

Sample Topic

Joint Disorders



The Medical Disability Advisor: Workplace Guidelines for Disability Duration

Fifth Edition

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Joint Disorders

Related Terms

- Decreased Range of Motion
- Osteoarthritis
- Frozen Joint
- Rheumatoid Arthritis

Medical Codes

- **ICD-9-CM:** 716.9, 719, 719.0, 719.9, 719.90, 719.91, 719.92, 719.93, 719.94, 719.95, 719.96, 719.97, 719.98, 719.99
- **ICD-10:** M13.8, M13.9, M16.9, M24.0, M24.4, M24.6, M24.8, M24.9, M25, M25.0, M25.1, M25.2, M25.3, M25.4, M25.9, M36.3*

Definition

Joint disorder is a general term describing any condition that involves any aspect of any joint.

A large number of diseases fall under the heading of joint disorder. A list compiled by the American College of Rheumatology contains more than 190 individual disorders that cause musculoskeletal pain and stiffness. Joint disorders are caused by infection, inflammation, chronic repetitive injury, acute injury, degeneration, congenital deformity, and neoplasm.

Examples of joint disorders include osteoarthritis, systemic lupus erythematosus, ankylosing spondylitis, Behçet's syndrome, gout, infectious (septic) arthritis, rheumatoid arthritis, Felty's syndrome, and patella chondromalacia. Joint disorders may be associated with diseases such as regional enteritis or ulcerative colitis.

Risk: Chronic arthralgia (pain in a joint) afflicts women more often than men. The most common cause (arthritis) and less common causes (e.g., systemic lupus erythematosus) of arthralgia are between 2 and 10 times more prevalent in women than in men.

The risk for chronic joint disorders is more than 1.5 times greater for obese individuals than for those of normal weight ("Arthritis").

The prevalence of joint disorders increases with age.

Incidence and Prevalence: Joint pain (arthralgia) is a very common symptom that affects everyone at some point during life. Nearly 1 in 3 adults in the US are affected by arthritis and chronic joint disorders ("Arthritis").

Arthritis or chronic joint symptoms affect 28.4% of adult males and 37.3% of adult females. By 65 years of age, 58.8% of adults will be affected ("Arthritis").

Diagnosis

History: Individuals will complain of joint pain with stiffness in one or more joints. The pain may be of sudden onset or may have gradually worsened over a period of weeks or months.

Physical exam: The individual may present with swelling, stiffness, and cracking, popping, or grinding (crepitation) with joint motion. On examination, tenderness, deformity, muscle spasm, and swelling may be evident. The joint may be locked into a nonfunctional position (contracture). The individual may have a fever.

Tests: Blood tests may include erythrocyte sedimentation rate (ESR), rheumatoid factor (RF), and complete blood count (CBC). Plain x-rays should be taken. Bone scans, CT scans, and MRI are more sensitive methods to detect early disease. A sample of joint fluid may be removed for analysis, including white blood cell count and laboratory cultures. Additional tests may be performed, depending on the suspected diagnosis.

Treatment

Minimizing stress to the affected joints can help. This includes weight loss, avoidance of activities that produce a higher load across the joint, judicious rest, splinting, and the use of assistive devices such as a cane for individuals with hip and knee disease. Other conservative treatment methods include heat, ice, exercise, analgesics, and anti-inflammatory agents, along with selective use of injectable steroid preparations. Aspiration and removal of inflamed joint fluid (arthrocentesis) may also be helpful to reduce joint pain and swelling. Physical and/or occupational therapy is used to improve joint flexibility and strength, facilitate patient education, and to reduce painful symptoms. Infection is treated with antibacterial or antifungal agents, as applicable.

In cases in which the pain becomes severe, symptoms fail to respond to conservative measures, and joint dysfunction leads to the inability to perform activities of daily living, surgery (arthrotomy or arthroscopy) may be considered. Possible joint surgeries include removal of the joint membrane (synovectomy), bone fusion (arthrodesis), and joint reconstruction or replacement (arthroplasty).

Prognosis

The outcome depends on the underlying cause and can vary from complete resolution to permanent deformity with associated disability. Conservative measures may lead to resolution of some conditions but be ineffective for other conditions. In general, surgical treatment of joint disorders has a good outcome, but the specific condition also influences the results of surgery.

