



## PAIN RELIEF AFTER SURGERY

### Preparation

Quick recovery after surgery can only happen if it doesn't hurt too much, so **effective pain management is one of our main priorities**. We expect to be able to keep you very comfortable after your surgery and consequently you should be able to be up and about just a few hours after surgery and you may go home if you wish very soon afterwards. We manage this by attacking the pain pathways at three points; at the operative site with anti-inflammatory medications, along the pain nerves with local anaesthetics and centrally with low dose opioid pain medications such as Panadeine Forte.

To make the pain management plan work effectively it is important for you to read this plan before you come into hospital and make some arrangements in advance. Firstly, have a box of **Paracetamol (Panadol, Panamax)** and a box of **Aspirin (Aspro Clear, Solprin, Disprin)** available at home as you will need some of these tablets for pain relief and to help to thin the blood. Secondly, some of the pain medication in combination with your reduced mobility after the operation can cause constipation. You may also need some **Metamucil or Normacol**. You should start with a dose morning and night the day before the operation.

### During the operation

You will most likely be given a combined spinal and general anaesthetic. Pain management will commence in the operating room while you are still asleep. At that time your knee will be extensively injected with a long acting local anaesthetic (Ropivacaine) and the anti-inflammatory drug Toradol. This should make your knee quite numb and substantially pain free for about 20 hours after the spinal anaesthetic wears off.

### In the Recovery Room

1. You will wake quickly after your operation and if you have had a spinal anaesthetic it is likely that it will still be providing you with pain relief. This means that you can expect to be quite comfortable when you wake for about one hour.
2. Once the spinal has worn off we may need time to fine tune things a little to make you completely comfortable. If we have not succeeded in spreading the local anaesthetic everywhere it needs to be you may have some pain.
3. We also need to begin oral anti-inflammatory medication when you wake up so that the pain remains under control after the local anaesthetic injection wears off. Our first choice is Nurofen tablets but if you cannot take Nurofen we may substitute another anti-inflammatory drug.
4. A Norspan 5 skin patch containing the drug buprenorphine will be put on your upper arm. This is to provide longer term pain relief. Please see information below.

### In the Ward and at Home

For the first 24 hours after your operation you need to take:

- 2 Neurofen tablets every 4 hours
- 1 Ranitidine (Zantac) tablet night and morning
- Metamucil or Normacol night and morning

After 24 hours we will reassess your requirements with a view to reducing the pain medication. You may continue taking Neurofen after 24 hours but try increasing the time between doses so that by the third day post operation you should be taking Neurofen only occasionally.

### **As the local anaesthetic wears off**

Somewhere between 10 and 30 hours (usually about 20 hours) after the operation the local anaesthetic injected into your knee will begin to wear off and you will start to feel uncomfortable. At this time we will give you a second dose of local anaesthetic and Toradol around your hip/knee through the fine plastic tube on your leg that we placed during surgery. The catheter will be removed as the injection is given. The discomfort should ease considerably for a further period of up to 15 hours or so after this second injection but because it will not cover the skin cut you may also need to start taking some of the optional pain killing tablets mentioned below.

### **Optional Medication**

If at any time after the operation you feel that pain control is inadequate you may supplement the medication mentioned above with Panadol or a stronger pain killer such as Panadeine Forte. If the pain is not too severe paracetamol (Panadol, Panamax) is the best drug to use. Paracetamol is the best tolerated and has few side effects. Although you may need something a little stronger immediately post operation, by 48 hours post op paracetamol should be the main drug you use. If this is insufficient you may take stronger pain killers such as one or two Panadeine Forte tablets. Panadeine Forte tablets can be taken fourth hourly as required but only take them if you need them as they can cause nausea and constipation. If you cannot take Panadeine Forte we will substitute another pain medication such as Digesic, Tramadol or Oxycodone.

Tramadol and Oxycodone should be taken together with paracetamol as the paracetamol acts as a helper drug when combined with Tramadol or Oxycodone.

### **Subsequent pain management**

After the second local anaesthetic injection wears off you should be able to control the discomfort satisfactorily by just taking your oral medications. Please feel free to cut down the medications at any time should you feel you no longer need them. Paracetamol should be your first choice with occasional doses of Neurofen or Panadeine Forte.

