

Management of CMCJ osteoarthritis



Information for patients
MSK Outpatients



PROUD TO MAKE A DIFFERENCE

SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



This booklet has been developed to provide you with information about your thumb arthritis.

It will give you a better understanding of your thumb joint, why you are experiencing pain and how you can manage your symptoms.

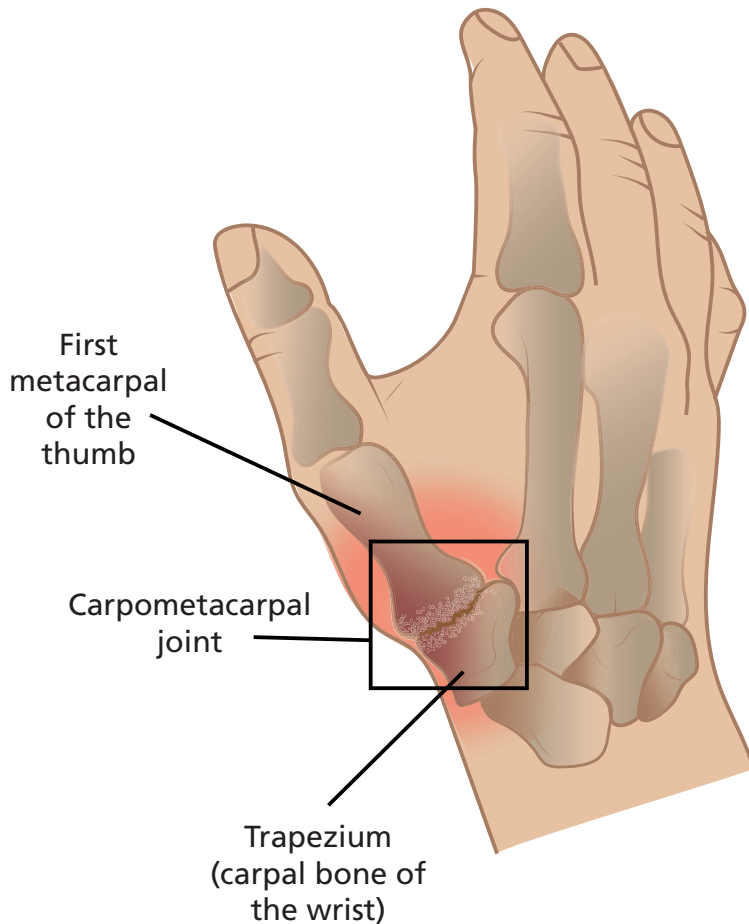
It contains information about:

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Anatomy of the thumb carpometacarpal joint

The thumb carpometacarpal joint (CMCJ) is where the metacarpal bone of the thumb attaches to the trapezium (carpal) bone of the wrist.

It is sometimes called the ' basal' joint (see diagram below):



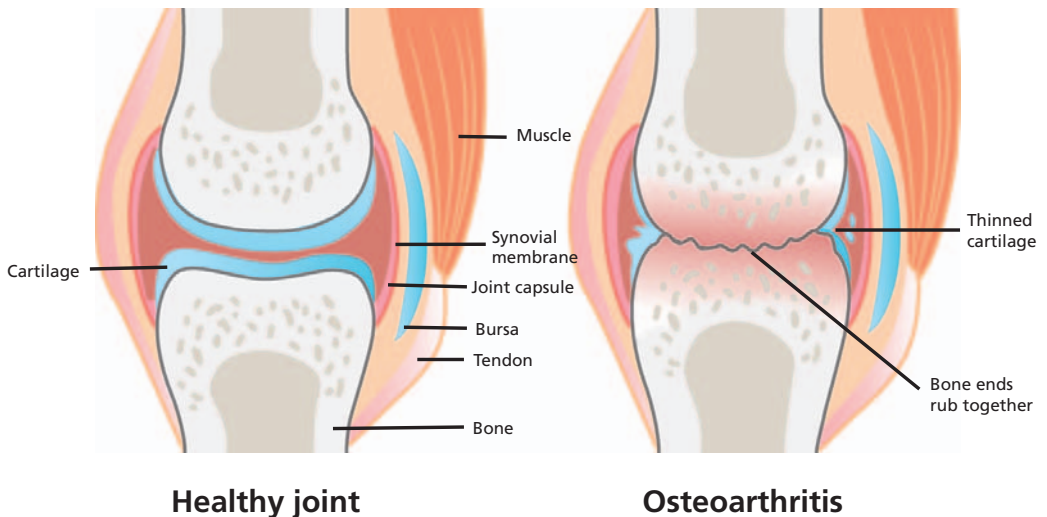
What is Osteoarthritis and how does it affect my thumb?

