

# Should you have a steroid injection for tennis elbow? Facts and decision aid

Content Editors: Peter Tugwell MD MSc FRCP, Rachelle Buchbinder MBBS(Hons), MSc, FRACP, Sally Green PhD

Decision Aid Format Editors: Annette O'Connor RN PhD\*, Nancy Santesso RD MLIS\*\*, Dawn Stacey RN PhD(c)\*\*, Ottawa Health Decision Centre.

Professional Reviewers (evidence): MBBS(Hons), MSc, FRACP, Sally Green PhD, Ottawa Methods Group (Daniel Francis BSc, Maria Judd BSc PT MSc, Jessie McGowan MLIS, Annette O'Connor RN PhD, Joan Peterson BA, Vivian Robinson MSc, Nancy Santesso RD MLIS, Beverly Shea RN MSc, Dawn Stacey RN PhD, Peter Tugwell MD MSc FRCP, George Wells PhD).

Consumer Reviewers (format only): Ann Qualman (Canada), Cheryl Koehn (Canada), Fergus J Rogers (the Netherlands) and Joyce Gordon (Canada).

Funding: Canadian Institutes for Health Research

\*University of Ottawa, Faculty of Medicine, Canada

\*\*University of Ottawa, Institute of Population Health, Canada

Date: 2004 Next update due: 2006

## What is tennis elbow?

Tennis elbow or elbow pain is a “repetitive stress injury” caused by too much stress on the tendon at the elbow. The tendon attaches the muscles of the forearm to the elbow and these muscles move the wrist backwards. Putting too much stress on the tendon by moving the wrist backwards over and over again or from damage can cause the tendon to tear, become painful and swollen or tear away from the bone. This can cause the outside of the elbow and the upper forearm to become painful and tender to touch.

The pain and swelling can last for 6 months to 2 years, and most of the time, it will get better on its own. Not getting treatment and waiting for the pain and swelling to go away is an option. But while waiting for it to go away, a person may not be able to or may find it hard to:

- grip or lift things
- do daily routines
- play sports using the wrist and elbow
- work well

## What can you do on your own to manage your disease?

- Cold packs
- Relax
- Movements that put less stress on joints

## What treatments are used for tennis elbow?

Three kinds of treatment may be used alone or together. The common (generic) names of treatment are shown below:

### 1. Pain medicines and non-steroidal anti-inflammatory drugs (NSAIDs)

- Acetaminophen
- Etodolac
- Piroxicam
- Acetylsalicylic acid
- Ibuprofen
- Rofecoxib
- Celecoxib
- Indomethacin
- Sulindac
- Diclofenac
- Naproxen

### 2. Steroid injections (in the short term)

### 3. Physical therapy options

- Needle acupuncture (in the short term)
- Physiotherapy (ultrasound, exercise and mobilisation)

## What about other treatments you may have heard about?

There is not enough research about the effects of some treatments. Other treatments do not work. For example:

- Wearing a brace
- Shock wave therapy
- Surgery

## What are your choices? How can you decide?

Treatment for your disease will depend on your condition and your doctor’s advice. You need to know the good points (pros) and the bad points (cons) about a treatment before you can decide.

When your doctor offers you a choice of a steroid injection because other drugs are not working well enough, this guide may help you.

**Step 1: Be clear about the choice**  
**What are the options?**

Should you have a steroid injection for tennis elbow?

When does this choice have to be made? Check  one

- Within days       Within weeks       Within months

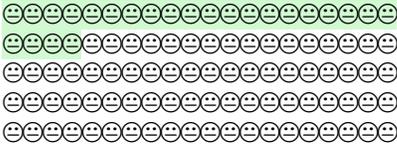
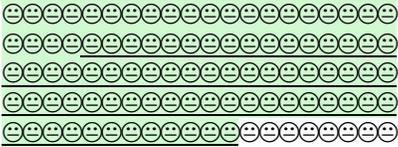
How far along are you with a choice? Check  one

- You have not thought about it yet       You are thinking about the choices  
 You are close to making a choice       You have made a choice

