

Nitrous oxide reference list

Nitrous oxide for pediatric medical procedural sedation

Pediatric medical procedures

Jiménez A, Blázquez D, Cruz J, Palacios A, Ordóñez O, Marín M, Ruiz-Contreras J. Use of combined transmucosal fentanyl, nitrous oxide, and hematoma block for fracture reduction in a pediatric emergency department. *Pediatr Emerg Care*. 2012;28(7):676-9. PMID: 22743745

Adult medical procedures

Dental procedures

Seith RW, Theophilos T, Babl FE. Intranasal fentanyl and high-concentration inhaled nitrous oxide for procedural sedation: a prospective observational pilot study of adverse events and depth of sedation. *Acad Emerg Med*. 2012;19(1):31-6. PMID: 22251190

General nitrous oxide

Specific side effects

Ekbom K, Kalman S, Jakobsson J, Marcus C. Efficient intravenous access without distress: a double-blind randomized study of midazolam and nitrous oxide in children and adolescents. *Arch Pediatr Adolesc Med* 2011;165(9):785-91. PMID: 21536947

Occupational safety

Sedation guidelines

Zier JL, Liu M. Safety of high-concentration nitrous oxide by nasal mask for pediatric procedural sedation: experience with 7802 cases. *Pediatr Emerg Care*. 2011;27(12):1107-12. PMID: 22134227

This document contains references organized by date, beginning with the most recent publication in each group. The list of references is not intended to be exhaustive; it represents a sampling of articles available on the subject matter. The list is current as of the date noted at the bottom of the page.

Reinoso-Barbero F, Pascual-Pascual SI, deLucas R, García S, Billoët C, Dequenne V, Onody P. Equimolar nitrous oxide/oxygen versus placebo for procedural pain in children: a randomized trial. *Pediatrics*. 2011;127(6):e1464-70. PMID: 21606149

Germán P, Pavo MR, Palacios A, Ordoñez O. Use of fixed 50% nitrous oxide-oxygen mixture for lumbar punctures in pediatric patients. *Pediatr Emerg Care*. 2011;27(3):244-5. PMID: 21378533

Babl FE, Belousoff J, Deasy C, Hopper S, Theophilos T. Paediatric procedural sedation based on nitrous oxide and ketamine: sedation registry data from Australia. *Emerg Med J*. 2010;27(8):607-12. PMID: 20515915

Zier JL, Tarrago R, Liu M. Level of sedation with nitrous oxide for pediatric medical procedures. *Anesth Analg*. 2010;110(5):1399-1405. PMID: 20237043

Brown SC, Hart G, Chastain DP, Schneeweiss S, McGrath PA. Reducing distress for children during invasive procedures: randomized clinical trial of effectiveness of the PediSedate. *Paediatr Anaesth*. 2009;19(8):725-31. PMID: 19624359

Furuya A, Masaki I, Suwa M, Nishi M, Horimoto Y, Sato H, Okuyama K, Ishiyama T, Matsukawa T. The effective time and concentration of nitrous oxide to reduce venipuncture pain in children. *J Clin Anesth*. 2009;2(3):1:190-3. PMID: 19464612