Osteoarthritis (OA) is a condition that affects your joints. The carpometacarpal joint (CMCJ) is one of the most common joints to be affected by OA.

In a normal joint, the cartilage covers the end of the bones to allow them to glide smoothly against each another. In between the joints is the synovial membrane which cushions the cartilage and prevents friction.

When OA affects a joint, the cartilage has worn away over time and becomes thin, the ligaments which keep your joint in place and stable become loose, small bony growths develop and the joints becomes red and inflamed. Together these can cause the pains and stiffness we associate with OA.

Age, gender, pre-existing joint injuries and joint abnormalities can all contribute to this damage.



What are the signs and symptoms?

Pain: Sharp pain or aching at the base of the thumb: worse during movement and eases at rest.

Reduced Grip Strength: May be increasingly difficult to pick up objects and hold items.

Stiffness: following periods of rest, such as in the morning.

Swellings: around the base of the thumb.

Muscle weakness and instability: You may find your thumb is not as strong as it once was. You may find it hard to pinch or turn a key.

Position: In later stages the CMCJ and MCPJ will become more damaged and change into a different position.

Limited range of movement: the above symptoms may lead to this.

Do I need any tests?

A diagnosis can be made based on your age, typical symptoms and examination of your hand.

Tests such as X-rays and blood tests are not usually needed, but they may be requested when steroid injections or surgery is advised, or to exclude any other problems.

How can OA of the CMCJ be treated?

OA of the CMCJ cannot be cured, but there are a number of ways the symptoms can be treated.

- Exercises
- Joint protection
- Assistive devices
- Splinting
- Pain relief
- Steroid injections
- Surgery

What are the aims of treatment?

- To help you understand the condition and how to manage it yourself
- To reduce your pain and stiffness
- To maintain or improve the movement of the affected joints
- To limit any further joint damage

Exercise

Exercise has many benefits for people with OA:

- Eases stiffness
- Improves joint movement
- Strengthens muscles which will support your joints

The following exercises should be completed at least 3 times per week, for at least 20 minutes.

It is not unusual to experience slight discomfort in the thumb after doing these exercises but this should last no longer than 24 hours.

If the pain persists past this time, please stop the exercises.

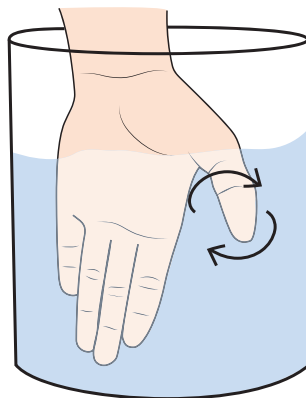
The exercises consist of Levels 1, 2 and 3. Only move on to the next level when you are happy and comfortable with the current level.

Some people may find the following warm up exercises beneficial.

Warm up exercise 1:

Place hand in warm water.

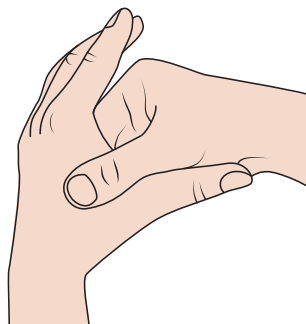
Move thumb slowly in a circular direction for 1 minute, then change direction for another minute.



Warm up exercise 2:

Gentle massage of your thumb web space.

