**Who is at risk for basal joint arthritis?**

- **1 in 4 women**  
  - especially after menopause  
  - evidence shows up to 75% of women over 70 have pain and limited motion associated with arthritis in one or more joints of the hand (Kjeken et al. 2005)
- **1 in 12 men**
  - it's likely that it occurs more often but isn't reported because people deal with it on their own and don't seek medical attention

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**Joint protection strategies are one of 3 conservative measures aimed at reducing the progression of basal joint arthritis:**

- *Joint protection techniques/adaptive equipment*
- *Thumb muscle strengthening*
- *Temporary use of a protective orthosis*

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**Joint protection strategies help to:**

- Decrease pain
- Improve function
- Help to slow the progression of arthritic changes at the basal joint
- Allow continued participation in the activities most important to each patient!

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**Potential Causes of Basal Joint Arthritis:**

- Cumulative trauma from repetitive tasks
- Injury
- Repeated forceful pinching
REDUCTION IN THE NEED FOR OPERATION AFTER CONSERVATIVE TREATMENT OF OSTEOARTHRITIS OF THE FIRST CARPOMETACARPAL JOINT: A SEVEN YEAR PROSPECTIVE STUDY

Technical accessories; "bread saw, grabber stick, scissors, potato peeler, tap handle, pen handle, cheese cutter, and book support." (p. 416)

<table>
<thead>
<tr>
<th>Group</th>
<th>Technical accessories only</th>
<th>Semistable textile splint</th>
<th>Leather Splint</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>7 months</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>7 years</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>


Objectives:
- Investigate the forces that patients with hand disorders are able to generate onto different tear tabs
- Compare the results obtained with normative data,
- Identify the difficulties in opening different types of packaging
- Recommend packaging design to the industry

100 consecutive pts w/ different hand disorders; 71 female, 29 male patients av age 61 years
Hand OA and CTS most common

FIGURE 4: Frequency of diagnoses of the patient population. (p.328)

Educating patients to incorporate joint protection principles into "all" ADLs and daily occupations will help minimize pain, and help slow the progression of basal joint disease.
Joint Protection Principles

- Use larger, stronger joints when able:

Use a shoulder bag rather than a clutch purse to avoid pinching motions.

Writing

- Large diameter pens
- Pen grips
- Felt tip or gel pens

All require less pressure to write.

Choose options to protect your joints when given a choice:

- Large diameter pens
- Pen grips
- Felt tip or gel pens

All require less pressure to write.

There are many ergonomic tools for the kitchen available at stores that sell kitchen supplies.

Large diameter handles decrease force on the thumb.

Ergonomic garden tools minimize force on the thumb.
USE ADAPTIVE EQUIPMENT TO DECREASE FORCE ON YOUR THUMBS!

Lever doorknobs are trendy and require much less force than turning a doorknob.

Bookstands eliminate the need to hold a book for prolonged period of time.

Magnetic jewelry clasps make it easier to apply a necklace.

Easy grip toenail clippers require less force and can be squeezed with your fingers instead of your thumb.

Start your car:
- Use a remote/ keyless car starter
- Or the master key

Custom formed or pre-fabricated orthoses
To temporarily rest the joint, and help to decrease pain at the cmc joint by immobilizing it.

The goal is to wean out of the orthosis as pain decreases.

**Helpful Resources:**
- www.BeAbleToDo.com
- www.goldviolin.com
- American Society of Hand Therapists; www.ASHT.org
- American Occupational Therapy Association; www.AOTA.org
- American Physical Therapy Association www.APTA.org
- American Association of Hand Surgeons; www.handsurgery.org
- American Association of Plastic Surgeons; www.aaa ply.org
- American Society of Surgery of the Hand; www.ASSH.org
- Arthritis Association; www.Arthritis.org

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**References**