- Zier JL, Rivard PF, Krach LE, Wendorf HR. Effectiveness of sedation using nitrous oxide compared with enteral midazolam for botulinum toxin A injections in children. *Dev Med Child Neurol*. 2008;50(11):854-8. PMID: 19046178
- Babl FE, Oakley E, Puspitadewi A, Sharwood LN. Limited analgesic efficacy of nitrous oxide for painful procedures in children. *Emerg Med J*. 2008;25(11):717-721. PMID: 18955601
- Carbajal R, Biran V, Lenclen R, Epaud R, Cimerman P, Thibault P, Annequin D, Gold F, Fauroux B. EMLA cream and nitrous oxide to alleviate pain induced by palivizumab (Synagis) intramuscular injections in infants and young children. *Pediatrics*. 2008;121(6):e1591-8. PMID: 18458035
- Babl FE, Oakley E, Seaman C, Barnett P, Sharwood LN. High-concentration nitrous oxide for procedural sedation in children: adverse events and depth of sedation. *Pediatrics*. 2008;121(3):e528-e532. PMID: 18310173
- Farrell MK, Drake GJ, Rucker D, Finkelstein M, Zier JL. Creation of a nurse-administered nitrous oxide sedation program for radiology and beyond. *Pediatr Nurs*. 2008;34(1):29-35. PMID: 18361084
- Uziel Y, Chapnick G, Rothschild M, Tauber T, Press J, Harel L, Haskes PJ. Nitrous oxide sedation for intra-articular injection in juvenile idiopathic arthritis. *Pediatr Rheumatol Online J*. 2008;6:1. PMID: 18197986
- Zier JL, Kvam KA, Kurachek SC, Finkelstein M. Sedation with nitrous oxide compared with no sedation during catheterization for urologic imaging in children. *Pediatr Radiol*. 2007;3(7):678-84. PMID: 17564739
- Carbajal R, Biran V, Lenclen R, Epaud R, Cimerman P, Thibault P, Annequin D, Gold F, Fauroux B. EMLA cream and nitrous oxide to alleviate pain induced by palivizumab (Synagis) intramuscular injections in infants and young children. *Pediatrics*. 2008;121(6):e1591-8. PMID: 18458035
- Denman WT, Tuason PM, Ahmed MI, Brennen LM, Cepeda MS, Carr DB. The PediSedate device, a novel approach to pediatric sedation that provides distraction and inhaled nitrous oxide: clinical evaluation in a large case series. *Paediatr Anaesth*. 2007;17(2):162-6. PMID: 17238888
- Zier JL, Drake GJ, McCormick PC, Clinch KM, Cornfield DN. Case-series of nurse-administered nitrous oxide for urinary catheterization in children. *Anesth Analg*. 2007;104(4):876-9. PMID: 17377099
- Onody P, Gil P, Hennequin M. Safety of inhalation of a 50% nitrous oxide/oxygen premix: a prospective survey of 35 828 administrations. *Drug Saf*. 2006;29(7):633-40. PMID: 16808555
- Bar-Meir E, Zaslansky R, Regev E, Keidan I, Orenstein A, Winkler E. Nitrous oxide administered by the plastic surgeon for repair of facial lacerations in children in the emergency room. *Plast Reconstr Surg*. 2006;117(5):1571-5. PMID: 16641727
- Luhmann JD, Schootman M, Luhmann SJ, Kennedy RM. A randomized comparison of nitrous oxide plus hematoma block versus ketamine plus midazolam for emergency department forearm fracture reduction in children. *Pediatrics*. 2006;118(4):e1078-86. PMID: 16966390
- Faddy SC, Garlick SR. A systematic review of the safety of analgesia with 50% nitrous oxide: can lay responders use analgesic gases in the prehospital setting? *Emerg Med J*. 2005;22(12):901-8. PMID: 16299211

Keidan I, Zaslansky R, Weinberg M, et al. Sedation during voiding cystourethrography: comparison of the efficacy and safety of using oral midazolam and continuous flow nitrous oxide. *J Urol.* 2005;174(4 Pt 2):1598-1601. PMID: 16148661

Iannalfi A, Bernini G, Caprilli S, Lippi A, Tucci F, Messeri A. Painful procedures in children with cancer: comparison of moderate sedation and general anesthesia for lumbar puncture and bone marrow aspiration. *Pediatr Blood Cancer.* 2005;45(7):933-8. PMID: 16106428

Fishman G, Botzer E, Marouani N, et al. Nitrous oxide-oxygen inhalation for outpatient otologic examination and minor procedures performed on the uncooperative child. *Int J Pediatr Otorhinolaryngol* 2005;69(4):501-4. PMID: 15763288

