



OSTEOARTHRITIS and Your HANDS

MNEMONICS FOR JOINT PROTECTION PRINCIPLES

Hot & cold

Exercise

Larger joints

Plan ahead

Your own pace

Others to help you

Use both hands

Rest

Splints

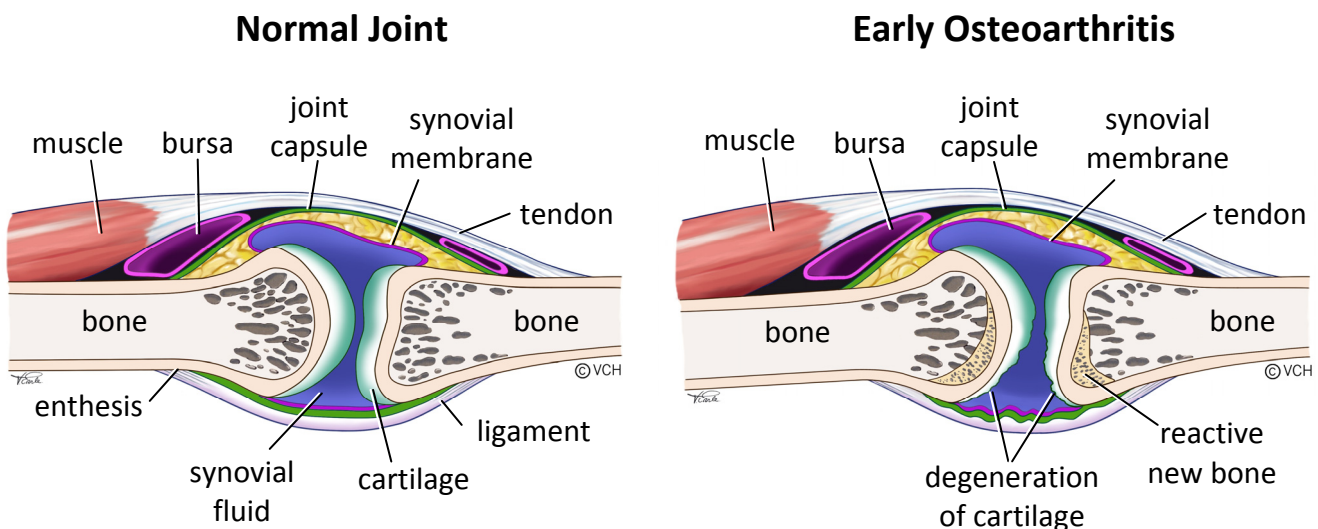
Enlarge grips

Listen to your pain

Friction and leverage

WHAT IS OSTEOARTHRITIS (OA)?

- OA is the wearing away of the cartilage that cushions the ends of the bone. The cartilage becomes less elastic and its surface irregular.
- As cartilage changes, the bone under it tries to repair itself by making new bone. The extra bone development leads to bony spurs called osteophytes.
- During this period of repair, the joint may become swollen and warm. The joint loses its normal shape and ability to move.
- It most commonly occurs in middle-aged or older adults.
- It is also called “degenerative arthritis”.
- **Types:**
 1. Primary OA with no apparent cause
 2. Secondary When the cartilage has been damaged by overuse or trauma, OA may develop in later years
- **Joints Affected in the Hand:**
 1. Commonly Small joint at the end of your fingers and joint
 2. Occasionally Joint in the middle of your fingers



Symptoms:

1. Pain

- Pain may occur after using your hands, but can be relieved by rest
- Later, pain may occur at rest, at night, or with minimal motion
- Pain arises from the structures (i.e. ligaments, joint capsule) in and around your joint being stretched and strained

2. Stiffness

- Your hands may feel stiff in the morning or after periods of inactivity
- This stiffness is generally short-lived and relieved by movement or heat

3. Joint Noises

- With movement, you may hear or feel crackling in your finger joints
- Generally, this is only repositioning of structures in or around your joints

Signs :

