

Surgical Pleth Index (SPI) Publications Reference List June 2016

PEER-REVIEWED ARTICLES

SSI, or Surgical Stress Index, was the first working name for the measurement. Therefore, this name may come up in some of the early research references.

- Ahonen J. et al.** Surgical Stress Index During Gynaecological Laparoscopy. *British Journal of Anaesth* **98**, 456-461 (2007).
- Bergmann A. et al.** Surgical Pleth Index (SPI) reduces propofol and remifentanil consumption and shortens operational process times in outpatient anaesthesia. *British Journal of Anaesth* **110(4)**, 622-8 (2013).
- Bergmann I. et al.** Remifentanil added to sufentanil-sevoflurane anaesthesia suppresses hemodynamic and metabolic stress responses to intense surgical stimuli more effectively than high-dose sufentanil-sevoflurane alone. Research article. *BMC Anesthesiology*, **15(3)** (2015)
- Bonhomme V et al.** Comparison of the Surgical Pleth Index with haemodynamic variables to assess nociception-antinociception balance during general anaesthesia. *British Journal of Anaesth* **105(5)**, 101-11 (2011).
- Chen X. et al.** Comparison of Surgical Stress Index-guided Analgesia with Standard General Anaesthesia. A Pilot study. *Anesthesiology* **112**, 1175-83 (2010).
- Chen X. et al.** Correlation of Surgical Pleth Index with Stress Hormones during Propofol-Remifentanil Anaesthesia. *The Scientific World Journal*, Volume 2012 (2012), Article ID 879158.
- Colombo R. et al.** Comparison of the Surgical Pleth Index with autonomic nervous system modulation on cardiac activity during general anaesthesia. A randomised cross-over study. *Eur J Anaesthesiol* **31**,76-84 (2014).
- Colombo R. et al.** Influence of gravitational sympathetic stimulation on the Surgical Plethysmographic Index. *Physiol Res*, **64(2)**, 183-9 (2015)
- Colombo R. et al.** Surgical Pleth Index guided analgesia blunts the intraoperative sympathetic response to laparoscopic cholecystectomy. *Minerva Anesthesiologica*, **81 (8)**, 837-845 (2015)
- Constant I. et al.** Monitoring depth of anaesthesia: from consciousness to nociception. A window on subcortical brain activity. A review article. *Pediatric Anaesthesia* **25**, 73-82 (2015).
- Gruenewald M. et al.** Influence of different remifentanil concentrations on the performance of the surgical stress index to detect a standardized painful stimulus during sevoflurane anaesthesia. *British Journal of Anaesth* **103(4)**, 586-93 (2009).
- Gruenewald M. et al.** Sufentanil administration guided by surgical pleth index vs standard practice during sevoflurane anaesthesia: a randomized controlled pilot study. *British Journal of Anaesth* **112(5)**, 898-905 (2014).
- Gruenewald M. et al.** Influence of nociceptive stimulation on analgesia nociception index (ANI) during propofol-remifentanil anaesthesia. *British Journal of Anaesth* **110(6)**, 1024-30 (2013).
- Gruenewald M.** Monitoring the nociception-anti-nociception balance. *Best Practice & Research Clinical Anaesthesiology* **27**, 235-247 (2013).



- Gruenewald M.** *et al.* Measurement of the Nociceptive Balance by Analgesia Nociception Index (ANI) and Surgical Pleth Index (SPI) during Sevoflurane - Remifentanil Anaesthesia. *MINERVA ANESTESIOLOGICA EPUB ahead of print Jul 17, 2014* <http://www.minervamedica.it/en/journals/minerva-anestesiologica/article.php?cod=R02Y9999N00A140908> (2014).
- Hamunen K.** *et al.* Effect of pain on autonomic nervous system indices derived from photoplethysmography in healthy volunteers. *British Journal of Anaesth.* **108(5)**, 838-44 (2012).
- Hannivoort L. N.** *et al.* Probability to tolerate laryngoscopy and noxious stimulation response index as general indicators of the anaesthetic potency of sevoflurane, propofol and remifentanil. *British Journal of Anaesthesia*, **116(5)**: 624-31 (2016)
- Hans P.** *et al.* Effect of a fluid challenge on the Surgical Pleth Index during stable propofol-remifentanil anaesthesia, *Acta Anaesthesiol Scand* **56**, 787-796 (2012).
- Huiku M.**, *et al.* Assessment of surgical stress during general anaesthesia. *British Journal of Anaesth* **98(4)**, 447-455 (2007).
- Höcker** *et al.* Surgical stress index in response to pacemaker stimulation or atropine. *British Journal of Anaesth* **105(2)**, 150-4 (2010).
- Ilies C.** *et al.* Evaluation of the surgical stress index during spinal and general anesthesia. *British Journal of Anaesth* **105(4)**, 533-7 (2010).
- Ilies C.** *et al.* The effect of posture and anaesthetic technique on the surgical pleth index. *Anaesthesia* **67**, 508-513 (2012).
- Kallio H.** *et al.* Measurement of surgical stress and anaesthetized children. *British Journal of Anaesth* **101(3)**, 383-389 (2008).
- Korhonen I.** *et al.* Photoplethysmography and nociception. *Acta Anaesthesiol Scand* **53(8)**, 975-85 (2009).
- Ledowski T.** *et al.* Monitoring of sympathetic tone to assess postoperative pain: skin conductance vs. surgical stress index. *Anaesthesia* **64**, 727-731 (2009).
- Ledowski T.** *et al.* Monitoring of intra-operative nociception: skin conductance and surgical stress index versus stress hormone plasma levels. *Anaesthesia* **65**, 1001-1006 (2010).
- Mustola S** *et al.* Performance of Surgical Stress Index during Sevoflurane-Fentanyl Anesthesia. *Anesthesiology Research and Practice* **2010**, Article ID 810721, 5 pages, (2010).
- Mustola S** *et al.* Effect-site concentration of remifentanil attenuating surgical stress index responses to intubation of the trachea. *Anesthesia* **65**, 581-585 (2010).
- Paloheimo, M, P, J** *et al.* Autonomic nervous system state: the effect of general anesthesia and bilateral tonsillectomy after unilateral infiltration of lidocaine. *British Journal of Anaesth* **104(5)**, 587-95 (2010).
- Struys, MMR F.** *et al.* Changes in a surgical stress index in response to standardized pain stimuli during propofol-remifentanil infusion. *British Journal of Anaesth* **99(3)**, 359-367 (2007).
- Thee C.** *et al.* Reliability of the Surgical Pleth Index for assessment of postoperative pain. A pilot study. *Eur J Anaesthesiol* **32**, 44-48 (2015).
- Wennervirta J.** *et al.* Surgical Stress Index as a Measure of Nociception/Antinociception Balance During General Anesthesia. *Acta Anaesthesiol Scand* **52**, 1038-1045 (2008).

Imagination at work

Product may not be available in all countries and regions. Full product technical specification is available upon request. Contact a GE Healthcare Representative for more information. Please visit www.gehealthcare.com/promotional-locations.

Data subject to change.

© 2016 General Electric Company

GE, the GE monogram and Surgical Pleth Index are trademarks of General Electric Company.

Reproduction in any form is forbidden without prior written permission from GE. Nothing in this material should be used to diagnose or treat any disease or condition. Readers must consult a healthcare professional.

JB17280XE(3) 6/16