

# Stanford

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## Hendrikus Lemmens

Professor of Anesthesiology, Perioperative and Pain Medicine

### CLINICAL OFFICES

- **Anesthesia**

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### Bio

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### CLINICAL FOCUS

- Anesthesia

### ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine

### PROFESSIONAL EDUCATION

- Fellowship: Stanford University Anesthesiology Fellowships (1991) CA
- Internship: University Hospital of Leiden (1982) Netherlands
- Medical Education: Rijksuniversiteit Te Utrecht (1981) Netherlands
- Board Certification: Anesthesia, American Board of Anesthesiology (2013)
- Residency: University Hospital of Leiden (1986) Netherlands

### Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Clinical Pharmacology of Anesthetics

Morbid Obesity

Impedance Cardiography

### CLINICAL TRIALS

- Desflurane or Propofol Anesthesia in Elderly Obese Patients Undergoing Total Knee Replacement, Recruiting

## Publications

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### PUBLICATIONS

- **The safety and efficacy of the use of the flexible laryngeal mask airway with positive pressure ventilation in elective ENT surgery: a 15-year retrospective single-center study.** *Minerva anesthesiologica*  
Nekhendzy, V., Ramaiah, V. K., Collins, J., Lemmens, H. J., Most, S. P.  
2017
- **Validation of stroke volume and cardiac output by electrical interrogation of the brachial artery in normals: assessment of strengths, limitations, and sources of error** *JOURNAL OF CLINICAL MONITORING AND COMPUTING*  
Bernstein, D. P., Henry, I. C., Lemmens, H. J., Chaltas, J. L., DeMaria, A. N., Moon, J. B., Kahn, A. M.  
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- **Medical devices for the anesthetist: current perspectives.** *Medical devices (Auckland, N.Z.)*  
Ingrande, J., Lemmens, H. J.  
2014; 7: 45-53
- **Pharmacology and obesity.** *International anesthesiology clinics*  
Lemmens, H. J., Ingrande, J.  
2013; 51 (3): 52-66
- **Anesthetic Pharmacology and the Morbidly Obese Patient.** *Current anesthesiology reports*  
Ingrande, J., Lemmens, H. J.  
2013; 3 (1): 10-17
- **Postoperative Subcutaneous Instillation of Low-Dose Ketorolac But Not Hydromorphone Reduces Wound Exudate Concentrations of Interleukin-6 and Interleukin-10 and Improves Analgesia Following Cesarean Delivery** *JOURNAL OF PAIN*  
Carvalho, B., Lemmens, H. J., Ting, V., Angst, M. S.  
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- **Individualized Dosing With Anesthetic Agents** *CLINICAL PHARMACOLOGY & THERAPEUTICS*  
Lemmens, H. J., Stanski, D. R.  
2012; 92 (4): 417-419
- **Lean Body Weight Scalar for the Anesthetic Induction Dose of Propofol in Morbidly Obese Subjects** *ANESTHESIA AND ANALGESIA*  
Ingrande, J., Brodsky, J. B., Lemmens, H. J.  
2011; 113 (1): 57-62
- **Comparison between RapidTEG (R) and conventional thromboelastography in cardiac surgery patients** *BRITISH JOURNAL OF ANAESTHESIA*  
Thai, J., REYNOLDS, E. J., Natalia, N., Cornelissen, C., Lemmens, H. J., Hill, C. C., van der Starre, P. J.  
2011; 106 (4): 605-606
- **Mathematical method to build an empirical model for inhaled anesthetic agent wash-in** *BMC ANESTHESIOLOGY*  
Hendrickx, J. F., Lemmens, H., De Cooman, S., van Zundert, A. A., Grouls, R. E., Mortier, E., De Wolf, A. M.  
2011; 11
- **Dose adjustment of anaesthetics in the morbidly obese** *BRITISH JOURNAL OF ANAESTHESIA*  
Ingrande, J., Lemmens, H. J.  
2010; 105: I16-I23
- **Vancomycin plasma concentrations in cardiac surgery with the use of profound hypothermic circulatory arrest** *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*  
van der Starre, P. J., Kolz, M., Lemmens, H. J., Faix, J. D., Mitchell, S., Miller, C.  
2010; 38 (6): 741-744
- **The Analgesic and Antihyperalgesic Effects of Transcranial Electrostimulation with Combined Direct and Alternating Current in Healthy Volunteers** *ANESTHESIA AND ANALGESIA*  
Nekhendzy, V., Lemmens, H. J., Tingle, M., Nekhendzy, M., Angst, M. S.  
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- **Perioperative pharmacology in morbid obesity** *CURRENT OPINION IN ANESTHESIOLOGY*  
Lemmens, H. J.  
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- **Intraoperative Fluid Replacement and Postoperative Creatine Phosphokinase Levels in Laparoscopic Bariatric Patients** *OBESITY SURGERY*  
Wool, D. B., Lemmens, H. J., Brodsky, J. B., Solomon, H., Chong, K. P., Morton, J. M.  
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- **Hunter Syndrome in an Adult: Beware of Tracheal Stenosis** *ANESTHESIA AND ANALGESIA*  
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- **Succinylcholine and Morbid Obesity: The Debate Continues** *OBESITY SURGERY*  
Brodsky, J. B., Lemmens, H. J.  
