

# HIGH FIVE

## Splinting the Arthritic Thumb

By, Denise Claiborne  
MS,OTR, CHT &  
Eileen Longworth, COTA

Thumb pain and stiffness is a common complaint. Arthritis often occurs at the base of the thumb known as the CMC joint. Osteoarthritis is a degenerative condition characterized by a progressive loss of joint cartilage due to wear and tear.

Thumb CMC joint osteoarthritis is the most common joint disease in the upper extremity. It typically occurs in both thumbs. This condition is more common in men until women reach menopause. It is believed to have a hereditary component.

Common symptoms include the following:

- Pain at the base of the thumb
- Loss of thumb motion
- Loss of function
- Thumb joint instability
- Thumb joint swelling
- Deformity

Activities requiring pinching, gripping, twisting, or turning objects with the thumb and fingers often results in increased complaints of pain and can make the arthritis worse. Pain may be felt when using keys, lifting or opening jars. Weather may also cause an increase in symptoms. Severe pain in the thumb can decrease hand function by 45%.

Non-surgical treatment for CMC osteoarthritis includes anti-inflammatory medication and splinting. Splinting the thumb can provide support and decrease pain. Splinting for CMC arthritis can decrease the need for surgery. There are two choices for thumb CMC splint.

**1. Static thermoplastic splint.** This splint is formed using a low temperature thermoplastic material. It is heated and molded directly to the patient's hand. It provides rigid support.

**2. Soft neoprene splint.** Is a prefabricated splint made of neoprene material. There are

two neoprene splint options including the simple blue with Velcro closures and the black Comfort Cool splint that has an extra wrap around strap for added support.

Both splints allow full wrist, finger and thumb tip motion.

Every splint issued at Michigan Hand and Sport is customized to meet the individual's needs. When considering the most appropriate splint, the therapist will evaluate current symptoms, aggravating activities, work status, splint comfort, durability and physician's prescription. Patients are instructed in a splint wearing schedule and joint protection techniques and principles.

If non-surgical treatment doesn't relieve the symptoms, the Doctor may recommend surgery.

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## Winter Alert: Snow Blower Safety

### SAFETY TIPS FOR OPERATORS OF SNOW BLOWERS:

By, Eileen Foley, OTR, CHT

- Keep hands and feet away from all rotating and moving parts
- Stop the engine (remove the key, spark plug wire or power cord) whenever you leave the operator position to make repairs or inspection
- Never put your hand in the discharge chute or near the auger/collector to remove snow, sticks or other debris



- Always use a long stick or shovel to clear blockages with the snow blower turned off!! Wet, heavy snow clogs snow blowers in 81% of the 43 blade contact accidents investigated.
- Clear snow early and often. Begin when a light covering is on the ground.
- Occasionally people can slip and fall and a hand or foot can get cme protection, but

the force of the snow blower. Wear proper hand and foot wear. Protective gloves can offer some protection, but the force of the snow blower can still cause severe damage.

If you or a family member sustains an injury, surgery is typically required to repair or reconstruct structures. Many months of hand therapy are usually required to assist in regaining function of the injured hand.

## Avoiding Slip and Falls

**“9 Million slip and fall accidents occur in North America every year.”**



**“25,000 people a day are hospitalized as a result of these accidents.”**

**By, Katie Rohroff, COTA**

Millions of people are injured every year due to a fall either on the job or at home. Common injuries include: wrist, elbow, hip and ankle fractures along with back injuries. Precautionary measures can be taken during your daily routine to reduce the risk of a slip and fall. Here are some tips:

Avoid slips: Watch for hazardous conditions such as;

- Throw rugs
- Loose flooring
- Icy Spots
- Wet Spots
- Uneven pavement or

Avoid trips: Observe cluttered or misplaced objects such as;

- Placement of furniture
- Electric cords

- Untidy floor
- Obstacles i.e. boxes or chairs

Unnecessary falls can be avoided by:

- Wearing good shoe-non-skid soles
- Shortening pants to eliminate catching cuffs on heels
- Carefully lowering self from high places i.e. trucks (vs. jumping)
- Getting assistance when carrying heavy objects

If a fall does occur; expect the unexpected!

