

Occupational Therapy and Arthritis

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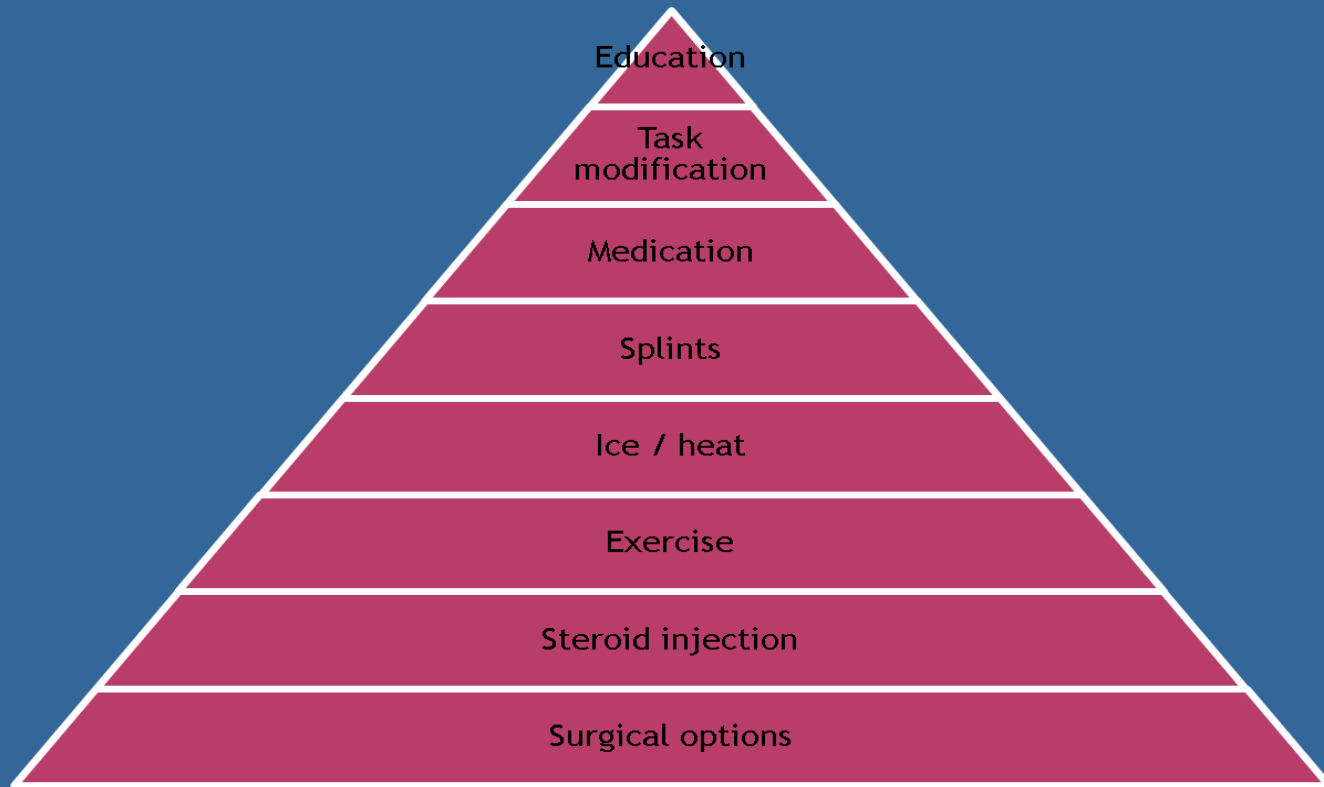
- General overview of Arthritis in Ireland
- Role of occupational therapy
- Example of treatment OA thumb



Impact of Arthritis in Ireland

- 1 in 5 people have some form of arthritis
- Over 30% of GP visits relate to arthritis
- 34% of woman and 23% of men are affected
- 18% of arthritis are < 55 years
- By 2030 25% of adults aged >18 will have doctor diagnosed arthritis.