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- **Reversal of profound vecuronium-induced neuromuscular block under sevoflurane anesthesia: sugammadex versus neostigmine** *BMC ANESTHESIOLOGY*  
Lemmens, H. J., El-Orbany, M. I., Berry, J., Ben Morte, J., Martin, G.  
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- **Reversal of profound vecuronium-induced neuromuscular block under sevoflurane anesthesia: sugammadex versus neostigmine.** *BMC anesthesiology*  
Lemmens, H. J., El-Orbany, M. I., Berry, J., Morte, J. B., Martin, G.  
2010; 10: 15-?
- **Regional anesthesia and obesity** *CURRENT OPINION IN ANESTHESIOLOGY*  
Ingrande, J., Brodsky, J. B., Lemmens, H. J.  
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- **Succinylcholine: A Useful Drug in Bariatric Surgery** *OBESITY SURGERY*  
Brodsky, J. B., Lemmens, H. J., Morton, J. M.  
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- **Update on local and regional anesthesia in obesity.** *Acta anaesthesiologica Belgica*  
Brodsky, J. B., Lemmens, H. J.  
2009; 60 (3): 181-183
- **Obesity Modestly Affects Inhaled Anesthetic Kinetics in Humans** *ANESTHESIA AND ANALGESIA*  
Lemmens, H. J., Saidman, L. J., Eger, E. I., Laster, M. J.  
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- **Is it more difficult to cannulate the right internal jugular vein in morbidly obese patients than in nonobese patients?** *OBESITY SURGERY*  
Fujiki, M., Guta, C. G., Lemmens, H. J., Brock-Utne, J. G.  
2008; 18 (9): 1157-1159
- **Does a delay in performing an activated clotting (ACT) test really matter? A study in nonheparinized blood and a single ACT machine.** *The Journal of extra-corporeal technology*  
Philip, B. M., Brock-Utne, J. G., Lemmens, H. J., Jaffe, R. A., Shuttleworth, P. E.  
2008; 40 (3): 193-195
- **The effects of esmolol and labetalol on cerebral blood flow velocity during electroconvulsive therapy** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*  
van der Starre, P. J., Lemmens, H. J., Chandel, A., Brock-Utne, J. G., Solvason, H. B.  
2008; 25 (2): 174-176
- **Can Modern Infrared Analyzers Replace Gas Chromatography to Measure Anesthetic Vapor Concentrations?** *BMC anesthesiology*  
Hendrickx, J. F., Lemmens, H. J., Carette, R., De Wolf, A. M., Saidman, L. J.  
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- **The effect of deliberate hypercapnia and hypocapnia on intraoperative blood loss and quality of surgical field during functional endoscopic sinus surgery** *ANESTHESIA AND ANALGESIA*  
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- **The history of anesthesia for thoracic surgery** *MINERVA ANESTESIOLOGICA*  
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- **Regional anesthesia and obesity** *OBESITY SURGERY*  
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- **The ideal oxygen/nitrous oxide fresh gas flow sequence with the Anesthesia Delivery Unit machine** *Annual Meeting of the American-Society-of-Anesthesiologists*  
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- **Can large volume N2O uptake alone explain the second gas effect?** *BRITISH JOURNAL OF ANAESTHESIA*  
Hendrickx, J. F., Carette, R., Lemmens, H. J., De Wolf, A. M.  
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- **Anesthetic drugs and bariatric surgery.** *Expert review of neurotherapeutics*  
Lemmens, H. J., Brodsky, J. B.  
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- **The haemodilution enhanced onset of coagulation as measured by the thrombelastogram is transient** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*  
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- **Plasma cefazolin levels during cardiovascular surgery: Effects of cardiopulmonary bypass and profound hypothermic circulatory arrest** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*  
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2006; 131 (6): 1338-1343
- **Estimating blood volume in obese and morbidly obese patients** *OBESITY SURGERY*  
Lemmens, H. J., Bernstein, D. P., Brodsky, J. B.  
2006; 16 (6): 773-776
- **The role of the craniospinal nerves in mediating the antinociceptive effect of transcranial electrostimulation in the rat** *ANESTHESIA AND ANALGESIA*  
Nekhendzy, V., Davies, M. F., Lemmens, H. J., Maze, M.  
2006; 102 (6): 1775-1780
- **Enriched analgesic efficacy studies: An assessment by clinical trial simulation** *CONTEMPORARY CLINICAL TRIALS*  
Lemmens, H. J., Wada, D. R., Munera, C., Eltahtawy, A., Stanski, D. R.  
2006; 27 (2): 165-173
- **Obesity and difficult intubation: Where is the evidence?** *ANESTHESIOLOGY*  
Couins, J. S., Lemmens, H. J., Brodsky, J. B.  
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- **Verification of endotracheal tube placement by prehospital providers: is a portable fiberoptic bronchoscope of value?** *Air medical journal*  
Angelotti, T., Weiss, E. L., Lemmens, H. J., Brock-Utne, J.  
2006; 25 (2): 74-78