Differential Diagnoses

- Bursitis
- Fracture
- Joint pain secondary to systemic disease
- Ligament sprain
- Muscle strain
- Tendinitis

Specialists

- Clinical Psychologist
- Immunologist
- Infectious Disease Internist
- Orthopedic Surgeon
- Pain Medicine Physician
- Physiatrist
- Physical Therapist
- Psychiatrist
- Rheumatologist
- Sports Medicine Internist

Rehabilitation

Rehabilitation for joint disorders is area-specific and depends on the cause (etiology) of the joint disorder. Some conditions such as chondromalacia (softening of articular cartilage of the patella due to abnormal shear forces) may take 6 months of progressive flexibility and strength training to achieve normal joint functioning. Other joint disorders such as rheumatoid arthritis (a systemic autoimmune response that targets joints) are increasingly debilitating and cause permanent joint damage. Arthritic conditions also differ from joint disorders caused by structural problems (e.g., improper loading on the joint due to muscle imbalances) in that periods of acute swelling and pain within the joints briefly subside, only to repeat again. Physical therapy for these individuals is long-term and aims to maintain joint mobility and muscle integrity as the condition progresses. Given the destructive nature of arthritic conditions, other therapeutic interventions (e.g., pain management, occupational therapy, and/or counseling) are frequently part of the rehabilitation plan.

Physical modalities to reduce pain and swelling, physical/occupational therapy, and education on joint-loading during activity are all part of any rehabilitation program involving the joints. The specific treatment protocol will depend on the nature of the joint disorder. Rehabilitation for disease states such as rheumatoid arthritis is typically more complex and involves a staged approach when implementing a rehabilitation program.

During an acute stage of joint pain, the individual is instructed to rest and possibly use a splint on the affected joint. If exercises are prescribed at all, they will be isometric (contraction of a muscle without joint movement). The acute stage usually lasts for 7 to 10 days but can vary.

Once the acute stage subsides, it is important to get the joint active through its full range of motion. However, it is very important during this stage to balance rest and exercise. During the subacute phase, active assisted range of motion exercises are implemented as tolerated. It is important not to overstretch the joint or increase intra-articular pressure or joint temperature at this time. Once the subacute phase has ended, the inflammation response in the joints will have decreased enough that the individual may begin gentle stretching and more dynamic low-resistance isotonic exercises.

Physical therapists instruct individuals in a progression of flexibility and strengthening exercises. Therapists educate the patient on joint mechanics and loading so that during the chronic pain phase, the individual can moderate the exercises according to the pain level on a given day. The individual may be instructed in the use of an assistive device to improve ambulation and to decrease loading of the affected joint. A pool routine in water that is slightly heated can be utilized to increase strength and flexibility with minimal joint stress.

Occupational therapists may re-evaluate the person's home environment to assess everyday living activities and recommend changes to help reduce joint stress. Therapists instruct individuals to make environmental changes, learn energy conservation

techniques, and to use adaptive equipment to protect the affected joint on a daily basis. The individual may be instructed to wear a night splint to help reduce excess motion and joint strain during sleep.

Comorbid Conditions

- AIDS
- Cancer
- Depression
- Diabetes
- Obesity

Complications

Complications are associated with the disease or condition that is causing the joint disorder. Possible complications include avascular necrosis, destruction of joint cartilage, joint dislocation, loss of joint function, and deformity.

Factors Influencing Duration

The location of the joint disorder, number of joints affected, effectiveness of treatment, severity of pain, job demands, need for surgical intervention, and presence of complications can influence the length of disability.

Length of Disability

Duration depends on the specific diagnosis. Contact physician for additional information.

Return to Work

Work restrictions and accommodations are related to the underlying cause of joint disorder, the location of the affected joint, and whether more than one joint is affected.

Failure to Recover

Regarding diagnosis:

- What is the cause of individual's joint disorder?
- Was onset of individual's pain sudden or gradual?
- What joints are involved?
- What other symptoms does individual have?
- Does individual have a fever?
- Does individual present with swelling, stiffness, and cracking, popping, or grinding (crepitation) with joint motion?
- Is there tenderness, deformity, muscle spasm, and swelling?
- Has individual had testing, such as erythrocyte sedimentation rate (ESR), rheumatoid factor, and CBC; x-rays, bone scans, CT scans, and MRI; and joint fluid analysis performed to determine the diagnosis? What were the results?

Regarding treatment:

- If needed, is individual on a weight loss program?
- Has individual reduced the stress on the involved joints?
- Have conservative treatment options been tried?
- If needed, is physical/occupational therapy effective?
- Is adaptive equipment or an assistive device needed?
- Is individual taking the appropriate medications? Are they helpful?
- Did individual have steroid injections?

- If pain was secondary to infection, were they treated with the appropriate medications?
- Will individual require surgery, such as arthrotomy or arthroscopy?

Regarding prognosis:

- Does individual require further physical/occupational therapy?
- Does individual have a home exercise program?
- Does individual modify activity for joint protection?

Cited References

"Arthritis." *Centers for Disease Control and Prevention*. 22 Apr. 2004. U.S. Department of Health and Human Services. 22 Dec. 2004 <<http://www.cdc.gov/nccdphp/arthritis/index.htm>>.