

## Pain Relief for Adults

PAIN SCORING CAN HELP ASSESS THE NEED FOR ANALGESIA AND THE PATIENT'S RESPONSE. Full information is available in the triage cubicle but here is a 'rule of thumb'

Mild: 3

Moderate: 6

Severe: 9

**People in severe pain require iv opiate analgesia with an anti-emetic immediately -**

- **Immediate short-term pain relief (all ages):**

**Entonox via self-administration mask from Blue & White-shouldered cylinder.**

**Contra-indicated if chest trauma or altered level of consciousness – don't use simultaneously with iv pain relief or sedation**

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- **Adults:**

**Morphine 10mg iv increasing up to 15mg+ if necessary and topping up every 20 mins**

**with 2-5ml aliquots to maintain effect**

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- **Elderly:**

**Dilute the adult dose in a total volume of 10 mls water.**

**Give in 2.5mg aliquots slowly iv until satisfactory pain relief is obtained.**

**Remember that the full effect of an iv injection takes longer to develop in the elderly.**

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- **Cardiac pain:**

**Diamorphine 5mg iv repeated if necessary**

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- **Renal Colic**

**Diclofenac 50mg PR (or 75mgim if patient prefers)**

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- **Very severe headache**

**Codeine Phosphate 45mg im**

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- **Fractured femoral shaft**

**– Femoral Nerve Block with levo-bupivacaine (chirocaine) 0.5% 10mls (ask for senior help if you cannot do this procedure)**

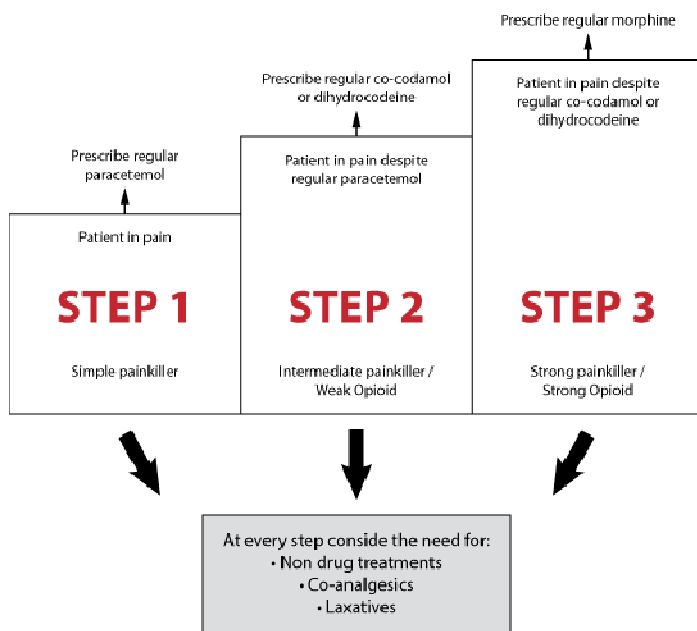
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**If iv analgesia hasn't worked - give half as much again slowly and keep incrementing until pain relief obtained.**

**Pain Relief Prescribing – Emergency Department Pain Packs**

The World Health Organization (WHO) has produced an analgesic ladder to be used as a guide for prescribing analgesics. Analgesics are staggered according to pain severity: mild, moderate and severe pain. If a patient does not experience pain relief on one step of the analgesic ladder, they should progress to the next step.

- Mild pain:                    *Step 1: Simple analgesics (non-opioid)*
  - Initiate topical and/or simple oral non-opioid analgesics (e.g. paracetamol, NSAIDs)
  - ± adjuvant e.g. tricyclic antidepressants, anticonvulsants (pregabalin or gabapentin) for neuropathic pain.
- Moderate pain:            *Step 2: Weak opioid*
  - Weak opioid (e.g. tramadol, codeine phosphate or dextropropoxyphene)
  - ± adjuvant e.g. tricyclic antidepressants, anticonvulsants
- Severe pain:                *Step 3: Strong opioid*
  - Opioids (e.g. morphine, oxycodone)
  - ± adjuvant e.g. tricyclics, anticonvulsants



**This department prescribes analgesia in pain packs. These have been formally agreed within the hospital and within the community.**

**NSAIDs may inhibit fracture healing and should NOT be prescribed for fracture patients.**

## Intravenous Sedation – Guidelines for Reduction under Sedation (see Fractures, Shoulder and Clavicle, Wrist)

Intravenous sedation is used extensively in the management of simple fractures and dislocations. It is also occasionally employed during our minor ops lists. The use of iv sedation incurs considerable responsibility and the sedationist must follow the guidelines below meticulously. Procedures under iv sedation should never be undertaken by inexperienced doctors or when there is doubt about the patient's safety for any reason. Never combine iv sedation with nitrous oxide – this is classified as general anaesthesia!

### Stage One: Assessing the patient's suitability

Take a history from the patient, list allergies and medications and examine cardiovascular and respiratory systems. This should enable you to assign the patient to an "ASA" class as defined below.

