

# The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynyk and Fineout-Overholt (2011).

- I Evidence obtained from a systematic review of all relevant randomised control trials.
- II Evidence obtained from at least one well designed randomised control trial.
- III Evidence obtained from well-designed controlled trials without randomisation.
- IV Evidence obtained from well designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case- series
- V Evidence obtained from systematic reviews of descriptive and qualitative studies
- VI Evidence obtained from single descriptive and qualitative studies
- VII Expert opinion from clinicians, authorities and/or reports of expert committees or based on physiology

Melynyk, B. & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice (2<sup>nd</sup> ed.)*. Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

National Health and Medical Research Council (2009). *NHMRC levels of evidence and grades for recommendations for developers of guidelines* (2009). Australian Government: NHMRC.  
[http://www.nhmrc.gov.au/files\\_nhmrc/file/guidelines/evidence\\_statement\\_form.pdf](http://www.nhmrc.gov.au/files_nhmrc/file/guidelines/evidence_statement_form.pdf)

OCEBM Levels of Evidence Working Group Oxford (2011). *The Oxford 2011 Levels of Evidence*. Oxford Centre for Evidence-Based Medicine. <http://www.cebm.net/index.aspx?o=1025>

<b>Reference (include title, author, journal title, year of publication, volume and issue, pages)</b>	<b>Evidence level (I-VII)</b>	<b>Key findings, outcomes or recommendations</b>
<b>Tirotta, Christopher, F. Munro, Hamish, M. et al (2009) Continuous incisional infusion of local anesthetic in pediatric patients following open heart surgery. Pediatric Anesthesia 19: 571-576</b>	<b>11</b>	<b>Total morphine requirement in the treatment group was less than the placebo group A continuous incisional infusion of local anaesthetic in the paediatric patients with sternotomy had less need for analgesia and sedatives</b>
<b>Ganesh, Arjunan, Rose, John et al (2007) Continuous Peripheral Nerve Blockade for Inpatient and Outpatient Postoperative Analgesia in Children. Pediatric Anesthesiology Vol 105, No 5, Nov</b>	<b>1V</b>	<b>An audit of the use of continuous peripheral nerve blocks in a single institution for orthopedic surgery showed this to be an alternative method of postoperative analgesia in children when the appropriate experts were available</b>
<b>Paut, Olivia et al (2001) Continuous Fascia Iliaca Compartment Block in Children: A prospective Evaluation of Plasma Bupivacaine Concentrations, Pain Scores, and Side Effects. Anaesthesia and Analgesia, 92: 1159-63</b>	<b>1V</b>	<b>The safety margins were reviewed by looking at plasma concentration of Bupivacaine. No severe adverse effects were found. It was believed that satisfactory analgesia was obtained in most children in the study</b>
<b>Gottschalk, A. Burmeister, M-A. et al (2003) Continuous Wound Infiltration with Ropivacaine Reduces Pain and Analgesic Requirement After Shoulder Surgery Anaesth Analg. 97: 1086-91</b>	<b>111-11</b>	<b>A randomized control study showed there were lower VAS scores and less opioid use with a continuous local anaesthetic infusion</b>
<b>Acute Pain management: Scientific Evidence 4<sup>th</sup> ed 2015, 216-217</b>	<b>1-11</b>	<b>Various references for wound infiltration and wound catheters</b>

<p><b>Muthusamy,Komalam et al (2010)</b>  <b>Effectiveness of an Anaesthetic Continuous-Infusion Device in Children With Cerebral Palsy Undergoing Orthopaedic Surgery. Journal of Pediatric Orthopaedics, Vol: 30, issue 8, pp 840-845</b></p>	<p>11</p>	<p><b>A prospective, randomized study evaluating the continuous local anaesthetic pump to manage post -operative orthopaedic pain with children who have cerebral palsy.</b>  <b>Pain was seen to be lower in the pain pump group but only for the first 1-2 days post surgery.</b></p>
<p><b>Ashad, R. et al. (2018) Use of the On-Q Pain Pump in Alveolar Bone Grafting: Effect on Hospital Length of Stay. The Cleft Palate-Craniofacial Journal Vol:53, issue 2, pp 23-27</b></p>	<p>1V</p>	<p><b>A retrospective, cohort study to compare the patients length of hospital stay with the ON-Q group with those without the On-Q group</b>  <b>The small group, 67 in all showed no statistic significant.</b></p>