1. Nodes

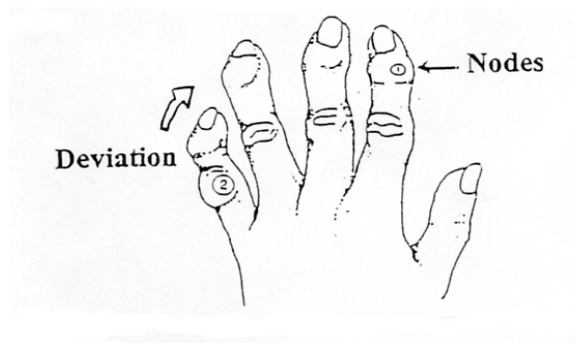
- Hard, painful lumps or nodes may develop at the end or middle joints of your fingers
- These nodes are small spurs of bone at the joint margins
- Soft moveable cysts may appear before nodes

2. Deviation

- Your fingers may become crooked and your thumb may deviate towards your palm
- These changes occur when ligaments are stretched or lax, allowing the bones to move out of normal alignment

3. Swelling

- Your fingers may swell periodically for no apparent reason or following trauma
- Joint irritation produces more joint fluid than is normal and it fills the joint space



Treatments:

The type of treatments you use will depend on your arthritis and what you have found works most effectively for you. Usually the best approach is a combination of the following along with taking your medication as prescribed:

- Use **physical modalities** like ice, contrast baths, heat
- **Get more rest**
- Use **joint protection techniques**

Physical Modalities

❖ **Heat**

- Increases circulation to your hands, which relaxes muscles and helps to decrease pain and stiffness in the joint.
- Examples include using hot bath, hot packs or wax bath.
- Apply heat for 10 to 15 minutes.

❖ **Ice**

- Decreases circulation, which helps to decrease joint pain and swelling.
- Ice should not be applied to your hands if you have circulation problems in your hands (e.g. Raynaud's).
- Examples included: using cold water, ice packs, bag of frozen peas, etc
- Ice packs can be easily made at home and wrapped in a cold wet towel.
- Apply ice therapy for 10 to 15 minutes & repeat frequently throughout the day (i.e. 4 to 5 times per day)

❖ **Contrast baths**

- Useful for decreasing pain, swelling and stiffness in the joints.
- Contrast baths alternates the use of hot and cold on the hands
- For example, soak your hands in cold water for 10 seconds, then in hot water for 5 seconds. This is repeated for 10 minutes and can be used several times a day.
- Use with caution if sensation is decreased or Raynaud's phenomenon present

Joint Protection Principles

The aim of joint protection is to reduce the stress on your joints. Reducing stress on joints will help reduce your pain. Joint protection techniques can be used at rest and during activity. At rest, support your joint(s) in a comfortable and well-aligned position. During activity, use adaptive equipment or alternative methods to reduce stress on your joints.

1. Respect Pain

- Pain can occur due to inflammation, damage or overuse of your hands
- Pain that occurs with or after an activity is an important warning sign. If the pain persists after the activity, then you should reduce the time and/or effort you spend on the activity
- Remember you are the best judge of your pain, so let your feelings guide your activity level
- Be aware of your pain-free time and work within that time
- Ignoring pain can lead to increased pain

2. Pace your activities

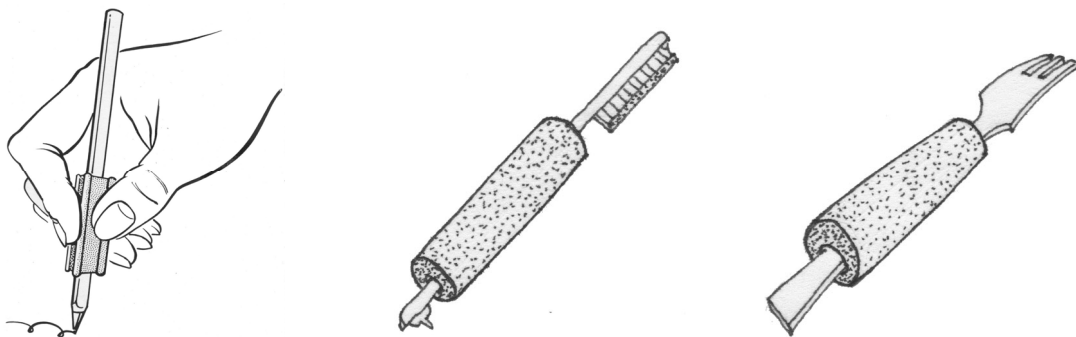
- Take short and frequent rest breaks, rather than waiting until you are finished the task to take a rest.
- Use a timer to help remind you to take a break.