Ekblom K, Jakobsson J, Marcus C. Nitrous oxide inhalation is a safe and effective way to facilitate procedures in paediatric outpatient departments. *Arch Dis Child.* 2005;90(10):1073-6. PMID: 15763288

Fauroux B, Onody P, Gall O, Tourniaire B, Koscielny S, Clément A. The efficacy of premixed nitrous oxide and oxygen for fiberoptic bronchoscopy in pediatric patients: a randomized, double-blind, controlled study. *Chest.* 2004;125(1):315-21. PMID: 14718459

Burnweit C, Diana-Zerpa JA, Nahmad MH, Lankau CA, Weinberger M, Malvezzi L, Smith L, Shapiro T, Thayer K. Nitrous oxide analgesia for minor pediatric surgical procedures: an effective alternative to conscious sedation? *J Pediatr Surg.* 2004;39(3):495-499. PMID: 15017577

Frampton A, Browne GJ, Lam LT, Cooper MG, Lane LG. Nurse administered relative analgesia using high concentration nitrous oxide to facilitate minor procedures in children in an emergency department. *Emerg Med J.* 2003;20(5):410-3. PMID: 12954676

Hee HI, Goy RW, Ng AS. Effective reduction of anxiety and pain during venous cannulation in children: a comparison of analgesic efficacy conferred by nitrous oxide, EMLA and combination. *Paediatr Anaesth.* 2003;13(3):210-6. PMID: 12641682

Kalach N, Barbier C, el Kohen R, et al. [Tolerance of nitrous oxide-oxygen sedation for painful procedures in emergency pediatrics: report of 600 cases]. *Arch Pediatr.* 2002;9(11):1213-5. PMID: 12503520

Cleary AG, Ramanan AV, Baildam E, Birch A, Sills JA, Davidson JE. Nitrous oxide analgesia during intra-articular injection for juvenile idiopathic arthritis. *Arch Dis Child.* 2002;86(6):416-8. PMID: 12023171

Kanagasundaram SA, Lane LJ, Cavalletto BP, Keneally JP, Cooper MG. Efficacy and safety of nitrous oxide in alleviating pain and anxiety during painful procedures. *Arch Dis Child.* 2001;84(6):492-5. PMID: 11369566

Luhmann JD, Kennedy RM, Porter FL, Miller JP, Jaffe DM. A randomized clinical trial of continuous-flow nitrous oxide and midazolam for sedation of young children during laceration repair. *Ann Emerg Med.* 2001;37(1):20-7. PMID: 11145766

Paut O, Calméjane C, Delorme J, Lacroix F, Camboulives J. EMLA versus nitrous oxide for venous cannulation in children. *Anesth Analg.* 2001;93(3):590-3. PMID: 11524323

Gall O, Annequin D, Benoit G, Glabeke E, Vrancea F, Murat I. Adverse events of premixed nitrous oxide and oxygen for procedural sedation in children. *Lancet*. 2001;358(9292):1514-5. PMID: 11705568

Annequin D, Carbajal R, Chauvin P, Gall O, Tourniaire B, Murat I. Fixed 50% nitrous oxide oxygen mixture for painful procedures: a French survey. *Pediatrics*. 2000;105(4):e47. PMID: 10742368

Luhmann JD, Kennedy RM, Jaffe DM, McAllister JD. Continuous-flow delivery of nitrous oxide and oxygen: a safe and cost-effective technique for inhalation analgesia and sedation of pediatric patients. *Pediatr Emerg Care*. 1999;15(6):388-92. PMID: 10608322

Michaud L, Gottrand F, Ganga-Zandzou PS, et al. Nitrous oxide sedation in pediatric patients undergoing gastrointestinal endoscopy. *J Pediatr Gastroenterol Nutr*. 1999;28(3):310-314. PMID: 10067734

Schmit P, Sfez M. [Management of anxious and painful manifestations in pediatric urology]. *J Radiol*. 1997;78(5):367-72. PMID: 9239339