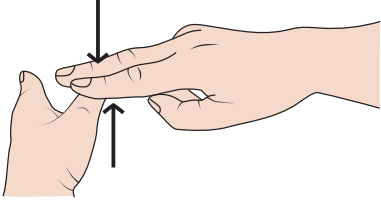
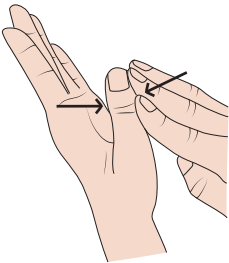
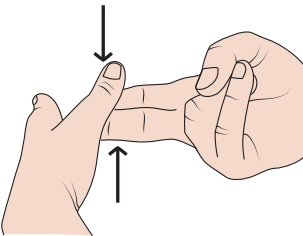
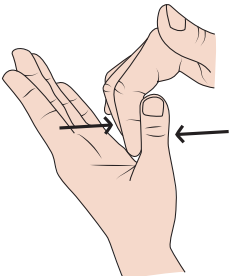
This will help to relax the muscles that can make this web space tight.



Level 1 Exercises

The first type of exercises are called static exercises, they make the muscles work but they do not move the joint. This is a simple way to start to strengthen the muscles and should not cause any discomfort.

Do 3 to 5 repetitions and hold the exercise for 5 seconds. You can increase this as pain allows.

<p>Try to keep your thumb still whilst gently pushing downwards with your other hand.</p>	
<p>Try to keep your thumb still whilst gently pushing towards the index finger with your other hand.</p>	
<p>Try to keep your thumb still whilst pushing upwards with your other hand.</p>	
<p>Try to keep your thumb still whilst pushing your thumb outwards with your other hand.</p>	

Level 2 Exercises

Perform all the exercises resting on little finger side of the hand and wrist slightly back, unless otherwise stated. Keep the top two joints of the thumb slightly bent.

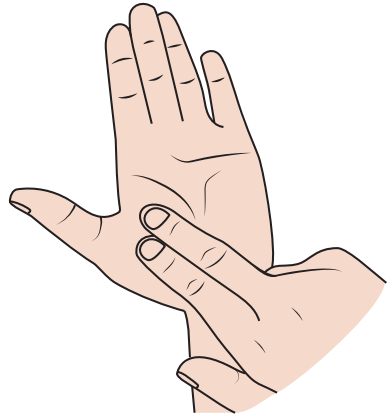
Repeat all exercises 10 times unless otherwise stated. If you feel any discomfort, reduce the frequency and/or repetitions.

No.1

Using the other hand, stretch the affected thumb out from the base (below the top 2 joints).

Hold for 10 seconds.

(Note: This will help to stretch out the thumb muscles to give you a flat hand. These may have become tight over time.)



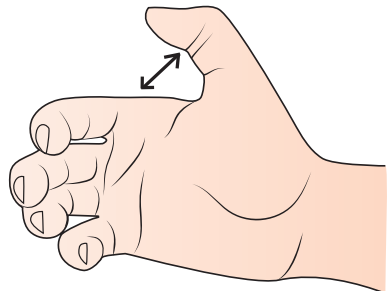
No.2

Lift the thumb upwards as far as possible (as if hitch hiking).

Hold for 10 seconds.

Alternatively you could place your hand palm down on a table and slide your thumb away from your hand.

(Note: This will help to lengthen and strengthen the muscles which straighten your thumb, without putting pressure on your CMCJ.)

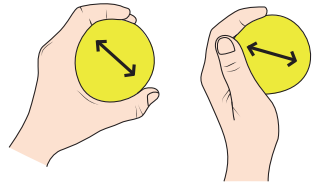
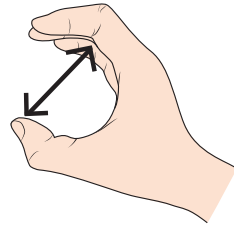


No.3**(Only do if the CMCJ is stable)**

Make the thumb into a C shape as wide as is comfortable (as if holding a glass). Hold for up to 10 seconds.

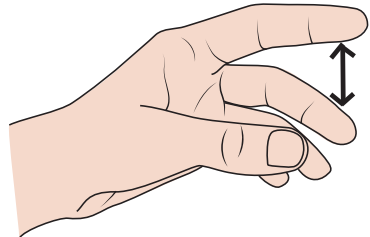
You could also use a tennis ball to guide the movement of your thumb. You could also follow the lines on the tennis ball moving the ball around in your hand.

(Note: This will help to strengthen the muscles that move your thumb out to the side.)

**No 4**

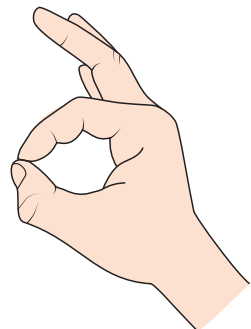
With your thumb in a C shape and slightly relaxed, lift the index finger up away from the middle finger and hold for 10 seconds.

