

## Osteoarthritis in Older Adults

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### BACKGROUND

Osteoarthritis (OA) is a progressive joint disease-causing bone and cartilage breakdown. OA is prevalent among older adults, who may lose their functional independence and require assistance with their activities of daily living. OA most commonly affects the weight-bearing joints such as the knees, hips, and the hands. A wide variety of treatments can have an impact on pain stages, functional ability, and quality of life.

### DIAGNOSIS

The most common symptom of OA is joint pain. Joints most commonly affected are the hands hips, knees, and spine. History and physical examination are important in making the diagnosis. Clinical signs include:

- Pain tends to worsen with activity, especially after rest.
- Morning stiffness, that usually lasts for less than 30 minutes.
- Joint locking and instability.
- Crepitus and decreased range of motion with involved muscle atrophy.

Plain radiography can help confirm diagnosis and rule out other arthritic diseases. Findings include joint space narrowing, osteophytes, and sclerosis.



**Fig. 1: Osteoarthritic hand.**

- (1) Heberden nodes.  
(2) Bouchard nodes.

Image Source: Sinusas K. 2020



**Fig. 2: Radiographic imaging of a osteoarthritic hand.** (1) Joint space narrowing (2) osteophytes (3) Joint destruction (4) carpo-metacarpal changes. Image Source: Sinusas K. 2020

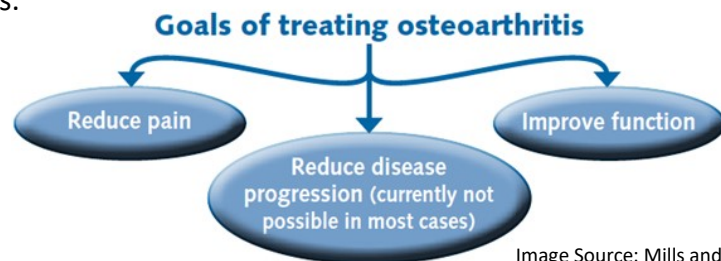


Image Source: Mills and Raycroft. 2017

### NON-PHARMACOLOGIC TREATMENTS

- Obesity is a major risk and weight loss has been shown to improve OA symptoms.
- Regular exercise improves muscle strength, tone, balance, and will help with weight loss.
- Physiotherapy, involving muscle strengthening, may reduce the progression of OA. Improvements in joint range of movement and function may occur.
- Occupational therapy to assess for splints, foot orthotics, braces, and assistive devices (e.g., canes, long-handled shoehorns, and appropriate footwear) may help to improve function.

## PHARMACOLOGICAL TREATMENTS

### Acetaminophen

- First line choice in older adults due to safety and efficacy.
- Caution with concurrent alcohol and patients with liver disease. Dosages should not exceed 3000 mg a day.

### NSAIDs

- Includes medications such as ibuprofen, indomethacin, and naproxen.
- Side effects include gastrointestinal bleeding, and kidney injury.
- Use the lowest possible dose in a short period of time to decrease risk of side effects.
- Some medications such as diclofenac can be given topically.

### Corticosteroids

- Includes methylprednisolone and triamcinolone injected into the affected joint and is a safe and effective option for older adults.
- Injections should be limited to 3 to 4 times a year to avoid joint damage.
- Analgesic effect onset starts in days and can last for months.
- Side effects include damage to local structures, bleeding, and infection.

### Surgery

- Knee and hip replacement have made significant improvement in patient's lives.



Image Source: Mills and Raycroft. 2017

### **When to refer?**

It may be necessary for rheumatologists or orthopedic surgeon to see OA patients if:

- Inadequate symptom control despite therapy.
- Complicated co-morbidities limiting standard treatment.
- Cases where the primary care physician is not comfortable administering intra-articular steroid injections.

### **References**

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