3. Avoid static positions and repetitive movements

- Staying in the same position (e.g. holding a book) or repeating the same movement many times may aggravate joint symptoms.
- Change positions frequently to help reduce stiffness.

4. Avoid tight grasps

- Use padded handles on items (e.g. toothbrush, hammer, mixing spoons etc.) so less force is required to grip object and stress on knuckle joints is reduced



- By sliding or rolling items, you can avoid tight grips and heavy lifting.
- Many everyday items are designed with wheels, which removes the need for lifting and carrying e.g. using a wheeled trolley or cart to carry groceries.

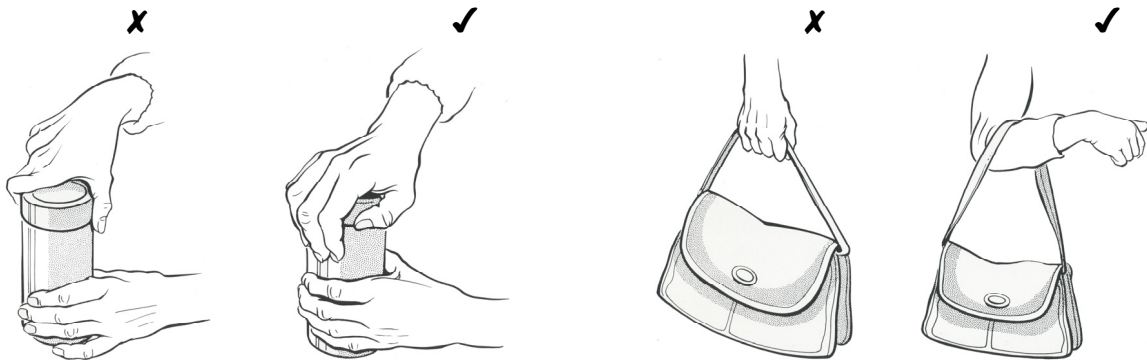
5. Use two hands

- Use two hands and an open hand position. This will spread the weight more evenly and reduce the strain on your fingers while lifting and carrying.
- Hold heavy objects with two hands instead of using just one. Place the object between or on top of two flat hands, instead of using your fingers to grip.



6. Use stronger, larger joints and good body mechanics

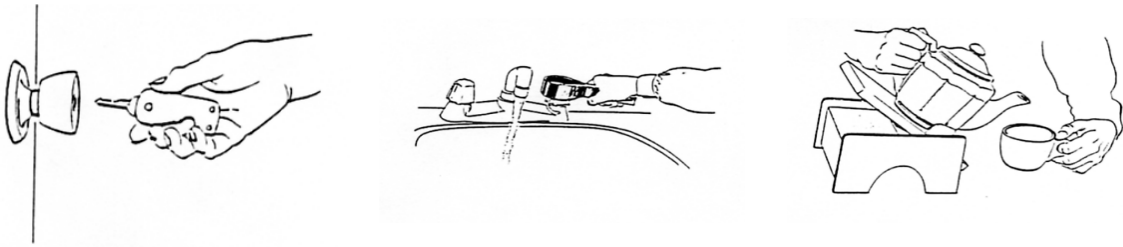
- When carrying a parcel, support the weight across your forearm and/or palm of your hands. Keep the item close to your trunk.
- Carry the strap of your purse over your forearm or shoulder instead of gripping it with your fingers.



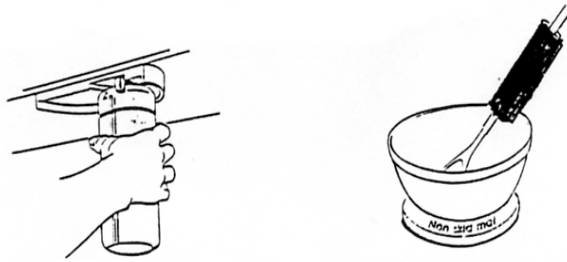
7. Use assistive equipment to minimise stress and improve your ability to use your hand

- Use **Adaptive Equipment** to lessen the stress on your joints and improve your ability to do activities.