Gregory PR, Sullivan JA. Nitrous oxide compared with intravenous regional anesthesia in pediatric forearm fracture manipulation. *J Pediatr Orthop*. 1996;16(2):187-91. PMID: 8742282

Vetter TR. A comparison of EMLA cream versus nitrous oxide for pediatric venous cannulation. *J Clin Anesth*. 1995;7(6):486-90. PMID: 8534466

Hennrikus WL, Shin AY, Klingelberger CE. Self-administered nitrous oxide and a hematoma block for analgesia in the outpatient reduction of fractures in children. *J Bone Joint Surg Am*. 1995;77(3):335-9. PMID: 7890780

Henderson JM, Spence DG, Komocar LM, Bonn GE, Stenstrom RJ. Administration of nitrous oxide to pediatric patients provides analgesia for venous cannulation. *Anesthesiology*. 1990;72(2):269-71. PMID: 2405740

Griffin GC, Campbell MD, Jones R. Nitrous oxide-oxygen sedation for minor surgery. Experience in a pediatric setting. *JAMA*. 1981;245(23):2411-2413.

Nitrous oxide for adult medical procedural sedation

Stewart LS, Collins M. Nitrous oxide as labor analgesia: clinical implications for nurses. *Nurs Womens Health*. 2012;16(5):398-409. PMID: 23067284

Klomp T, van Poppel M, Jones L, Lazet J, DiNisio M, Lagro-Janssen AL. Inhaled analgesia for pain management in labor. *Cochrane Database Syst Rev*. 2012;12:CD009351. PMID: 22972140

Young A, Ismail M, Papatsoris AG, Barua JM, Calleary JG, Massod J. Entonox inhalation to reduce pain in common diagnostic and therapeutic outpatient urological procedures: a review of the evidence. *Ann R Coll Surg Engl*. 2012;94:8-11. PMID: 22524905

Kariman H, Majidi A, Amini A, Dolatabadi AA, Derakhshanfar H, Hatamabadi H, Shahrami A, Yasari M, Sheibani K. Nitrous oxide/oxygen compared with fentanyl in reducing pain among adults with isolated extremity trauma: a randomized trial. *Emerg Med Australas*. 2011;23(6):761-8. PMID: 22151676

Meskine N, Vullierme MP, Zappa M, d'Assignies G, Silbert A, Vilgrain V. Evaluation of analgesic effect of equimolar mixture of oxygen and nitrous oxide inhalation during percutaneous biopsy of focal liver lesions: a double-blind randomized study. *Acad Radiol.* 2011;18(7):816-21. PMID: 21511500

Maslekar S, Balaji P, Gardiner A, Culbert B, Monson JR, Duthie GS. Randomized controlled trial of patient-controlled sedation for colonoscopy: Entonox vs modified patient-maintained target-controlled propofol. *Colorectal Dis.* 2011;13(1):48-57. PMID: 19575742

Aboumarzouk OM, Agarwal T, Syed Nong Chek SA, Milewski PJ, Nelson RL. Nitrous oxide for colonoscopy. *Cochrane Database Syst Rev.* 2011;10(8):CD008506. PMID: 21833967

American College of Nurse-Midwives. From the American College of Nurse-Midwives: nitrous oxide for labor analgesia. *J Midwifery Women's Health.* 2010;55(3):292-6. PMID: 20437663

Welchman S, Cochrane S, Minto G, Lewis S. Systematic review: the use of nitrous oxide gas for lower gastrointestinal endoscopy. *Alimet Pharmacol Ther.* 2010;32(3):324-33. PMID: 20491748

Maslekar S, Gardiner A, Hughes M, Culbert B, Duthie GS. Randomized clinical trial of Entonox R versus midazolam-fentanyl sedation for colonoscopy. *Br J Surg.* 2009;96(4):361-8. PMID: 19283736