(Note: This help the strengthen the muscle between your thumb and index finger which stabilises the CMCJ.)

**No.5**

With your thumb joints slightly bent making an 'O' shape, touch each of your fingertips.

(Note: This will help you gain full movement of your thumb across your palm.)



Level 3 Exercises

Only move to this next level if you are comfortable and happy with all of the Level 1 exercises.

Complete the warm up exercises before Level 2 exercises.

Start with an easy strength rubber band. Different strength bands are available from online stores.

No.1

Place your rubber band across your hand and thumb as shown in the picture. Wrist slightly backwards.

(See **Fig. 1**)

Lift the thumb upwards as far as comfortable while keeping the 2 joints of the thumb slightly bent.

Do not let your wrist bend forwards.

Hold for 5 seconds then slowly lower to the relaxed position.

(See **Fig. 2**)

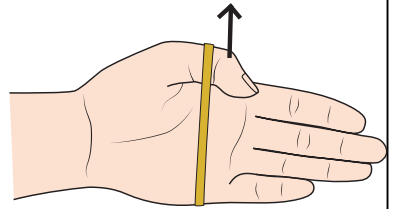


Fig. 1

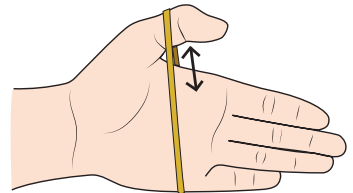


Fig. 2

No.2

Place your rubber band across your hand and thumb (see **Fig. 1**). Wrist slightly backwards.

Stretch your thumb out to the side making a 'C' shape, keeping the 2 joints of your thumb slightly bent. (See **Fig. 2**).

Hold for 5 seconds.

Relax the thumb and slowly bring the thumb back to the relaxed position still keeping the 'C' shape.

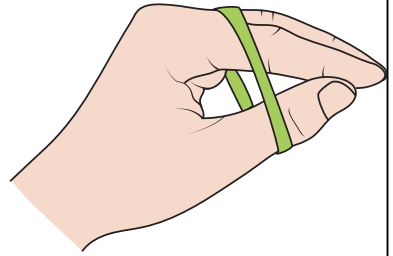


Fig. 1

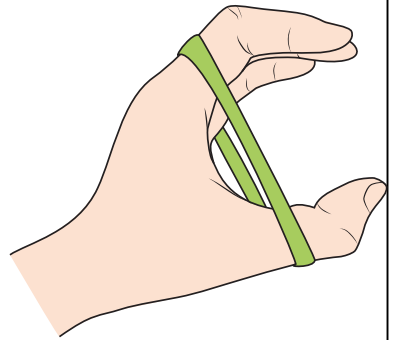

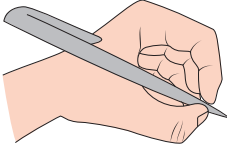

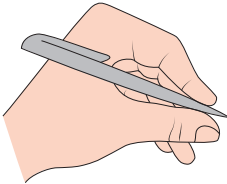

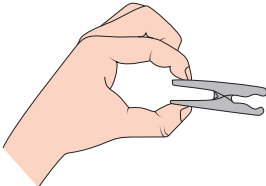

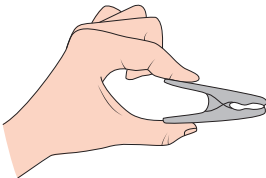


Fig.2


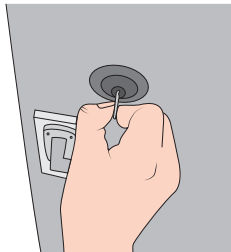

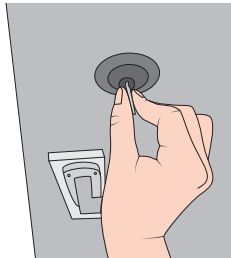

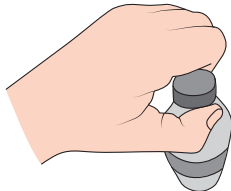

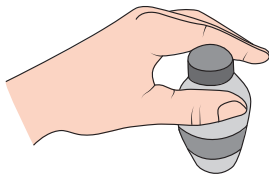
Level 3 Activities

Keeping the top joint of your thumb bent, practice doing these activities with your thumb in the correct position. Make sure your thumb does not cross your palm.