You may also find that simple measures such as bending the knee slightly or taking a short walk ease the discomfort without medication. Pain is a natural phenomenon. Pain does not kill and does not make anybody sick – it is just very uncomfortable. If you don't have much pain it is important not to overmedicate because some of the pills can make you sick.

### **Preventing Dangerous Blood Clots**

For the next six weeks you also need to take one 300 mg aspirin tablet (Aspro Clear, Disprin, Solprin) each day to help prevent blood clots. If you have had trouble with deep vein thrombosis in the past additional measures may be necessary.

### **How to get help**

It is important to know that we will be with you all the way along the path to your recovery. If you need help with any aspect of your care at any time just call us at:

**Public Hospital:** Orthopaedic Registrar via Switchboard of the hospital that you had your procedure done.

**Private Hospital:** Contact rooms 9587 4720. If after hours contact the hospital where you had your procedure.

### **Notes:**

- Most pain medications have a tendency to cause constipation and nausea. It is important to drink plenty of water and eat some fresh fruit each day. Metamucil or Normacol will also help. Take morning and night.
- Most strong pain medications can cause nausea. If you start to feel nauseous the dose may be too high so you should try reducing the dose to half or increase the time between doses.
- Some details in this template plan may need to be changed after consultation with your anaesthetist if you have allergies or sensitivities to any of the medications.

### **Norspan 5 Skin Patches**

Norspan 5 skin patches contain the drug buprenorphine, a strong pain killer distantly related to morphine. The purpose of the patch is to control low grade but annoying pain that may persist at the tail end of your recovery period. It is not meant to be used for acute pain following your operation and other techniques will be used immediately post-op.

A Norspan 5 patch will be applied to the skin usually of the upper arm either in the Recovery Room or the next morning depending on your circumstances.

Norspan 5 patches take a long time to start working because the drug soaks through the skin only slowly. You should not expect much to happen for about 24 hours after the patch is applied but conversely, once the patch gets started it will provide good pain relief for about one week

You will be given a second patch to take home with you which may be applied after 7 days but only if you have sufficient pain to warrant its use. Let the first patch wear out and do not apply the second patch unless you experience enough pain to make it obvious that a second patch is necessary. We often find that after one week the pain has subsided to the point that something simple like oral paracetamol (Panamax, Panadol) is sufficient.

### **Side effects**

Like most strong pain medicines this medication occasionally produces undesirable side effects. These include: Respiratory depression, nausea, vomiting, drowsiness, constipation, hallucinations and disorientation.

The most common side effect is a short period of low grade nausea (a bit like morning sickness) on the morning of the day after application of the patch as your body gets used to the drug. Once you are up and about and have breakfast this will usually subside and not re-occur. In general, these problems are infrequent.

## **WARNINGS**

### **1. DO NOT HEAT THE PATCH.**

THIS MAY RESULT IN DANGEROUS OVERDOSE.

The rate of uptake of the drug is highly temperature dependant. Heating the patch will not only increase the rate of drug release from the patch but also increase the circulation in the skin under the patch resulting in increased uptake of the drug into the blood.

Therefore **AVOID ELECTRIC BLANKETS, HOT WATER BOTTLES, HOT PACKS** as these may be dangerous. You must also be careful of overly heated environments and strenuous exercise.

**2. NEVER DRIVE WITH THE PATCH ON** or within **12 HOURS** of its removal— you will be over the limit and could cause an accident.

### **3. SEEK ADVICE BEFORE TAKING OTHER DRUGS**

Rarely, some drugs (clarithromycin) can interfere with the medication in the patch and may lead to side effects.

## **Supplementary Medication**

Generally, the patch will be sufficient to keep you comfortable by itself. Sometimes, however, the patch alone is insufficient to control the pain to a satisfactory level. If this is the case you may carefully add other painkillers. We want you to get a box of paracetamol tablets and we will give you some Tramadol (Tramal) 50 mg tablets to take home from the hospital to take as supplements should the need arise.

**We advise you to make a graded response to pain control as follows:**

1. If pain control is satisfactory, do nothing! (If it ain't broke, don't fix it)
2. If you need a bit more relief you can take two paracetamol tablets (1000 mg) or two Nurofen tablets or both together. If this is sufficient do no more.

**Do not take supplementary medication in anticipation of pain but only if you are experiencing unacceptable discomfort.**