Paris A, Horvath R, Basset P, Thiery S, Couturier P, Franco A, Bosson J. Nitrous oxide-oxygen mixture during care of bedsores and painful ulcers in the elderly: a randomized, crossover, open-label pilot study. *J Pain Symptom Manage.* 2008;35(2):171-6. PMID: 18226725

Gudgin EJ, Besser MW, Craig JJ. Entonox as a sedative for bone marrow aspiration and biopsy. *Int J Lab Hematol.* 2008;30(1):65-67. PMID: 18190470

Spie R, Watfa J, Dubruille T, Michel F. [Value of nitrous oxide-oxygen mixture (Entonox) in transrectal prostate biopsies]. *Prog Urol.* 2008;18(6):358-63. PMID: 18558324

Calleary JG, Massood J, Van-Mallaerts R, Barua JM. Nitrous oxide inhalation to improve patient acceptance and reduce procedure pain of flexible cystoscopy for men younger than 55 years. *J Urol.* 2007;178(1):184-8. PMID: 17499771

Bauer C, Lahjibi-Paulet H, Somme D, Onody P, Saint Jean O, Gisselbrecht M. Tolerability of an equimolar mix of nitrous oxide and oxygen during painful procedures in very elderly patients. *Drugs Aging.* 2007;24(6):501-7. PMID: 17571915

Robinson PA, Carr S, Pearson S, Frampton C. Lignocaine is a better analgesic than either ethyl chloride or nitrous oxide for peripheral intravenous cannulation. *Emerg Med Australas.* 2007;19(5):427-32. PMID: 17919215

Onody P, Gil P, Hennequin M. Safety of inhalation of a 50% nitrous oxide/oxygen premix: a prospective survey of 35 828 administrations. *Drug Saf.* 2006;29(7):633-40. PMID: 16808555

Laurent G, Bertaux G, Martel A, Fraison M, Fromentin S, Gonzalez S, Pierre FS, Wolf JE. A randomized clinical trial of continuous flow nitrous oxide and nalbuphine infusion for sedation of patients during radiofrequency atrial flutter ablation. *Pacing Clin Electrophysiol.* 2006;29(4):351-7. PMID: 16650261

Faddy SC, Garlick SR. A systematic review of the safety of analgesia with 50% nitrous oxide: can lay responders use analgesic gases in the prehospital setting? *Emerg Med J*. 2005;22(12):901-8. PMID: 16299211

Atassi K, Manqiapan G, Fuhrman C, Lasry S, Onody P, Housset B. Prefixed equimolar nitrous oxide and oxygen mixture reduces discomfort during flexible bronchoscopy in adult patients: a randomized, controlled, double-blind trial. *Chest*. 2005;128(2):863-8. PMID: 16100179

Rosen MA. Nitrous oxide for relief of labor pain: a systematic review. *Am J Obstet Gynecol*. 2002;186(5 Suppl Nature):S110-26. PMID: 12011877

Castéra L, Nègre I, Samii K, Buffet C. Patient-administered nitrous oxide/oxygen inhalation provides safe and effective analgesia for percutaneous liver biopsy: a randomized placebo-controlled trial. *Am J Gastroenterol*. 2001;96(5):1553-7. PMID: 11374698

Gerhardt RT, King KM, Wiegert RS. Inhaled nitrous oxide versus placebo as an analgesic and anxiolytic adjunct to peripheral intravenous cannulation. *Am J Emerg Med*. 2001;19(6):492-4. PMID: 11593469

Steward RD, Paris PM, Stoy WA, Cannon G. Patient-controlled inhalational analgesia in prehospital care: a study of side-effects and feasibility. *Crit Care Med*. 1983;11(11):851-5. PMID: 6354585

Dental procedures

Hierons RJ, Dorman ML, Wilson K, Averley P, Girdler N. Investigation of inhalational conscious sedation as a tool for reducing anxiety in adults undergoing exodontia. *Br Dent J*. 2012;213(6):E9. PMID: 22996510