Activities that involve pinching:

Writing		
Correct		
Incorrect		
Opening clothes pegs		
Correct		
Incorrect		

Activities that involve turning or twisting:

Turning a key		
Correct		
Incorrect		
Unscrewing a bottle		
Correct		
Incorrect		

Keeping the top joint of your thumb bent, practice doing these activities with your thumb in the correct position. Make sure your thumb does not cross your palm.

Joint Protection

Most people find their own way of doing activities that are less painful for their joints.

It is important that you are aware of the activities that cause the pain in your thumb, so you can wear the appropriate splint to protect it, and also try to perform these activities in a different way.

When you are doing an activity and it causes you pain, stop and consider if the way you are doing it is causing stress on the joint. Are there other ways the activity can be performed that are better for your joint?

Instead of pouring with one hand...



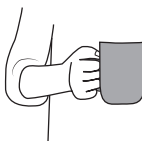
...try using both hands.



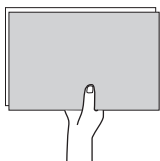
Instead of using a cup with a small handle...



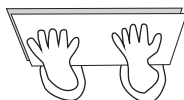
...try using a cup with a large handle that doesn't push your fingers into an uncomfortable position.



Instead of carrying with one hand...



...try using both hands.



This is called 'joint protection' and is not about stopping doing activities, but about finding the best way to do them which causes the least amount of discomfort to the joint.

Examples:

- Activities that require a **pinch grip** (such as writing, opening clothes pegs). Keep the top joint of your thumb bent and your wrist bent slightly back.
(See page 13.)
- Activities that involve **twisting or turning** (such as turning a key, turning taps or opening bottles). Avoid fully straightening the top joint of the thumb and avoid the thumb coming across your palm.
(See page 14.)

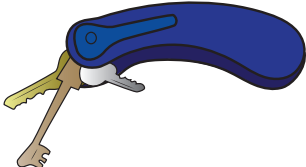

The following joint protection techniques may help to reduce the pain you experience when doing activities:

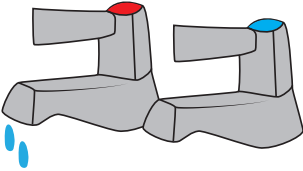
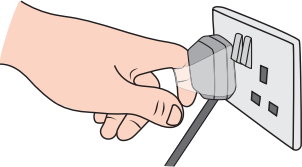
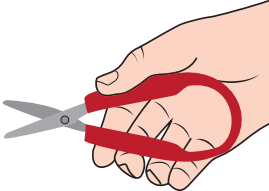
- **Take notice when you feel pain:** this can serve as a warning that the way you are using your hand may be causing harm.
- **Spread the load over several joints:** by carrying items in flat hands and forearms rather than by gripping.
- **Using larger and stronger joints:** use your forearms and wrists rather than putting the strain through the thumb joints.
- **Use less effort:** push, pull or slide rather than carrying.

Further information and ideas for joint protection can be found online - please refer to the further information section in the back of this booklet.

Assistive devices

There are a variety of small aids available which could help you to maintain your independence with daily activities. Here are some examples:

<p>Jar openers: to help open tight jars.</p>	 An illustration showing a green, C-shaped jar opener with a red ball in the center. A hand is shown using the opener to pry open a silver jar lid. Below the circular inset is a larger view of the green jar opener.
<p>Pen grips: to support your grip while writing.</p>	 An illustration of a blue, ergonomic pen grip attached to an orange pen. Next to it is a blue, cylindrical cap for the grip.
<p>Key turners: to provide a larger grip to small keys.</p>	 An illustration of a blue, ergonomic key turner with a gold-colored key inserted into its slot.
<p>Wide grip cutlery: to make it easier to hold and manipulate cutlery when eating.</p>	 An illustration of four pieces of cutlery with wide, ergonomic handles: a knife, a fork, a spoon, and a smaller spoon.