OT Treatment – top of the pyramid



Inflammatory Vs Non Inflammatory

- Inflammatory RA

Symptoms tend to ease with activity, early morning stiffness prominent, Onset often acute/sub-acute, Systemic upset, Raised level on blood tests eg CRP and ESR, inflammation

- Non Inflammatory OA

Symptoms worse with Activity, Minor morning Stiffness, Usually gradual onset, No systemic upset, Blood tests usually normal

OT Goals of Conservative Treatment for the Arthritic Hand

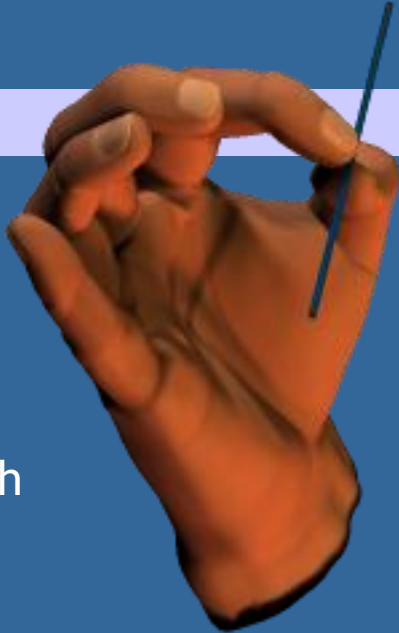
- Symptoms:

Pain, Stiffness, Tenderness, Classic signs of bony enlargement, Limited motion, Deformity, Ulnar Deviation, Unstable Joints, Decreased Grip strength.

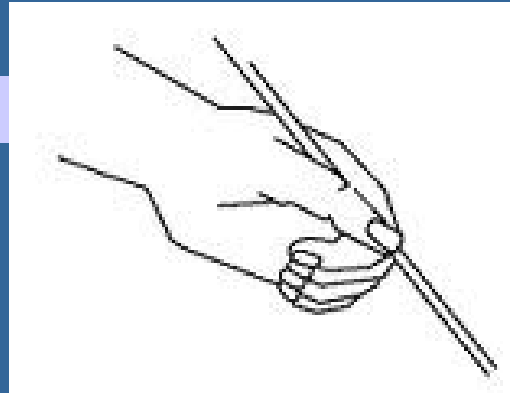
- Goal of Conservative treatment:

Eliminate aggravating factors, Reducing stiffness, pain and inflammation, Maintaining functional muscle strength for pinch and grip, Reducing joint stress, Increasing hand function and independence in ADL's