### The American Society of Anaesthesiologists

#### Classification of physical status

##### Class I

The patient has no organic, physiological, biochemical or psychiatric disturbance. The pathological process for which surgery is to be performed is localised and does not entail a systemic disease. Examples: a fit patient with an inguinal hernia, a fibroid uterus in an otherwise healthy woman.

##### Class II

Mild to moderate systemic disease caused either by the condition to be treated surgically or by other pathophysiological processes. Examples: non or only slightly limiting organic heart disease, mild diabetes, essential hypertension or anaemia. The extremes of age may be included here, even though no discernible disease is present. Extreme obesity and chronic bronchitis may be included in this category.

##### Class III

Severe systemic disturbance or disease from whatever cause, even though it may not be possible to define the degree of disability with finality. Examples: severely limiting organic heart disease, severe diabetes with vascular complications, moderate to severe degrees of pulmonary insufficiency, angina pectoris or healed myocardial infarction.

#### Classes IV and V - Life-threatening conditions

Only patients in Class I or Class II should be considered for Emergency Department sedation. You will note that the classes are quite broad and that your judgement will be required - err on the side of caution. Seek advice from the on-call anaesthetist if necessary. Children under the age of 13 should not receive iv sedation in the Emergency Department and young people aged 13-16 should only be sedated with senior Emergency Department or anaesthetic supervision.

Patients undergoing sedation must have fasted for at least four hours.

## PAIN RELIEF AND SEDATION

Some reductions can be deferred until the next morning (e.g. if the patient has been drinking, if they are not fasting, if only one doctor is available). Such patients may be admitted or allowed home to return on the following morning. Arrange to enter the patient's name, Emergency Department number, procedure and ASA class the Nurses' Diary. Give notes and x-rays to the nurse in charge and ensure that the patient is asked to come back fasting at 10.00 am. Ensure that Steps Two prior to discharge.

Patients who are unsuitable for iv sedation in Emergency Department should be discussed with the fractures team on call.

### Stage Two: Devising a safe discharge plan

A competent adult carer should be identified and this individual *must* be given a copy of the white "Advice for patients following iv Sedation" leaflet with the anticipated recovery time completed (four hours after sedation). If a satisfactory discharge plan cannot be devised care arrangements should be made with Social Services in advance, for example Nursing Home placement is often required for the elderly.

### Stage Three: Ensuring the safety of the procedure

Intravenous sedation mandates the full time presence of a dedicated sedation nurse and a doctor. The doctor can be responsible for both procedure and sedation but another doctor must be present in Emergency Department in case an emergency arises in the department.

The following equipment must be to hand before the procedure is commenced -

- bag-valve-mask with O2 tubing attached
- Guedel airway
- anaesthetic machine with oxygen on at 10 litres/min
- suction on
- SaO2 monitor
- ECG
- BP cuff
- full oxygen cylinder under patient's trolley with 100% oxygen mask attached
- Naloxone (Narcan)

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### Stage Four: Obtaining consent

The patient must sign the white consent form for the procedure and the sedation, e.g. "Reduction of Colles' fracture right wrist under iv sedation". Consent must be fully informed and the patient deemed competent to provide this. A patient under the age of 16 should not be permitted to consent for iv sedation irrespective of "Gillick-competency".

### Stage Five: The Procedure

- The patient should be pre-oxygenated with 100% oxygen for 10 minutes
- ECG, SaO2- monitor and BP cuff in situ
- X-ray should be informed that a portable check film will soon be required
- Midazolam, and propofol are the commonest iv sedation agents used in this unit

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## PAIN RELIEF AND SEDATION

- When patient is unresponsive to voice the procedure can commence

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- Patient will often respond to the painful stimulus and a *small amount* of additional midazolam may be required (note that rendering a patient completely unresponsive to pain amounts to a general anaesthetic and this is not permitted!)
- Procedure should be discontinued immediately if oxygen saturation falls below 92% and attention paid to the airway

#### Stage Six: Post-operative Care

Following the procedure the patient should have a supervised recovery period, no less than four hours. They can move to the observation ward to complete this

**Patients are deemed to have recovered when vital signs are stable, they can walk without support, they can drink fluids and have passed urine.**

You should write the procedure up on operation notes form that is then filed in the Emergency Department notes. The write-up should include the anaesthetic assessment, sedation and monitoring. You must comment on the check x-ray appearance.

Clear post-op instructions should be listed including the recovery criteria above, that the plaster should be split, what follow-up is required and what analgesia should be dispensed.

#### Levels of Sedation

**Sedation is a continuum and your patient's score may rise or fall. Expect sedation to deepen when you have finished your procedure – close monitoring is needed for at least ten minutes.**

Level 1      Anxious, agitated or restless

Level 2      Co-operative, orientated and tranquil

Level 3      Responds to commands

Level 4      Asleep but brisk response to glabellar tap or shout

Level 5      Asleep with sluggish response to glabellar tap or shout

Level 6      No response

**Target for most procedures is 3-4**