<p>Tap turners: attach to your taps to make them easier to turn on/off with less force.</p>	
<p>Plug pulls: a plastic loop that fits around the plug to assist your grip if you struggle removing plugs.</p>	
<p>Adapted or easy grip scissors: helps you to cut without putting extra stress on painful joints.</p>	

A wide range of different assistive equipment can be found online or at specialised mobility stores. Please see the further information section at the back of this booklet.

Compression Gloves

Compression gloves can be used to provide mild compression to help reduce swelling in the hand.

They are also thought to increase the circulation to the hand to help reduce aching and ease pain and stiffness in the joints.

These can be self purchased, please see the websites in the additional information section at the back of this booklet.

Splinting

It may be beneficial to use a splint during activities that cause you pain.

The aims of splinting are:

- To enable pain free use of a joint
- To maintain range of movement
- To maintain or improve function
- To give stability
- To reduce mechanical stress
- To reduce inflammation by resting the joint

You can purchase a thumb splint from your local pharmacy or online, or if you are referred to a therapist they can provide one for you.

A splint should be used in conjunction with the relevant exercises and joint protection techniques provided in this booklet.

You should wear your splint for activities that cause you most pain, but try not to wear the splint too much as this will reduce muscle strength and joint range of movement.

Example of a typical thumb splint:



Important information about your splint. You should only wear your splint for activities that cause you pain.

- Do not alter the splint in any way. Keep your splints in good condition and replace them if they are damaged.
- If you experience pain and numbness, redness, swelling, discomfort or increased pain when wearing the splint, stop wearing it.
- If you wish to wear your splint when driving, this must be with the prior consent of your insurance company as it may otherwise invalidate your insurance.
- You should not wear your splint for operating machinery unless it has been specifically designed for this purpose.

Pain relief

Some people find that paracetamol, anti-inflammatory medications (such as aspirin or ibuprofen) or anti-inflammatory gels, help to reduce the pain experienced. Pain medication should always be discussed with your GP, consultant or pharmacist to ensure it is right for you and does not interfere with any other medication or conditions you have. Where symptoms are severe, steroid injections may be given to provide temporary relief. Your consultant will decide if this is right for you.

Surgery

If your symptoms cannot be managed with the methods described in this booklet, you may wish to discuss surgery as an option with your consultant. There are a variety of operations that can relieve symptoms, but surgery should be avoided where symptoms can be managed by non-operative methods. Common surgical procedures include removal of the arthritic bone (trapeziectomy), replacement of the joint (arthroplasty), or a fusion of the painful joint to stop it moving altogether.

If you have any concerns or questions, please contact:

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.....

Or: The Sheffield Hand Centre on 0114 271 5684

Notes

Where can I find more information?

Versus Arthritis

Charitable organisation that campaigns against arthritis. Promotes medical research into the cause, treatment and cure of arthritis. They provide information to medical and healthcare professionals and for people affected by arthritis.

- Copeman House
St Mary's Court
St Mary's Gate
Chesterfield S41 7TD
- **0300 790 0400**
- **enquiries@versusarthritis.org**
- **www.versusarthritis.org**

William Merritt Centre

A charitable organisation which provides information and advice on all types of disability aids and adaptations, driving and mobility assessments.

- Aire House
100 Town Street
Rodley
Leeds
West Yorkshire
LS13 1HP
- **0113 350 8989**
- **07858 224 510** (Text)
- **info@wmdlc.org**
- **www.wmdlc.org/kitchen-equipment**

Living Made Easy

Since 1969 the DLF has been providing free impartial advice and information on solutions, gadgets, adaptations and aids to make life easier. Their website provides a list of suppliers of many different disability living aids and adaptations.

- DLF - Shaw Trust
Black Country House
Rounds Green Road
Oldbury
B69 2DG
- **0300 123 3084** (Monday to Friday, 9.00am to 5.00pm)
- **enquiries@dlf.org.uk**
- **www.livingmadeeasy.org.uk**

Websites for Compression Gloves

There are many different gloves on the market, however these have been assessed and are recommended by us.

KSA easy fit compression gloves:

- **www.ketteringsurgical.co.uk**

Mediroyal unisex oedema glove:

- **www.jobskin.co.uk/mediroyal-oedema-gloves**

Isotoner gloves:

- **www.jobskin.co.uk/isotoner-glove**

Thermoskin thermal gloves:

- **www.thermoskin.co.uk**



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