated), thiazides, penicillamine, propylthiouracil, montelukast, TNF inhibitors, hepatitis B vaccine, trimethoprim/sulfamethoxazole, minocycline, hydralazine

Abbreviations: ACE, angiotensin-converting enzyme; AZT, zidovudine; HCTZ, hydrochlorothiazide; IL-2, interleukin 2; TNF, tumor necrosis factor.