

**B**y the time you are 85 years old, approximately half of all women and a quarter of all men will have some stiffness and pain in their hands due to osteoarthritis (OA). OA is the breakdown, over time, of the smooth, protective cartilage that covers the ends of bone at the joints. When the cartilage has deteriorated, rough edges or bone start to rub together causing pain and inflammation. Within the hand, the small joints of the hand – namely the knuckles and fingers – as well as the thumb are the most commonly affected.

OA affects the hand at:

- the base of the thumb, and where the thumb and wrist join;
- the last finger joint closest to the nail;
- the middle joint of a finger; and
- knuckles, where the fingers join the hand.

### CAUSES OF HAND OA

OA usually occurs later in life, with no specific cause. Several factors can play a role, including the following.

- **Age.** The older you are, the more likely you are to have hand OA.
- **Sex.** Women are more likely to be affected than men.
- **Weight.** Obese people are more likely to have hand OA.
- **Genes.** Some people inherit the tendency to develop OA (this usually presents in younger age).
- **Injuries.** Even when properly treated, a previously injured joint is more likely to develop OA over time. Fractures and dislocations are among the most common injuries that lead to arthritis.
- **Joint issues.** Joint infections, overuse (sporting activities, hobbies or work requiring repetitive use of the hands and fingers), loose ligaments, and poorly aligned joints can also lead to hand or wrist arthritis.

### SYMPTOMS OF HAND OA

As the cartilage deteriorates or thins, so does the ability to produce synovial fluid (lubricant) for the joints. In addition to this, with abnormal bone-on-bone movement, excess bone formation can result leading to spurs developing. Bone spurs in and around the joints increase your stiffness and pain. With worsening OA, daily activities can become difficult and your finger joints may lose their normal shape.



# Osteoarthritis of the Hand and Thumb

Common symptoms include:

- **Pain.** The pain and the intensity of the pain may come and go; it can worsen with use and ease with rest. Morning pain and stiffness are typical. Pain can change and become more constant and may change from a dull ache to a sharp pain. It may start waking you up at night.
- **Stiffness and loss of motion.** As arthritis progresses, you may lose the ability to open and close your fingers completely.
- **Crepitus.** When damaged joint surfaces rub together, you may feel grinding, clicking or cracking sensations.
- **Swelling.** Your body may respond to constant irritation and damage to the tissues surrounding the joint by swelling and becoming red and tender to the touch.
- **Nodules.** Bony lumps may form on the middle joint of the finger, often called Bouchard's nodes, or at the joint near the fingertip where they are called Heberden's nodes.
- **Bone changes,** loss of cartilage, unstable or loose ligaments and swelling can make your finger joints large and misshapen.
- **Weakness.** The combination of joint pain, loss of movement and joint deformity can leave your hands weak.

Activities that once were easy, such as opening a jar or starting the car, carrying a heavy teacup can become challenging. Even doing up buttons or a zip (your fine motor tasks) become difficult.

Your symptoms are not always a direct reflection of how much damage there is. Sometimes people can have no symptoms even though an X-ray can show changes already happening within the joints. The opposite can also be true where minor changes on a X-ray are seen but the patient has severe symptoms.

### HOW IS IT DIAGNOSED?

Diagnosis of hand OA is usually done by assessing your age, history and symptoms combined with a physical examination of your joints and their function. You won't always need further tests, although sometimes X-rays are taken.

### Prognosis

A diagnosis of OA does not mean that it will continue to get worse and you will become more 'crippled'. Approximately 25% of patients (1 in 4) deteriorate with this condition. However, 25% of people can improve and the remainder stay about the same.

## HOW TO MANAGE HAND OA

An assessment by a doctor or physical therapist will determine:

- how much mobility you have in your thumb and fingers;
- the strength of the muscles that support your thumb, fingers and hand; and
- how much function you have in hand.

Management can include offering you the following options.

- 1 An exercise programme aimed at strengthening your hand muscles, which in turn will provide your joints with better support, as well as exercises to mobilise (move) your joints avoiding stiffness.
- 2 Splinting can be done in more severe cases. Your therapist may give you a splint to assist with the functioning of your hand, to support a joint and to help relieve the pain.
- 3 Techniques to help your pain, advice and assistance on improving the functioning of your hand will all be considered. This may include advice on tricks to open and close jars or tools you can use in your home to help reduce the strain on your hands in daily life, and how to better use your hands while working at a computer, for example.
- 4 Heat or cold. Some patients with OA find heat can help their pain. This may involve placing a hot water bottle or heat pack over your hand or using a warm water bath. Always make sure that the temperature is not too hot for you skin. Or, an ice pack can be soothing if you feel hot and swollen around your joint.
- 5 Paraffin wax (also called paraffin bath or simply wax treatment) can be done by your physical therapist. It is a form of moist heat that is applied to the hands and eases pain and stiffness. It can be effective when done before exercise therapy.
- 6 Medication, including painkillers or analgesia like paracetamol can be an effective. Ask your GP or pharmacist for advice on the most appropriate medication for you.
- 7 Steroid injections such as a corticosteroid administered directly into the joint provide an anti-inflammatory effect but is not always suitable for every patient.
- 8 Surgery. If exercises and other conservative methods are not effective, surgical options are available. You would need a referral to an orthopaedic surgeon for this.

## HELPFUL TIPS

- It is important to keep your joints and muscles moving; however, be careful not to overdo things – pace yourself.
- Spread activities or jobs over a day or a week, especially if a lot of gripping or repeated movements are required.
- Consider spreading what you're carrying or the activities you're doing to your other joints, eg. using two hands instead of one, switching hands. Carrying items on a tray using both hands or your forearm instead of using a one-handed grip.
- If your pain gets worse during/after an activity think about whether there was anything you could have done to help to reduce it, or was it simply too much?
- You might want to consider using the to identify and then monitor things that could be flaring up your pain – ask your physical therapist about this.
- Use labour-saving gadgets or devices where possible, eg. in the kitchen, at work, gardening.
- Avoid awkward positions.

The information contained in this article is intended as general guidance and information only and should not be relied upon as a basis for planning individual medical care or as a substitute for specialist medical advice in each individual case.  
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