Hennequin M, Collado V, Faulks D, Koscielny S, Onody P, Nicolas E. A clinical trial of efficacy and safety of inhalation sedation with a 50% nitrous oxide/oxygen premix (Kalinox™) in general practice. *Clin Oral Investig*. 2012;16(2):633-42. PMID: 22186944

American Academy of Pediatric Dentistry Council on Clinical Affairs. Guideline on appropriate use of nitrous oxide for pediatric dental patients. *Pediatr Dent*. 2008-2009;30(7 Suppl):142-2. PMID: 19216413

Faulks D, Hennequin M, Albecker-Grappe S, Maniere MC, Tardieu C, Berthet A, Wolikow M, Droz D, Koscielny S, Onody P. Sedation with 50% nitrous oxide/oxygen for outpatient dental treatment in individuals with intellectual disability. *Dev Med Child Neurol*. 2007;49(8): 621-5. PMID: 17635209

Collado V, Hennequin M, Faulks D, et al. Modification of behavior with 50% nitrous oxide/oxygen conscious sedation over repeated visits for dental treatment: a 3-year prospective study. *J Clin Psychopharmacol*. 2006;26(5):474-481. PMID: 16974188

Haupt MI, Limb R, Livingston RL. Clinical effects of nitrous oxide conscious sedation in children. *Pediatr Dent*. 2004;26(1):29-36. PMID: 15080355

Hennequin M, Maniere M, Albecker-Grappe S, Faulks D, Berthet A, Tardieu C, Droz D, Wolikow M, Koscielny S, Onody P. A prospective multicentric trial for effectiveness and tolerance of a N2O/O2 premix as a sedative drug. *J Clin Psychopharmacol*. 2004;24(5):552-4. PMID: 15349016

General nitrous oxide

Baum VC, Willschke H, Marciniak B, Davidson A. Is nitrous oxide necessary in the future? *Paediatr Anaesth.* 2012;22(10):981-7. PMID: 22967156

Drummond GB, Fisher L, Pumphrey O, Kennedy RR. Direct measurement of nitrous oxide kinetics. *Br J Anaesth.* 2012;109(5):776-81. PMID: 22933018

Turan A, Mascha EJ, You J, Kurz A, Shiba A, Saager L, Sessler DI. The association between nitrous oxide and postoperative mortality and morbidity after noncardiac surgery. *Anesth Anal.* 2012 Jul 19 [Epub ahead of print]. PMID: 22822187

Whalley MG, Brooks GB. Enhancement of suggestibility and imaginative ability with nitrous oxide. *Psychopharmacology (Berl).* 2009;203(4):745-52. PMID: 19057896

Sanders RD, Weimann J, Maze M. Biologic effects of nitrous oxide: a mechanistic and toxicologic review. *Anesthesiology.* 2008;109(4):707-22. PMID: 18813051

Becker DE, Rosenberg M. Nitrous oxide and the inhalational anesthetics. *Anesth Prog.* 2008;55(4):124-131. PMID: 19108597

Emmanouil DE, Quock RM. Advances in understanding the actions of nitrous oxide. *Anesth Prog.* 2007;54(1):9-18. PMID: 17352529

Haelewyn B, David HN, Rouillon C, Chazalviel L, Lecocq M, Risso J, Lemaire M, Abraini JH. Neuroprotection by nitrous oxide: facts and evidence. *Crit Care Med.* 2008;36(9):2651-9. PMID: 18679119

Richebe P, Rivat C, Creton C, Laulin J, Maurette P, Lemaire M, Simonnet G. Nitrous oxide revisited: evidence for potent antihyperalgesic properties. *Anesthesiology.* 2005;103(4):845-54. PMID: 17884109

Alkire MT, Gorski LA. Relative amnesic potency of five inhalational anesthetics follows the Meyer-Overton rule. *Anesthesiology.* 2004;101(2):417-29. PMID: 15277925