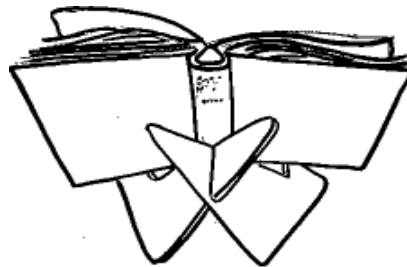
- Use **Leverage**: less force is needed to turn or lift an object if the lever arm is long e.g. use tap turners, key extensions, jar openers etc.



- Use **Friction / Traction**: a non-slippery surface will improve grip with less pressure. Use pen grips, non-skid mats under objects.



- Use **Tools/Equipment**: to support or anchor items in place in order to avoid gripping tightly or holding your joints in one position for long periods of time e.g. book rests and card holders etc.



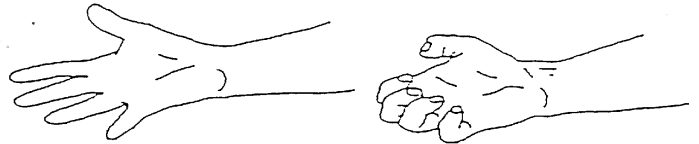
- Use **Splints**: to protect and support your joints in a well-aligned position. Also the use of elastic gloves (isotoner) may help to decrease joint pain, swelling and stiffness.



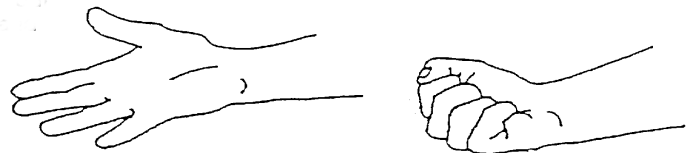
Hand exercises

- Hand exercises will maintain your hand mobility and strength, which in turn will help to decrease the pain and stiffness in your hands.
- It is important to perform the exercise correctly and to relax between each exercise. Be aware of your body posture and continue to breathe.
- Try to incorporate your hand exercises into your daily routine. They can easily be done while watching TV, listening to music etc.
- Do exercises at least twice a day with each exercise repeated about 5 to 10 times
- Apply heat (e.g. heat pack) or cold (e.g. ice pack) to your hands for 10 minutes before you perform the exercises. This will help decrease the pain and stiffness in your hands so you can exercise more easily.

- 1) Curl the tips of your fingers down to touch the base of each finger. Uncurl to the straight position.



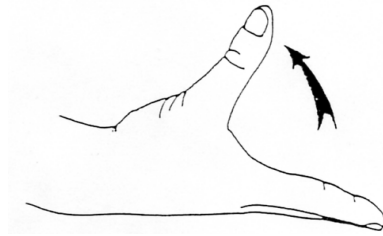
- 2) Make a gentle fist curling all your fingers. Slowly open your hand wide.



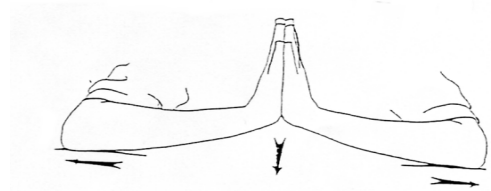
- 3) Touch the tip of your thumb to the tip of each finger, making a circle. Open your hand completely after each touch.



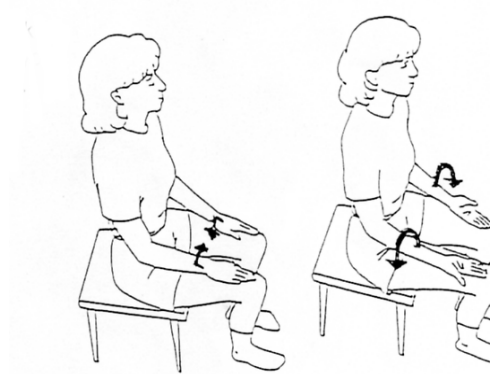
- 4) With your hands resting on table, palms up, move your thumb directly towards the ceiling. Always keep the thumb in line with the index finger.



- 5) Stretch your fingers by putting your hands together and then move your palms away from each other.



- 6) Pronation / Supination
Start with your arm in a hand shaking position. Keep elbows tucked by your side. Slowly turn your palm down. Relax. Then turn your palm up.



Note: Persons with osteoarthritis may use exercise hand putty or balls to improve their hand mobility. However, if using them increases your pain, then decrease or discontinue their use. If you are using a ball, it should be soft and “give” when you squeeze it. Do not use a firm ball like a tennis or rubber ball.