This algorithm applies to adults aged more than 18 years presenting with suspected hip or knee osteoarthritis. Refer to RACGP Clinical guidelines for musculoskeletal diseases for more information on recommendations and grading of evidence www.racgp.org.au/guidelines/musculoskeletaldiseases

**PROBABLE OA**

**Common presentations**

Management mild-moderate persistent symptoms
- Simple analgesia (A)
- Regular paracetamol (maximum 4 g/day)
And/or
- Trial short term
  - topical NSAIDs (C)
  - topical capsaicin (D)
If symptoms persist:
- trial short term oral NSAID (B)
- monitor blood pressure, renal function

**EXCLUDE**
OA may present in other ways. Investigations to rule out alternative diagnoses (if needed based on clinical judgment): laboratory tests (e.g. ESR, PTA, synovial fluid analysis); and radiographs (particularly weight bearing X-rays, however findings are often nonspecific)

**CONSIDER**
Trauma, soft tissue conditions, referred pain syndromes, inflammatory arthritis (e.g. rheumatoid, psoriatic, septic/crystal arthritis, haemarthrosis)

**Mild-moderate persistent symptoms**
Check use of strategies for mild-moderate. Then consider:
- Continued oral NSAID (with caution)
- Viscosupplementation for the knee*(eg. hyaluronate 5–13 weeks for OA knee) (C)
- Opioid therapy (A) for severe symptoms where surgery is contraindicated or not yet available

**Consider impact of comorbidities**
Nutritional assessment (BMI, girth)
Falls risk assessment, function, impairment
**Consider other impacts**
Psychosocial assessment (emotional disability eg. depression, anxiety), sleep, mobility, activities of daily living

**NSAID risk**
Age, hypertension, upper GIT events, cardiovascular, renal or liver disease

**Medication risk**
Polypharmacy, aspirin allergy, diuretics, ACEIs, anticoagulants

**Patient’s knowledge, expectations and goals**

**Assess nonpharmacological interventions for all patients according to individual need at all stages of OA**

**OPTIMIZE WEIGHT (B)**
- Optimal weight BMI 18.5–25
- Combination of two or more interventions: nutrition education, cognitive behavioural therapy, low energy diet, exercise regimen, dietician referral

**ALLIED HEALTH INTERVENTIONS**
- Land based exercise program (B)
- Aquatic therapy (C)
- Multimodal physical therapy (C)
- Tai chi (especially if at risk/fear of fall) (C)
- Thermotherapy (C)
- TENS (C)
- Acupuncture (C)
- Patellar taping (D)
- Massage therapy (D)
- Low level laser therapy (D)

**Complete joint replacement surgery referral for orthopaedic assessment**

**Short term pharmacological therapy**
- Simple analgesia (paracetamol) (A)
- Oral NSAIDs/COX-2 inhibitors (with caution) (B)
- Intra-articular corticosteroid (B)
- Topical NSAIDs (C)

**Moderate-severe persistent symptoms**
In those whom mild-moderate strategies have not been successful

**Consider**:
- Continued oral NSAID (with caution)
- Viscosupplementation for the knee*(eg. hyaluronate 5–13 weeks for OA knee) (C)
- Opioid therapy (A) for severe symptoms where surgery is contraindicated or not yet available

**Management of an acute flare of symptoms**
Manage as for mild-moderate, stepping up/adding therapy as needed
And/or
Intra-articular corticosteroid injection (B)

**Long term pharmacological therapy**
- Simple analgesia (paracetamol) (A)
- Weak and strong opioids (with caution) (A)
- Viscosupplementation* (eg. hyaluronate 5–13 weeks for OA knee) (C)

**EDUCATION ANDSELF MANAGEMENT SUPPORT**
Self management and education programs (C)
Telephone support (D)

**Review**
- Complementary therapies
- Activities of daily living
- Sleep, mood
- Medication and self care adherence
- Consider referral to pharmacist for home medication review

*Procedure of administering synthetic hyaluronic acid products into the joint via intra-articular injection
Diagnosis and management of hip and knee osteoarthritis