Fujinaga M, Maze M. Neurobiology of nitrous oxide-induced antinociceptive effects. *Mol Neurobiol.* 2002;25(2):167-89. PMID: 11936558

Taheri S, Eger EI. A demonstration of the concentration and second gas effects in humans anesthetized with nitrous oxide and desflurane. *Anesth Analg.* 1999;89(3):774-80. PMID: 10475324

Jastak JT, Donaldson D. Nitrous oxide. *Anesth Prog.* 1991;38(4-5):142-153. PMID: 1819967

Stewart RD, Gorayeb MJ, Pelton GH. Arterial blood gases before, during, and after nitrous oxide:oxygen administration. *Ann Emerg Med.* 1986;15(10):1177-80. PMID: 3092705

Chapman WP, Arrowood JG, Beecher HK. The analgetic effects of low concentrations of nitrous oxide compared in man with morphine sulphate. *J Clin Invest.* 1943;22(6):871-5. PMID: 16695072

Specific side effects

Foster BL, Liley DT. Effects of nitrous oxide sedation on resting electroencephalogram topography. *Clin Neurophysiol*. 2012 Sep 8 [Epub ahead of print]. PMID: 22968005

Xie Z, Xu Z. General anesthetics and β -amyloid protein. *Prog Neuropsychopharmacol Biol Psychiatry*. 2012 Aug 14 [Epub ahead of print]. PMID 22918033

Sanders RD, Graham C, Lewis SC, Boenham A, Gough MJ, Warlow C; GALA Trial Investigators. Nitrous oxide exposure does not seem to be associated with increased mortality, stroke, and myocardial infarction: a non-randomized subgroup analysis of the General Anaesthesia compared with Local Anaesthesia for carotid surgery (GALA) trial. *Br J Anaesth*. 2012;109(3):361-7. PMID: 22710267

Nagele P, Tallchief D, Blood J, Sharma A, Kharasch ED. Nitrous oxide anesthesia and plasma homocysteine in adolescents. *Anesth Analg*. 2011;113(4):843-8. PMID: 21680854

Leslie K, Myles PS, Chan MT, Forbes A, Paech MJ, Peyton P, Silbert BS, Williamson E. Nitrous oxide and long-term morbidity and mortality in the ENIGMA trial. *Anesth Analg*. 2011;112(2):387-93. PMID: 20861416

Hathout L, El-Saden S. Nitrous oxide-induced B12 deficiency myelopathy: perspectives on the clinical biochemistry of vitamin B12. *J Neurol Sci*. 2011;301(1-2):1-8. PMID: 21112598

Zier JL, Doescher JS. Seizures temporally associated with nitrous oxide administration for pediatric procedural sedation. *J Child Neurol*. 2010;25(12):1517-20. PMID: 20519672

Nagele P, Zeugswetter B, Eberle C, Hupfl M, Mittlbock M, Fodinger M. A common gene variant in methionine synthase reductase is not associated with peak homocysteine concentrations after nitrous oxide anesthesia. *Pharmacogenet Genomics*. 2009;1(5):325-9. PMID: 19339913

Renard D, Dutray A, Remy A, Castelnovo G, Labauge P. Subacute combined degeneration of the spinal cord caused by nitrous oxide anaesthesia. *Neurol Sci*. 2009;30(1):75-6. PMID: 19169627

Lockwood AJ, Yang YF. Nitrous oxide inhalation anaesthesia in the presence of intraocular gas can cause irreversible blindness. *B Dent J*. 2008;204(5):247-248. PMID: 18327188

Myles PS, Chan MTV, Leslie K, Peyton P, Paech M, Forbes A. Effect of nitrous oxide on plasma homocysteine and folate in patients undergoing major surgery. *Br J Anaesth*. 2008;100(6):780-6. PMID: 18400808

Singer MA, Lazaridis C, Nations SP, Wolfe GI. Reversible nitrous oxide-induced myeloneuropathy with pernicious anemia: case report and literature review. *Muscle Nerve*. 2008;37(1):125-129. PMID: 17623854

