

## Patient Information Sheet

### Wrist Fusion (Arthrodesis)

Mr Simon Lau

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#### What's the Problem?

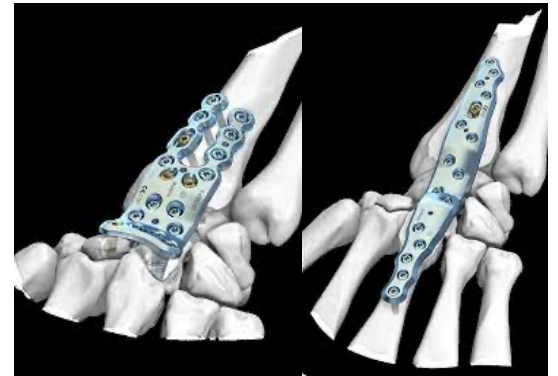
End stage wrist osteoarthritis can result in considerable pain and difficulty using the hand. This is because the cartilage of the wrist that allows it to bend and straighten has worn away, leading to bone on bone movement.

#### How can you treat it?

In some instances, non-surgical treatment is appropriate. This includes:

- Taking pain relief
- A steroid injection
- A splint around the wrist to help immobilise it
- Physio or Hand Therapy to mobilise the wrist and surrounding muscles/tendons

Ultimately, surgery is only reserved for patients whose pain and dysfunction is severe enough that they cannot tolerate it in most aspects of their life.



#### The Operation:

A wrist fusion or arthrodesis involves an incision along the back of the hand. The worn out bones of the wrist are then prepared and a plate placed over the top of the entire wrist to hold the bones together and allow them to fuse with time.

#### The Anaesthetic:

You will be asleep for the duration of the operation (ie a general anaesthetic). The anaesthetist may talk to you about a nerve block before the operation, which helps with pain relief and generally lasts 24-48 hours. Alternatively, Mr Lau can put local anaesthetic into the wound whilst you are asleep, which can also help reduce pain.

#### What are the Risks of this Operation?

- **Infection:**  
Usually only a superficial wound infection to the top-most layer of the skin. In rarer cases a deep infection can develop and this is a serious complication that may require further surgery and exchange of the implants. Rare but serious, <1%.
- **Non Union:**  
There are a number of small bones in the wrist that will need to fuse together, and this takes time. In some cases, not all the bones will fuse despite the operation, and this might require

*These notes have been prepared by Mr Simon Lau. They are general overviews and information aimed for use by his patients. They reflect Mr Lau's views, opinions and recommendations. They do not constitute medical advice. The contents are provided for information and education purposes only. Please seek Mr Lau's specific advice with any questions regarding medical conditions and treatment.*

further surgery. Certain factors like peripheral vascular disease, smoking and diabetes will increase this risk. Approximately 90-95% of wrist fusions go on to unite without incident.

- **Damage to the nerves and blood vessels around the wrist.**  
Rare but serious, <1%
- **Tendon irritation:**  
A number of tendons to the fingers pass across the wrist joint. Sometimes, these tendons (most often to the thumb) can be irritated by the plates or screws that are placed on the bone. If that occurs, then the metalware can be removed as a secondary operation after the fracture has healed. Very rarely does the tendon itself rupture (<1%)
- **Metalware Removal:**  
Ideally, the metal plates and screws stay inside your wrist for life. In some cases, however, the metalware may become irritable to you with movement, or to the tendons of the fingers. If this occurs, the plates and screws can be removed once the fusion has occurred – usually at least 12 months after the first operation. This is a day procedure and no rehabilitation is required.
- **Chronic Regional Pain Syndrome (CRPS):**  
This is a chronic pain response that develops after an insult (like trauma or surgery) which we don't have a full understanding of. It usually presents as ongoing burning or stinging to the hand, with change in sensation as well. Some factors increase the risk of developing this such as injury to the hands or feet, middle age and female gender. Mr Lau routinely prescribes Vitamin C post operatively, which has been shown in some studies to reduce the development of CRPS, but if it does develop, then a prolonged rehabilitation with hand therapy may be required.

## **Benefits:**

If Mr Lau recommends surgical fusion of your wrist, it is because he feels you will have a better outcome with surgery. However, as the wrist joint is fused, it will not move any longer. As difficult as that sounds, the main goal of the operation is pain relief, and this should become apparent within two weeks (after the incision site heals). Another aim of the operation is to maintain your hand and finger function, and if your shoulder and elbow range of motion is maintained, then you should be able to place your hand into a position where you can grip objects in a very functional way. Most patients who undergo wrist fusion are very satisfied with their hand and finger movements.

## **What can I expect?**

You will wake up with your arm in a sling after your surgery and in a half-plaster. If you have had a nerve block, you shouldn't feel any pain till the next day. The nurses will provide you pain relief and the next morning a physio or hand therapy will see you to go through some exercises you can do to mobilise the fingers and elbow to prevent excessive stiffness in these joints. These exercises will change over the next few weeks to months but you should try to do them regularly to maximise your rehabilitation.

Most patients spend 1 day in hospital after surgery, before going home. A number of allied health staff (physios, occupational therapists) will make sure you have adequate support at home before

discharge. An appointment will be made for you for a wound check at 2 weeks. At this time, the plaster will be removed and a hand therapist will fashion a plastic removal splint made for you. This splint is removable and allows for washing, whilst also keeping your wrist immobilised. Another appointment with Mr Lau will be at 6 weeks with repeat XRs.

## **What should I avoid doing?**

- In the first 2 weeks: keep your plaster/wound dry. Try to mobilise your fingers and elbow as much as possible
- Between 2 and 6 weeks: you will be placed into a moulded thermoplastic splint which allows for washing of the hand/wrist. Ongoing exercises to the fingers and elbow should continue with physio or hand therapy. You can pick up lighter objects such as a phone or cup with the affected side. You will have physio or hand therapy to help you with rehabilitation
- Between 6 and 12 weeks: full mobilisation of the wrist, fingers and elbow. The only restriction is no heavy lifting (weights, heavy pots/pans etc) till after 12 weeks.

## **Return to...?**

- **Work**  
Depends what you do. Desk based work can be done from 2 weeks post operatively, if you can do these tasks single handedly. Otherwise generally 6 weeks before you can use both hands freely whilst seated.  
For manual work, it depends on what kind of lifting/pushing you do, but generally not before 3 months
- **Drive**  
In Australia, you can't drive unless you are in full control of both your arms. Therefore, whilst you're in a sling, you cannot drive. Generally 6 weeks post operatively.
- **Sports/Hobbies:**
  - Gentle swimming: after 6 weeks
  - Gardening (light tasks only): 8-12 weeks
  - Bowls: after 3 months
  - Golf, tennis, badminton, squash: after 4-6 months
  - Weights: commence after 3 months

## **Concerns or Questions?**

If you have any concerns post operatively, or you would like further information, please contact Mr Lau through the VBJS on 03 5752 5020 or via email at [admin@vbjs.com.au](mailto:admin@vbjs.com.au)