Managing osteoarthritis of the thumb (1 of 5)

What is osteoarthritis?

Osteoarthritis (OA) is a condition that affects the joints in the body. The surface of the joint is damaged and the surrounding bone grows thicker. ‘Osteo’ means bone and ‘arthritis’ means joint damage and swelling (inflammation).

Normal thumb anatomy

To understand how osteoarthritis develops, you need to know how a normal joint works. A joint is where 2 bones meet. The end of the bones are covered by a thin layer of tissue called cartilage. The cartilage cushions and helps to spread the forces evenly when you put pressure on the joint. The smooth, slippery cartilage surface also allows the bone ends to move freely. The joint is surrounded by a membrane (synovium) which produces a small amount of thick fluid which helps to nourish the cartilage and keep it slippery, acting as a lubricant. The whole joint has a tough outer layer called the capsule.

The bones are kept firmly in place on both sides of the joint by the ligaments. These are thick, strong, bands which run within or just outside the capsule. Together, the ligaments and the capsule direct the movement of the joint. Muscles provide the power of movement. The muscles might be attached to the bone directly or connected to the bone via tendons. Strong muscles also help to give the joint stability and strength.

Normal joint

Your thumb is made up of three long bones, (see picture), the distal phalanx, proximal phalanx and 1st metacarpal. The base of the 1st

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metacarpal rests on a small bone, called the trapezium, which forms part of the wrist. The joint where these two bones meet is called the 1st carpometacarpal joint (CMCJ).

The CMCJ is a special joint (a saddle joint) which allows the large range of movements to be performed by the thumb

**The development of osteoarthritis (OA)**

In the development of OA, all or some of the cartilage wears away allowing bone surfaces to grind together during movement. This often feels like a ‘toothache’ type of pain. There may also be inflammation, causing a sharper pain and possibly swelling and heat in the joint.

OA is a slow process that develops over many years. For most people there are only small changes that affect only part of the joint. However, in a few people OA can be more extensive. The body attempts to heal itself by producing extra bone (osteophytes). This extra bone can alter the shape of the joint, forcing the bones out of their normal position, leading to further deformity.

**OA in the thumb**

The CMC joint is one of the most common joints to be affected by osteoarthritis in the hand. Signs and symptoms include pain and stiffness in the thumb and wrist, especially in the morning. You may also notice difficulty in performing tasks involving heavy gripping,
twisting or pinching such as opening jars or pegging clothing out. There may also be a thickening of bony tissue at the base of the thumb. You may notice that you become unable to spread your hand flat or open your thumb wide, and that the base of your thumb becomes gradually pulled into your palm. There may be a change in shape at the base of your thumb and sometimes in the MCPJ as this becomes over-worked.

Managing your thumb pain

- **Heat** can be helpful to bring relief to your painful thumb joints. You can use wheat bags such as a Theramit (see supplier details at the back of this leaflet) and many people find that putting their hands into warm water first thing in the morning can help to relieve painful joints.

- **Cold** can also be helpful in bringing relief to painful thumb joints for some people. You can use ice packs, frozen peas or Biofreeze gel.

- **Anti-inflammatory gels** (e.g. Voltarol gel, Ibuleve) can be applied last thing at night, possibly with your splint as well. You should use these for a limited period of time. Please follow the advice of your GP or pharmacist. Many people find that one type suits them better than others, so if you have tried one without benefit, try others.

- **Splints** can often help to ease the strain on your joints. They provide some pain relief by preventing or limiting the movements that allow the bones to rub together. They restrict your thumb movement leading to further rest for the joint.

A splint can support the joint during activity, but can also reduce pain due to the gentle warmth and compression. Splints can only work whilst they are worn and they do not change the underlying condition. It is therefore important to work out which, if any, is the right splint for you and to wear it appropriately during activities.

Splints are worn for two purposes, firstly as a working, supportive splint during activities (a bit like putting on your wellies for gardening) and also as a resting splint for pain relief (as you would wear slippers for relaxing).

Splints should not be worn all the time because they reduce the movement of the thumb which can lead to increased stiffness. As it limits movement the splint can also take over the role of the muscles around the thumb, making them weaker. There is a balance between keeping your thumb muscles strong and managing your pain.

Different types of splint will give different levels of support. If you have any doubts about your splint please feel free to discuss it with your therapist, as there are a range of alternatives. If you have been given a splint, please make sure you look at the instruction page on using your soft splint, at the back of the handout.
What can I do to help myself?

Your arthritis can affect your ability to use your hands. Here are some basic principles to help you. Take notice of the pain that you feel; if the pain lasts more than an hour after finishing the task that caused it, try to change the way you do the task.

1. Protecting your joints

It is useful to consider how you are using your thumb. If a task is particularly uncomfortable, can you find another way of doing it that does not hurt as much? Think of ways that put less strain on your thumb. It takes time to form new habits – start by adapting just a few activities and get used to these before including others.

You can do this by:

- Using larger, stronger joints to take the load e.g. use the power of the elbow to carry bags

- Spreading the load over several joints. Avoid gripping things tightly - add friction to surfaces to help with grip
  
  e.g. dycem mat

- Using your joints in more stable positions e.g. use larger handles

- Using levers to reduce load

2. Gadgets

You may find some tasks easier using special equipment. Many household activities are repetitive and can be painful to thumb joints, for example preparing vegetables, opening jars, pulling plugs, using keys, pegging washing and using a needle. Useful tools that make tasks easier are widely available in supermarkets, household/DIY stores, cookshops and chemists. They may also enable you to continue to use your thumb for longer, with less pain. Try the gadget out to make sure it offers you a real benefit – they are very individual and not all gadgets suit everybody. Store them at home where you can use them easily.

See details of gadgets attached.

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Other treatment options

You need to try all the suggested ways of managing the osteoarthritis in your thumb first to see if they give you pain relief. If these measures do not provide sufficient pain relief, there are other treatment options available. Your therapist would refer you on to either a rheumatologist or plastic surgeon to be assessed for these other treatments.

- Steroid injections are used to help to reduce inflammation and pain in and around the CMCJ. The steroid is injected by a doctor directly into the joint. The injection may give pain relief for approximately 4 - 6 months. However, it is not found to be beneficial for all patients and cannot be used on a long-term basis.

- Surgery is discussed with a plastic surgeon if you reach the point where your thumb is causing you major pain and loss of hand function. A commonly used operation for this condition is the removal of the small trapezium bone (trapeziumectomy) at the base of your thumb to help provide pain relief. You would be unable to use your hand normally for approximately 12 weeks after surgery and will have therapy to guide you through your recovery until the end of this period. Most patients find it takes about 6 - 12 months to fully recover from this type of surgery.

Further information

Arthritis Research UK
www.arthritisresearchuk.org

Lakeland Ltd
www.lakeland.co.uk ☑ (01722) 338769 Salisbury store

Homecare from The Consortium
www.homecare-products.co.uk

Chestercare – Making Life Easier
www.homecraft- rolyan.com ☑ (01623) 448703

Mobilis Rolyan
www.youreablesshop.co.uk/living ☑ (08444) 124331