**Step 2: Think about the pros and cons of the options**

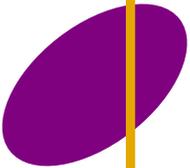
**What does the research show?**

Blocks of 100 faces show the 'best guess' for what happens to 100 people with tennis elbow 6 weeks after a steroid injection. Each face ☹️ stands for one person.

|  <b>No Treatment</b>   |  <b>With a steroid injection</b>  |
|---|--|
| <div style="text-align: center;">  </div> <p><b>24</b> people may improve on the whole</p> <p><b>76</b> people may not improve at all</p> | <div style="text-align: center;">  </div> <p><b>92</b> people may have improve overall (<u>68 more people than with no treatment</u>)</p> <p><b>8</b> people may not improve at all</p> |

\*\*\*\* Ribbons show the strength of results from research studies.

-  **Platinum:** Research results from a well done review of 2 or more randomised controlled studies. Each study was well done and had at least 100 people in it.
-  **Gold:** Research results from at least one well done randomised controlled study that had at least 100 people in the study.
-  **Silver:** Research results from studies that were not as strong. There may have been too few people in the study or the study was not well done.
-  **Bronze:** Expert views and experiences, or cases of what happened to someone taking a treatment.



### What do you think of the pros and cons of steroid injections?

The information below is from a review of 13 studies that tested steroid injections in people with tennis elbow. These studies lasted up to 4 years.

1. Review the common pros and cons.
2. Add any other pros and cons that matter to you.
3. Show how much each pro and con matters to you. Circle one (\*) star if it matters a little to you and up to five (\*\*\*\*\*) stars if it matters a lot to you.

| PROS AND CONS OF STEROIDS AND IMMUNOSUPPRESSIVE AGENTS                                    |                                 |  |   |                                 |
|---|---------------------------------|--|---|---------------------------------|
| PROS  | How much does it matter to you? |  | CONS  | How much does it matter to you? |
| Pain and overall well-being may improve in the short term (up to 6 weeks after injection) | * * * * *                       |  | Pain may go away on its own   | * * * * *                       |
| Quicker relief compared to waiting  | * * * * *                       |  | Improved pain and overall well-being may not last long  | * * * * *                       |
| Avoid the risk of major stomach side effects if NSAIDs are not taken                      | * * * * *                       |  | Short-term side effects: facial flushing, pain and hardening of the skin where injection occurred | * * * * *                       |
|   |                                 |  | Personal cost of medicine   | * * * * *                       |
| Other pros:   | * * * * *                       |  | Other cons:   | * * * * *                       |

### What do you think about taking steroid injections? Check one

You are willing to take this treatment  
Pros matter more to you than the Cons

Unsure

You are not willing to take this treatment  
Cons matter more to you than the Pros

### Step 3: What role do you want to have in choosing your treatment? Check one

- You prefer to choose on your own after listening to the opinions of others.
- You prefer to share the choice with: \_\_\_\_\_.
- You prefer someone else to choose for you, namely: \_\_\_\_\_.



**Step 4: Find out what else you need to help you make the choice**

|                  |   |                              |                             |
|------------------|---|------------------------------|-----------------------------|
| <b>Facts</b>     | Do you know which options you have?                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|                  | Do you know both the good <b>and</b> bad points of each option?           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <b>Values</b>    | Are you clear about which good and bad points <i>matter most to you</i> ? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <b>Support</b>   | Do you have enough support and advice from others to make a choice?       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|                  | Are you choosing without pressure from others?                            | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <b>Certainty</b> | Do you feel sure about the best choice for you?                           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

*If you answered "No" to many of these questions, you should talk to your doctor.*

**Step 5: Plan the next steps**

**What do you need to do before you make this choice?**

For example – talk to your doctor, read more about this treatment and other treatments.

**Step 6: Share your answers on this form with your doctor**

It will help your doctor understand what you think about this treatment.

## Appendix A: Key Words are Defined

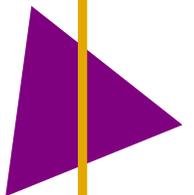
**Tennis elbow or elbow pain** is a “repetitive stress injury” caused by too much stress on the tendon at the elbow. The tendon attaches the muscles of the forearm to the elbow and these muscles move the wrist backwards. Putting too much stress on the tendon by moving the wrist backwards over and over again or from damage can cause the tendon to tear, become painful and swollen or tear away from the bone. This can cause the outside of the elbow and the upper forearm to become painful and tender to touch.

