

Micro-invasive Carpal tunnel release. Pre-operative Information Sheet

What is carpal tunnel syndrome?

Carpal tunnel syndrome is the result of pressure on the median nerve as it passes through the carpal tunnel. The carpal tunnel is formed by the bones of the wrist and the transverse carpal ligament

What are your treatment options?

To treat Carpal tunnel syndrome through surgery, the carpal ligament is cut to relieve pressure on the median nerve by allowing the carpal tunnel to expand. At Northeast Health Wangaratta this can be achieved through open surgery or through the use of a new technique known as micro-invasive ultrasound guided carpal tunnel release.

Treatment through open surgery needs an incision along the wrist, as in the



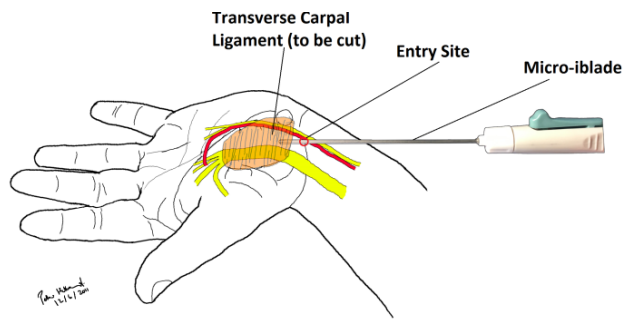
image above¹, which can result in painful scarring and prolonged rehabilitation.

What is the ultrasound treatment option?

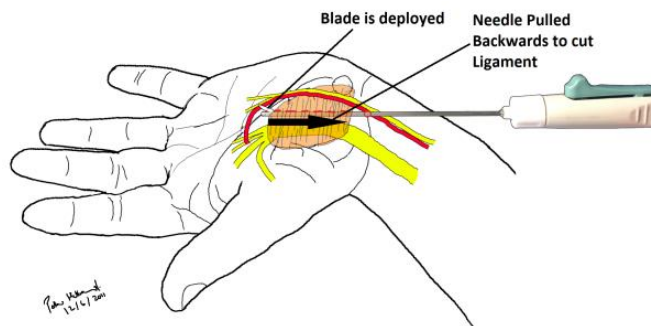
The micro-iblade, an invention of local Specialist Anaesthetist A/Prof Peter Hebbard, is a needle based device with a deployable scalpel, and is produced in the USA. It is used to cut the carpal ligament under ultrasound guidance.



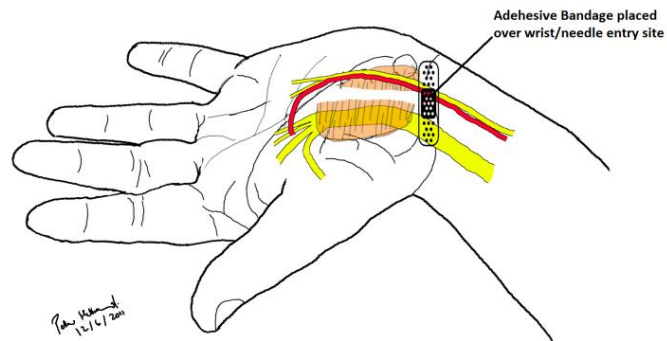
Under general or local anaesthesia, the micro-iblade will be inserted to cut the transverse carpal ligament using ultrasound to guide the procedure. The procedure will take up to 45 minutes to complete after which you will have a light dressing or band aid on your wrist. You will go home the same day



The micro-iblade is inserted under the carpal ligament, through a needle hole.



The scalpel of the micro-iblade is extended and drawn backwards to cut the carpal ligament without puncturing the skin.



After the carpal ligament has been cut the micro-iblade is removed and a light dressing or adhesive bandage is placed on the wrist.

What are the advantages of this procedure?

We cannot guarantee or promise that you will receive any benefits from either open surgery or micro-invasive surgery; however possible benefits from this micro-invasive treatment are likely to include:

- Faster recovery due to minimal surgical site
- Less pain post-surgery
- No painful scarring or stitches

- The main nerve to the hand (the median nerve) and major arteries can be identified on ultrasound and the tool directed to reduce the risk of inadvertent damage.
- No incision in the skin required

What are the risks of this procedure?

Possible risks, side effects and discomforts include:

- The techniques of ultrasound guided carpal tunnel release and use of the micro-iblade are new. Complications of any form of carpal tunnel release, including open surgery may include: bleeding, infection and inadvertent damage to other structures such as the nerves to the hand or the thumb. This damage can be permanent. With any carpal tunnel release there will be pain after the operation which can be prolonged.
- There may be an increased risk of only having partial release of the carpal ligament. This may require another procedure to complete the release on another day.

¹Image sourced from: Blausen.com staff (2014). "Medical gallery of Blausen Medical 2014". WikiJournal of Medicine 1 (2). DOI:10.15347/wjm/2014.010. ISSN 2002-4436. (Own work) [CC BY 3.0 (<http://creativecommons.org/licenses/by/3.0/>)], via Wikimedia Commons