- Relax—do not tense muscles
- Absorb—let upper and lower extremities give like a spring

- Roll—move with the direction of the fall to minimize injury

\*\*If excessive pain, swelling, bruising or bleeding should occur following a fall, please seek medical advice via your primary physician or visit your closest emergency room.\*\*

Always be alert. Use safety equipment when available and pace yourself. Take time to care about your safety. Be aware of your surroundings while using proper judgment. Fall prevention is up to you!



## Crossbows & Michigan Hunters Update

**By, Curtis Best, PT**

This is an update for the article written for Volume 1, Issue 2 Summer of 2005. The original article is archived and available on our office website at [www.michiganhandsportsrehab.com](http://www.michiganhandsportsrehab.com).

I have spoken numerous times with Michigan DNR and can relate only one change in the current crossbow regulations since 2005. That being that an Occupational Therapist (OTR) are now able to perform the evaluation and, as appropriate, sign the license application for a crossbow permit. Prior to this, only a physical therapist (PT) licensed by Michigan could do the evaluation and sign the application

including their license number. The signing OTR, must place their registration number in the space provided for PT license number. It may take some time for a new application form to catch up with this new ruling. Cecilia Gibson of customer services at Michigan DNR assures me the application can be signed by either an OTR or a PT despite the fact only PT is designated to do so on the current form. If you have any further questions, you may contact Cecilia directly at (517)335-3274.

There is also a plan to form a committee of OTR's and PT's in 2007 to meet and develop a standard evaluation form. This to be com-

pleted and returned with the crossbow application. At this time, no State accepted evaluation form is available. If this comes to be, it will help eliminate much of the confusion and complication in determining disability related to crossbow regulations. Further updates will be forthcoming as necessary. Should you have any questions, please feel free to of me, please feel free to contact me at (586)573-8890 or at



## Winter Sport Tips for Avoiding Knee Injuries

By, Mike Perkins, A.T.C.

It's that time of the year again. The snow has already started to stay active, you might be gearing up for the ski slopes, or even sharpening your skates for a trip to the ice rink. The last thing you want to happen is sustain an injury. The knee joint is at risk for injury when you lace up a pair of ice skates or lock your feet into a set of skis due to the slippery surface of the ice or snow. To improve knee strength, stability, and reduce the risk of injury, here are some simple exercises to perform.

1. **Single Leg Balance**—stand on one foot with knee slightly bent and try to keep your balance for a minimum of 30 seconds. Make sure to keep your knee bent to increase the work load on the knee joint. Perform 3 sets, and then switch legs. To further challenge your balance skills, try closing your eyes or stand on a rolled up towel to create an unstable surface.
2. **Standing Single Leg Knee Lift**—stand with both feet shoulder width apart and both arms straight overhead. Lift up left leg to waist level by bending knee and balance on right leg. Return to starting position. Repeat 10 times. Then switch legs. Perform 3 sets on each leg.
3. **Lateral Line Hop**—place an 8-12 inch piece of tape on the ground and stand on one side. Begin by bending knees and hopping sideways over the tape and back to starting position. Remember to bend your knees when hopping to cushion your landing. Repeat this sequence for 30 seconds. To increase the exercise difficulty, try hopping and landing with only 1 leg. Switch legs every 30 seconds. Perform 3 sets on each leg.

Perform these exercises 3 times a week to improve strength and stability of the knee and reduce your risk of sustaining a knee injury this winter season.

## Dealing With Scar Tissue

By, Esther Chu, COTA

The causes of a wound vary from simple lacerations to major surgery. Despite the cause of injury, scar tissue results. The amount of scar tissue formed is dependent upon many factors including depth and extent of injury, location, heredity and other medical conditions within the first few days of injury, the body begins the wound healing process with blood clotting.