STATIC FUNCTIONAL HAND POSITIONS



Tip pinch



Lateral pinch



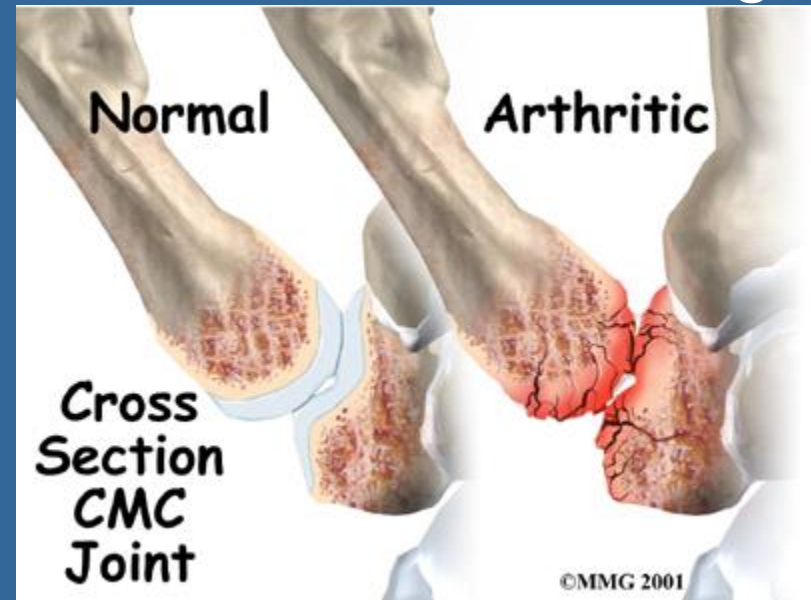
Palmar pinch



Grasp pinch

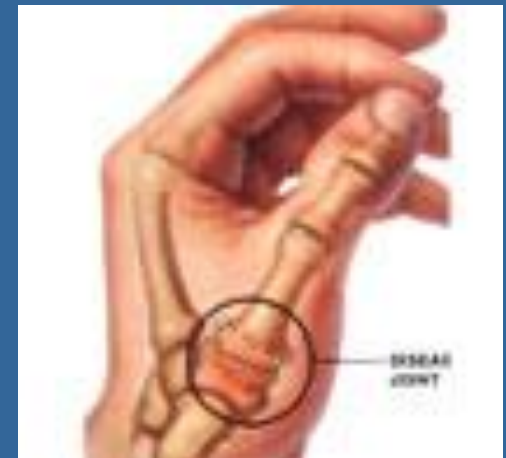
Presentation of the Arthritic Joint

- It results in degeneration of articular cartilage with fibrillation, fissures, ulceration and full thickness loss of joint surface.



Thumb CMC joint

- A painful thumb can limit hand function by 45%.
- It is a saddle joint, its movements include:
 1. Flexion/Extension
 2. Abduction/Adduction
 3. Opposition
(abduction+flexion+pronation).



Presentation of CMCJ

- Localised joint pain, worse with activities - pinching, grasping, twisting, relieved with rest.
- Tenderness, joint swelling, deformity, instability.
- Assessment - rule out differential diagnosis, grind test, observe shouldering sign, decreased web space (progressive adduction contracture), joint laxity, ROM, function

Over Time...

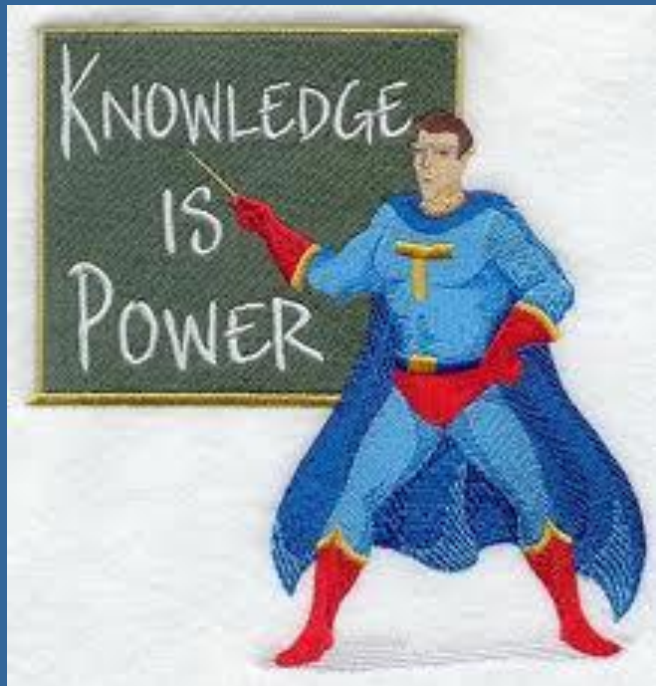
- The joint subluxes and often, a progressive adduction contracture develops
- Unable to place palm completely flat on table
- Unable to spread web space between thumb and index finger as wide as normal – difficult to grasp large objects.
- Palmar **beak ligament** – major static stabilising structure of the CMC joint during function – provides mobility but prevents dislocation



Role of OT

- Preserve the integrity of the musculoskeletal system during periods of exacerbation so that the patient will have optimal functioning during periods of remission.
- Treatment can be preventive as many of the deformities that occur can be avoided due to inadequate information regarding the disease and lacking instruction regarding appropriate or effective exercise and positioning techniques.

Education



Joint Protection

- Education on how to avoid adverse mechanical factors
- Use strongest joints for the task
- Distribute weight
- Avoid static positions
- Alternate activity with rest
- Maintain ROM
- Avoid pain
- Employ work simplification techniques.

Recognise Pain

- Poor correlation between radiographic changes and pain
- Can have mild radiographic changes but severe pain or severe damage and pain free.
- Overweight people with OA will experience more pain and disability than those not overweight (Somers et al 2012).

