



Patient Comprehension of Carpal Tunnel Surgery: an Investigation of Health Literacy

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Introduction

- Health literacy is the ability of a patient to understand their medical condition,
- The purpose of this investigation is to determine if patients are able to obtain an elementary understanding of carpal tunnel syndrome and the fundamental principles of carpal tunnel release after going through the process of informed consent and being provided an additional standardized postoperative instruction document.

Methods

- 50 patients with a diagnosis of carpal tunnel surgery who elected to undergo carpal tunnel release alone were enrolled.
- The patients were informed that at their postoperative visit they would be asked to complete a questionnaire regarding personal demographics, use of the postoperative instruction sheet, the carpal tunnel release surgery, and the postoperative instructions.
- Patients completed the questionnaire at their postoperative visit

Table 1 Postoperative Carpal Tunnel Release Questionnaire

1. What nerve is decompressed/operated on?	A. Ulnar nerve B. Median nerve C. Axillary nerve D. Sciatic nerve E. I don't know
2. What structure in the hand is cut as part of the procedure?	A. Median nerve B. Transverse carpal ligament C. Ulnar nerve D. Flexor tendon E. I don't know
3. When can I get my incision wet?	A. In 1 week post-operatively B. Not until cleared by my surgeon C. Day after surgery D. I don't know
4. How long can it take for my pre-operative symptoms to be resolved?	A. Immediately after surgery B. A week or two C. In many chronic cases, symptoms may not completely resolve. D. All the above E. I don't know
5. Although there are many different types of complications and having any one of them is rare after hand surgery, when one does occur what are some of the more common complications post-operatively?	A. Infection B. Injury to nerves or tendons C. Wound Healing Issues D. A & B E. B&C F. All of the above G. I don't know
6. During the first week after surgery, what are important elements in taking care of your hand after your procedure? (circle all that apply)	A. Ice at least 3-4 times per day for 20-30 minutes per session not applied directly to skin B. Elevation of the hand above the heart C. Keeping the dressing clean, dry, and intact D. No sports, heavy work or heavy lifting until your physician gives you permission E. Aggressive activity and food intake
7. When can you return to driving an automatic vehicle?	A. Once you are off narcotic pain medications B. Once you are able to make a fist and grip the steering wheel C. Both A&B D. I don't know

Table 2 Responses to Questionnaire

Question	Responses*
What nerve is being decompressed/operated on?	Median nerve, 46% (n=22) Ulnar nerve, 8% (n=4) Axillary nerve, 2% (n=1) I don't know, 44% (n=22)
What structure in the hand is cut as part of the procedure?	Transverse carpal ligament, 50% (n=25) Median nerve, 10% (n=5) Flexor tendon, 6% (n=3) I don't know, 34% (n=17)
When can I get my incision wet?	Not until cleared by my surgeon, 92% (n=46) 1 week postoperatively, 4% (n=2) Day after surgery, 2% (n=1) I don't know, 2% (n=1)
How long can it take for my pre-operative symptoms to be resolved?	All the above, 66% (n=33) Immediately after surgery, 10% (n=5) A week or two, 14% (n=7) I don't know, 10% (n=5)
What are common complications post operatively?	All of the above, 58% (n=29) Infection, 16% (n=8) A&B (i.e. infection & injury to nerves or tendons), 10% (n=5) B&C (i.e. Injury to nerves or tendons & wound healing issues), 4% (n=2) answered I don't know, 12% (n=6)
During the first week after surgery, what are important elements in taking care of your hand after your procedure? (circle all that apply)	Ice at least 3-4 times per day for 20-30 minutes per session, 86% (n=43) Elevation of the hand above the heart, 94% (n=47) Keeping the dressing clean, dry and intact, 92% (n=46) No sports, heavy work or heavy lifting until your physician gives your permission, 88% (n=44) Aggressive activity and food intake, 12% (n=6)
When can you return to driving an automatic vehicle?	Both A&B (once you are off narcotic pain medications & once you are able to make a fist), 74% (n=37) Once off of narcotic pain medications, 18% (n=9) Once you are able to make a fist, 2% (n=1) I don't know, 6% (n=3)

*Correct responses shaded gray

Post-Operative Instruction Sheet for Carpal Tunnel Surgery

About Your Surgery

- The cause of carpal tunnel surgery is compression on the median nerve resulting in a lack of blood flow to the nerve. In order to reduce the compression, we release or cut your transverse carpal ligament as part of the procedure

Showering/Personal Hygiene

- You should not get your incision wet until seen by your surgeon. Your dressing should not be changed or removed until seen by your surgeon and should be kept clean and dry. We want to give your incision time to heal.

Things to look for post-operatively

- Although there are many types of post-operative complications and having one is rare, the more common complications are infection, injury to nerves or tendon and wound healing issues.

Resolution of Pre-operative Symptoms

- This varies depending on your individual disease process. Most patients have improvement in their pre-operative symptoms of numbness/tingling or pain within the first 2 to 3 weeks. Some have relief immediately after surgery. Some patients with more chronic symptoms may not have complete resolution of symptoms.

What are some of the most important elements in taking care of your hand after surgery?

- Elevating your hand above your heart or shoulder will help control swelling in the operative extremity. A swollen hand can give the sensation of having a "tight bandage" or increase pain in the extremity.
- Ice can be applied at least 3-4 times per day for 20-30 minutes per session not applied directly to skin to help with pain control and swelling.
- Compliance with not using your hand will help your wounds after surgery. Most patients are told to not be involved in any sports, heavy work or heavy lifting until your surgeon gives you permission
- Your dressing should remain clean, dry and intact. A wet or dirty dressing will increase your chance of developing an infection. If you plan to shower, you must keep your dressing covered and not allow it to get wet.
- Adequate food and nutrition intake will help with wound healing.

Driving

- Patients can return to driving an automatic vehicle after hand surgery once they are off narcotic pain medications and are able to make a fist. Patients must feel comfortable with gripping the steering wheel prior to returning to driving. Most patients do not go back to driving until about 1 week after surgery.

Results

- The average percentage of correct answers was 75.8% (8.34 out of 11 correct).
- Fischer exact test analysis demonstrated that patients with a lower education level were less likely to know how long it takes for their preoperative symptoms to resolve ($p=0.0071$), and they were less likely to correctly choose all of the important elements of postoperative care during the first week after surgery ($p=0.022$).

Conclusions

- Although we made efforts to help patients achieve health literacy in carpal tunnel surgery, we found that patients continued to lack comprehension of pertinent components of carpal tunnel surgery.

References

Baker DW. The meaning and the measure of health literacy. *J Gen Intern Med.* 2006;21(8):878-883.