From week 2 to week 6, the body generates an enormous amount of scar tissue to heal the wound. However, scar tissue differs from normal skin tissue. It has less tensile strength and also gets sunburns easily. When scar tissue shrinks at around 7 to 10 days after injury, it draws all moving parts in the region, together, making patients feel "stiffer". Therefore, exercising within surgical precautions is imperative at this stage. At this time,

the scar is often raised, thick, red, tight, sensitive, and stuck to tissues underneath. From week 6 to 12, scar tissue formation slows down and the scar begins to soften. At 6 months after injury, the body breaks down scar tissue faster than generating it. However, scar will continue to form for over a year. The body continues to remodel and realign the scar until it matures. Scar maturation can take years.

The goal of scar management is to facilitate scar maturation to achieve a pale, soft, supple, flat, cosmetically acceptable scar that is not sensitive. Poorly managed scars can lead to adhesions and contractures, which limit range of motion and functional ability. Besides exercising, some scar management techniques that your therapist can instruct you in may include:

- 1) **Massage:** Gently massage in circles with lotion that contains vitamin E, Cocoa butter, or lanolin. Avoid open wounds and sutures.
- 2) **Desensitization:** Massage sensitive area regularly with touch or immersion. Padding may be used for protection if hypersensitivity causes functional limitations.
- 3) **Silicone gel sheet:** Regular wear can soften and flatten raised scar.
- 4) **Compression:** Light compression using materials such as Coban, gloves, or elastomar, can facilitate scar maturation and flattening.
- 5) **Sunscreen:** Avoid sun exposure on immature scar, which can darken its color. Use of sunscreen for 6 months after wound closure or until scar is mature.

**“Avoid sun exposure on immature scar which can darken it's color”**



## Michigan Hand & Sports Rehabilitation Centers

### \* CORPORATE OFFICE

WARREN LOCATION  
11012 13 Mile, Ste. 200  
Warren, MI 48093  
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### \* DEARBORN LOCATION

22731 Newman, Ste. 100B  
Dearborn, MI 48124  
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Phone: 313-831-1235  
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## Helping Paws



By, Britt Garret, P.T.A

Many people with medical conditions or disabilities now have options to obtain help from assistant dogs. Many organizations work with clients to match dogs to the client based upon their specific needs. Assistant dogs can perform tasks such as: open and close doors, pull a wheelchair, pick up and retrieve items, push elevator buttons, turn on and off lights, warn a person of a pending seizure and even call 911 for emergencies. Many times these services are available to the disabled for free or limited cost since many of these organizations are ran with volunteers.

Phase 1—Application phase, contacting an organization such as Paws with a cause, Dogs with jobs, or Assistant

dogs of America. A potential client must complete an application which includes a survey of expectations, abilities of the client, acceptance to care for the assistant dog and environment of where the dog will be placed.

Dogs will be chosen by breeds most likely to be easily trained such as Labradors, and golden retrievers. A clients own dog may be considered for training if the dog can meet standards and complete the training successfully.

Puppies in the program are raised by foster volunteers. The puppies must complete all basic obedience classes and receive socialization skills. The puppies will also get adjusted to travel in cars and planes. This phase is

approximately 12-15 months.

Phase 2—Finding a dog phase. After an application is accepted, the client will meet with a field instructor for a detailed assessment of home environment, other pets or small children in the home, support systems currently available, and does the client drive or work. A dog will be chosen that matches the client's energy level and needs. Training then will be customized to target the specific requirements that the client needs. This phase is on average 6 months at a training site.

Phase 3—Client find phase. Field instructors then notify clients regarding care and grooming needs of the dog and delivery date. One on one training in the home

continues with the field instructor and the client for as long as required for completion of the training that is needed. Frequent follow up is provided to the client and further re-training is available if the client's disability progresses either with the current dog or another dog will be chosen if the needs surpass the skills of the current dog. Many people may find this service invaluable. The dog provides unconditional love and companionship and is a dedicated helper. For further information you can contact these organizations:

**Paws with a cause**

**1-800-253-7297**

**4646 South Division  
Wayland, MI 49348**



**Loving paws for children with  
disabilities**

**Dogs with jobs**