Myles PS, Chan MTV, Kaye DM, McIlroy DR, Lau C, Symons JA, Chen S. Effect of nitrous oxide anesthesia on plasma homocysteine and endothelial function. *Anesthesiology* 2008;109(4):657-63. PMID: 18813045

Nagele P, Zeugswetter B, Wiener C, Hansjorg B, Hupfl M, Mittlebock M, Fodinger M. Influence of methylenetetrahydrofolate reductase gene polymorphisms on homocysteine concentrations after nitrous oxide anesthesia. *Anesthesiology*. 2008;109(1):36-43. PMID: 18580170

Hancock SM, Eastwood JR, Mahagan RP. Effects of inhaled nitrous oxide 50% on estimated cerebral perfusion pressure and zero flow pressure in healthy volunteers. *Anaesthesia*. 2005;60(2):129-32. PMID: 15644008

Litman RS, Kottra JA, Berkowitz RJ, Ward DS. Upper airway obstruction during midazolam/nitrous oxide sedation in children with enlarged tonsils. *Pediatr Dent*. 1998;20(5):318-20. PMID: 9803430

Litman RS, Berkowitz RJ, Ward DS. Levels of consciousness and ventilatory parameters in young children during sedation with oral midazolam and nitrous oxide. *Arch Pediatr Adolesc Med*. 1996;150(7):671-5. PMID: 8673188

Flippo TS, Holder WD Jr. Neurologic degeneration associated with nitrous oxide anesthesia in patients with vitamin B12 deficiency. *Arch Surg*. 1993;128(12):1391-5. PMID: 8250714

Konstadt SN, Reich DL, Thys DM. Nitrous oxide does not exacerbate pulmonary hypertension or ventricular dysfunction in patients with mitral valvular disease. *Can J Anaesth*. 1990;37(6):613-7. PMID: 2208532

Schulte-Sasse U, Hess W, Tarnow J. Pulmonary vascular responses to nitrous oxide in patients with normal and high pulmonary vascular resistance. *Anesthesiology*. 1982;57(1):9-13. PMID: 7091732

Occupational safety

Wronska-Nofer T, Palus J, Krajewski W, Jajte J, Malgorzata K, Stetkiewicz J, Wasowicz W, Rydzynski K. DNA damage induced by nitrous oxide: study in medical personnel of operating rooms. *Mutation Research*. 2009;666(1-2):39-43. PMID: 19439331

Ekbom K, Lindman N, Marcus C, Anderson RE, Jakobsson JG. Health aspects among personnel working with nitrous oxide for procedural pain management in children. *Acta Anaesthesiol Scand*. 2008;52(4):573-4. PMID: 18339168

Henry RJ, Jerrell RG. Ambient nitrous oxide levels during pediatric sedations. *Pediatr Dent*. 1990;12(2):87-91. PMID: 2133939

Sweeney B, Bingham RM, Amos RJ, Petty AC, Cole PV. Toxicity of bone marrow in dentists exposed to nitrous oxide. *Br Med J*. 1985;291(6495):567-9. PMID: 3929875

Sedation guidelines

American Academy of Pediatrics, American Academy of Pediatric Dentistry, Coté CJ, Wilson S, Work Group on Sedation. Guidelines for monitoring and management of pediatric patients during and after sedation for diagnostic and therapeutic procedures: an update. *Pediatrics*. 2006;118(6):2587-602. PMID: 17142550

American Society of Anesthesiologists Task Force on Sedation and Analgesia by Non-Anesthesiologists. Practice guidelines for sedation and analgesia by non-anesthesiologists. *Anesthesiology*. 2002;96(4):1004-17. PMID: 11964611

American Academy of Pediatric Dentistry Council on Clinical Affairs. Guideline on appropriate use of nitrous oxide for pediatric dental patients. *Pediatr Dent*. 2008-2009;30(7 Suppl):142-2. PMID: 19216413