**SELECTED PRACTICE TIPS (SEE THE FULL GUIDELINE FOR MORE TIPS AND FURTHER DETAILS)**

www.racgp.org.au/guidelines/osteoarthritis

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pharmacological management</strong></td>
<td></td>
</tr>
<tr>
<td>Oral NSAIDs</td>
<td>Good evidence for NSAIDs or COX-2 inhibitors for reducing pain in the short term for hip or knee OA (Recommendation 21 B)</td>
</tr>
<tr>
<td>Opioids</td>
<td>Opioids have a modest effect in managing moderate to severe OA pain in patients for whom paracetamol is ineffective, and who do not respond to, or have contraindications for, NSAIDs. However, most of the research on opioid use has been in short term trials and long term efficacy has not been shown (Recommendation 22 C)</td>
</tr>
<tr>
<td>Glucosamine</td>
<td>Conflicting evidence of benefit for glucosamine sulphate and glucosamine hydrochloride in the treatment of the symptoms of knee OA (Recommendation 27 C). There is insufficient evidence to support benefit for preventing progression of OA knee cartilage loss. In all reported studies, glucosamine was safe compared to placebo (Recommendation 28 C)</td>
</tr>
<tr>
<td>Intra-articular corticosteroid injection</td>
<td>Good evidence to support intra-articular corticosteroid injections for short term treatment of knee and hip OA (Recommendation 24 C)</td>
</tr>
<tr>
<td>Topical NSAIDs</td>
<td>Some evidence to support short term treatment of knee OA with topical NSAIDs (Recommendation 23 B)</td>
</tr>
<tr>
<td><strong>Nonpharmacological interventions</strong></td>
<td></td>
</tr>
<tr>
<td>Land based exercise</td>
<td>Land based exercise is recommended for obese people with OA of the hip and knee (Recommendation 6 B)</td>
</tr>
<tr>
<td>Aquatic exercise</td>
<td>Aquatic exercise programs, performed in either group or individual settings, provide the same general benefits as land based exercise programs but with reduced stress to the joints due to buoyancy (Recommendation 7 C)</td>
</tr>
<tr>
<td>Multimodal physical therapy</td>
<td>Some evidence to support GPs recommending multimodal physical therapy (up to 3 months) (Recommendation 8 C)</td>
</tr>
<tr>
<td>Magnetic bracelets</td>
<td>Weak evidence only to support GPs recommending the wearing of magnetic bracelets (Recommendation 17 D)</td>
</tr>
<tr>
<td>Weight loss</td>
<td>Weight loss recommended for obese people with OA of the knee (Recommendation 5 B)</td>
</tr>
<tr>
<td>Walking aids</td>
<td>Walking aids (eg. walking sticks and frames) may assist with mobility* (Recommendation 18 C)</td>
</tr>
<tr>
<td><strong>Interventions not supported by current evidence</strong></td>
<td></td>
</tr>
<tr>
<td>Braces and orthoses</td>
<td>Good evidence that knee braces, neoprene sleeves or lateral wedged insoles are of little or no benefit (Recommendation 29 C)</td>
</tr>
<tr>
<td>Electromagnetic fields</td>
<td>Good evidence that electromagnetic field or electric stimulation are of no benefit (Recommendation 28 B)</td>
</tr>
<tr>
<td>Chondroitin sulphate</td>
<td>Some evidence to suggest that chondroitin sulphate is of no benefit (Recommendation 31 C)</td>
</tr>
<tr>
<td>Therapeutic ultrasound</td>
<td>Some evidence to suggest that therapeutic ultrasound is of no benefit (Recommendation 33 C)</td>
</tr>
<tr>
<td>Topical capsaicin</td>
<td>There is weak evidence to support GPs recommending topical capsaicin for short term treatment of OA of the hip and knee (Recommendation 25 D)</td>
</tr>
</tbody>
</table>

**FOR DETAILED PRESCRIBING INFORMATION**

National Prescribing Service www.nps.org.au
Therapeutic Guidelines www.tg.com.au
Australian Medicines Handbook www.amh.net.au

**PATIENT SERVICES**

Arthritis Australia www.arthritisaustralia.com.au
Australian Rheumatology Association www.rheumatology.org.au

**NHMRC grades of recommendations**

A Body of evidence can be trusted to guide practice
B Body of evidence can be trusted to guide practice in most situations
C Body of evidence provides some support for recommendation(s) but care should be taken in its application
D Body of evidence is weak and recommendation must be applied with caution

**Note:** A recommendation cannot be graded A or B unless the volume and consistency of evidence components are both graded either A or B

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**Disclaimer**

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