The pain and swelling can last for 6 months to 2 years, and most of the time, it will get better on its own. Not getting treatment and waiting for the pain and swelling to go away is an option. But while waiting for it to go away, a person may not be able to or may find it hard to:

- grip or lift things
- do daily routines
- play sports using the wrist and elbow
- work well

**Pain** varies from person to person. When it is severe, it can limit your daily routines at home and at work. Also, it can get in the way of how you feel in general about your well-being.

**Steroid injections:** Steroids (corticosteroids) can be injected by a needle into and around joints to relieve pain and swelling. Many different types of steroids can be injected. Steroids can also be injected into different parts of the joint or around the joint into muscles and tendons. Where the injection is put depends on where the doctor thinks the problem is.



## Appendix B: Facts and Numbers Behind the Decision Aid

These facts are only for those who want to know more about how the decision aid was made. To make your choice, you do not need to read it.

The following are the data sources, assumptions and calculations used in this decision aid. These are the best estimates based on available data. Data are subject to review as more information becomes available.

The information presented in this patient decision aid was based on evidence referenced in Appendix C (below).

It is assumed that patients who participated in the research studies used as the data sources for this patient decision aid would be similar to patients who would use the decision aid.

**Author disclosure:** None of the authors or their institutional affiliations can gain financially from the information contained within this patient decision aid.

**Reading level:** This decision aid is estimated to be able to be understood by patients with less than grade 8 reading level. Readability was calculated using the SMOG index.

**This patient decision aid meets the following draft standards of the IPDAS Collaboration © 2004:**

- Used a systematic development process  
See credentials of review team. Physician & consumers revised the decision aid (see list of developers). The needs assessment and review is underway with patients and physicians who were not involved in its development.\*
- Provided information on the condition, options, and their outcomes  
health condition, options (including doing nothing), natural history, procedures involved, positive & negative features of options, probabilities of outcomes.
- Presented probabilities of outcomes (benefits and harms)  
Uses event rates, comparing same denominator, same period of time and balanced frames. Describes uncertainty around probabilities (our best guess), using more than one method (numbers, words, diagrams). There is no tailoring of probabilities to individual risk categories. Refers to reference of source of probabilities.
- Clarified values and suggested ways to communicate values with the practitioner  
Describes features and physical, emotional, and social effects (Summary and glossary). Asks people to think about which positive and negative features matter most using balance scales and rating exercises. Suggests patient share their worksheet with the practitioner
- Used personal stories of how others' made their decision  
Not included.
- Guided or coached in deliberation and communication.  
Uses step-by-step process. Uses worksheet and suggests sharing it with practitioner.
- No coaching offered but could be used with a coach.
- Disclosed conflicts of interest  
Funding source disclosed for development and distributing. Discloses conflicts of interest of authors and affiliations.
- Delivered the decision aid on the internet. Currently available only as a PDF on the internet.  
An interactive internet version is under development.\*
- Balanced the presentation of options.  
Compares positive and negative features with similar detail and emphasis (font, order, display). Field testing for balance is underway.\*
- Used plain language.  
Plain language specialist reviewed the decision aid and readability level < grade 8 by SMOG.
- Based information on up-to-date scientific evidence  
pending\_ Evaluated its effectiveness; currently being evaluated.\*

\* underway in CIHR grant 2004 (Brehaut, Tugwell & O'Connor)

## Appendix C: References

Buchbinder R, Green S, Ottawa Methods Group. Shoulder and elbow pain. In: Tugwell P, Shea B, Boers M, Brooks P, Simon LS, Strand V, Wells G, eds. Evidence-based rheumatology. London: BMJ Books, 2004.

Day BH, Govindasamy N, Patnaik R. Corticosteroid injections in the treatment of tennis elbow. *Practitioner*. 1978 Mar;220(1317):459-62.

Smidt N, Assendelft WJ, Arola H, Malmivaara A, Greens S, Buchbinder R, van der Windt DA, Bouter LM. Effectiveness of physiotherapy for lateral epicondylitis: a systematic review. *Ann Med*. 2003;35(1):51-62.