Pain Coping Skills

- A study by Somers et al 2012 documents coping strategies including:
 - Activity rest cycling + pleasant activity scheduling to reduce pain, and encourage pacing whilst increasing activity levels.
 - Cognitive restructuring to help participants recognise the relationship between thoughts and feelings and behaviour.
 - Encouragement to replace catastrophising thoughts with rational coping strategies

Exercise

- Exercises should go alongside joint protection education and include:
- Range of motion exercises (5-10 x per day)
- Proprioceptive exercises: trace a line of a tennis ball improves conscious joint control and opposition
- Strengthening exercises -theraputty
- Tendon glides to decrease pain sensitivity and increase pinch strength.

Assistive Devices

- Based on a persons needs and their daily occupations.
- Built up grips
- Kitchen aids
- Dressing aids
- Long leavers



Adapting Occupations.

- Analyze daily occupations and try alternative ways to complete tasks that decreased the load on the joints.
 - Try alternative ways to open zips
 - squeeze out a cloth,
 - lift pots, carry bags etc.
-
- Remember it takes time to form new habits.



- Large round contoured handles



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Grip objects between palm



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Incorrect



Correct



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It is important to look carefully at each individual, their characteristics, needs and lifestyle.



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"At least your arthritis didn't prevent you from opening that jar of pickles!"

Application of Heat/Ice

Local application of heat including:

- paraffin wax, hot packs,
- electric blankets,
- Isotoner gloves



Application of Ice – over the CMC for 5 -15 mins to decrease pain and swelling

Splinting

- Decrease pain
- Prevent progression of deformity or correct deformity
- Maintain first web space
- Enhance stability at the CMCJ by restricting these changes
- Maintain/improve function



Splinting Evidence

- Rannou (2009) provided evidence that splinting the OA thumb at night for 12 mths will reduce pain & disability.
- Study by Jones et al (2007) compared splint types and concluded that there was no significant difference in improvements based on choice/style of thermoplastic splint including: thumb spika, thumb strap splint, short opponens.

Evidence

- A study by Correirp et al (2007) – confirmed splinting the CMC joint is effective to decreased pain scores however it did not effect the strength, functional capacity and dexterity.
- A study following a joint protection program by Boustead et al (2010) showed a greater effect on ADL one year after participating in the extended JP programme and found significant improvements in hand function for pain and stiffness but not in grip force.

Splint Choice

Based on patients goals and lifestyle, effect on hand function and hand condition

- Off the shelf – quick, washable, softer option, breathable, may not fit so well and can be expensive.
- Hybrid - Combines the convenience of ready made splints and the ability to customise the device Neoprene – soft option, comfortable, functional.
- Thermoplastic – Range of Material and design choice, an achieve correct positioning, more supportive, more durable, accommodate anatomical abnormalities



Pharmacological Treatments

- Topical NSAIDS are more effective than oral ibuprofen (Zacher et al 2001)
- These are a safe and effective treatment for hand OA such as Volterol gel.
- A RCT by Widrig et al (2007) proven Arnica to be not inferior to topical NSAIDS for OA.
- Paracetamol (up to 4g/day) is the oral analgesic of choice
- Corticosteroid Injections are effective for a flare up of CMC OA however benefits are short lived with only 1 in 6 having benefits for up to 6mths.
- Surgery is an option for severe thumb base OA and considered when all conservative treatments have failed.

Point to Note: Arthritis and Emotions

Important to be holistic when treating OA and the impact it can have.

- 48% can no longer participate in the social activities they used to enjoy.
- 31% are sad and depressed whilst 40% find it hard to keep going and find it a constant worry.
- 30% worry how the condition affect their appearance.
- 40% believe it have a negative impact on intimacy with their partner.
- 40% find basic house hold tasks and chores difficult.
- 44% are in pain everyday.
- 55% are comfortable talking to their partner about it

Referral Details

- Hours: 8.30-4.30 Monday to Friday.
- Cost: inpatient - included in bed rate
- outpatient - €70/hr, €60/45min, €50/30min, €30/15min
- Aids/Appliances: supplied & billed, pay at accounts or Physio/OT reception
- Referrals to be sent to Occupational Therapy Department, Bon Secours Hospital, College Road, Cork, (021) 4801630
- Referral information required: name, address, DOB, contact number, medical history and presenting complaint

Thank You