- **Large volume N2O uptake alone does not explain the second gas effect of N2O on sevoflurane during constant inspired ventilation** *BRITISH JOURNAL OF ANAESTHESIA*  
Hendrickx, J. F., Carette, R., Lemmens, H. J., De Wolf, A. M.  
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- **Tracheal width and teft double-lumen tube size: a formula to estimate teft-bronchial width** *JOURNAL OF CLINICAL ANESTHESIA*  
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- **Limitations of impedance cardiography** *OBESITY SURGERY*  
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- **General anesthesia, bariatric surgery, and the BIS monitor.** *Obesity surgery*  
Lemmens, H. J., Brodsky, J. B.  
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- **Kidney transplantation: recent developments and recommendations for anesthetic management.** *Anesthesiology clinics of North America*  
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- **Is the super-obese patient different?** *Obesity surgery*  
Brodsky, J. B., Lemmens, H. J.  
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- **Laryngoscopy and morbid obesity: a comparison of the "sniff" and "ramped" positions** *OBESITY SURGERY*  
Collins, J. S., Lemmens, H. J., Brodsky, J. B., Brock-Utne, J. G., Levitan, R. M.  
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- **The antinociceptive effect of transcranial electrostimulation with combined direct and alternating current in freely moving rats** *ANESTHESIA AND ANALGESIA*

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- **Amsorb((R)) causes no less carbon monoxide formation than either "new" or "classic" sodalime** *ANESTHESIOLOGY*  
Lemmens, H. J.  
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- **Patient state index - Titration of delivery and recovery from propofol, alfentanil, and nitrous oxide anesthesia** *ANESTHESIOLOGY*  
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- **Isosulfan blue affects pulse oximetry** *ANESTHESIOLOGY*  
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- **Rapacuronium recovery characteristics and infusion requirements during inhalation versus propofol-based anaesthesia** *BRITISH JOURNAL OF ANAESTHESIA*  
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- **Double blind, placebo-controlled, randomized, crossover, pharmacodynamic study of 10 and 20 mg doses of zaleplon and zolpidem.**  
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- **THE PHARMACOKINETICS OF THE NEW SHORT-ACTING OPIOID REMIFENTANIL (GI87084B) IN HEALTHY ADULT MALE-VOLUNTEERS** *ANESTHESIOLOGY*  
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