

If you are a Health Professional and need any of these papers, please contact us.

## **NASAL IRRIGATION – Related bibliography**

### **1. Sinusitis**

**EPOS Primary Care Guidelines: European Position Paper on the Primary Care Diagnosis and Management of Rhinosinusitis and Nasal Polyps 2007 - a summary.** Thomas M, Yawn BP, Price D, Lund V, Mullol J, Fokkens W; European Position Paper on Rhinosinusitis and Nasal Polyps Group. *Prim Care Respir J.* 17:79-89. 2008 .

**BSACI guidelines for the management of rhinosinusitis and nasal polyposis** G. K. Scadding, S. R. Durham, R. Mirakian, N. S. Jones, A. B. Drake-Lee, D. Ryan, T. A. Dixon, P. A. J. Huber and S. M. Nasser. *Clinical and Experimental Allergy*, 38 : 260–275, 2008

**Nasal irrigation for chronic sinus symptoms in patients with allergic rhinitis, asthma, and nasal polyposis: a hypothesis generating study.** Rabago D, Guerard E, Bukstein D. *WMJ.* 107(2):69-75. 2008

**Nasal Saline Irrigations for the Symptoms of Chronic Rhinosinusitis.** Harvey R, Hannan S, Badia L, Scadding G. *Cochrane Database Syst Rev.* 18:CD006394, 2007

**Pediatric sinusitis.** Tan R, Spector S. *Curr Allergy Asthma Rep.* 7:421-6, 2007

**Qualitative Aspects of Nasal Irrigation Use by Patients with Chronic Sinus Disease in a Multimethod Study.** Rabago D, Barrett B, Marchand L, Maberry R, Mundt M. *Ann Fam Med.* 4:295, 2006

**Nasal irrigation in case of rhinosinusitis.** Michel O. *Laryngorhinootologie* 85:448, 2006

**Evidence-based Recommendations for Antimicrobial Nasal Washes in Chronic Rhinosinusitis.** Elliott KA, Stringer SP. *Am J Rhinol.* 20:1, 2006

**The Efficacy of Hypertonic Saline Nasal Irrigation for Chronic Sinonasal Symptoms.** Rabago D, Pasic T, Zgierska A, Mundt M, Barrett B, Maberry R. *Otolaryngol Head Neck Surg.* 133:3, 2005

**Chronic Sinusitis in Children.** Steele RW. *Clin Pediatr.* 44:465, 2005:

**Management for Optimal Outcomes.** Aukema AA, Fokkens WJ. *Treat Respir Med.*3: 97, 2004

**Nasal Irrigations: Good or Bad?** Brown CL, Graham SM. *Curr Opin Otolaryngol Head Neck Surg.* 12:9, 2004

**When Sinus Trouble Won't Stay Away: for people with chronic sinusitis, nasal irrigation and surgery offer avenues for fewer relapses and better breathing.** Metson R. *Health News.* 10:12, 2004

**Nasal Irrigation as Adjunctive Care for Acute Sinusitis.** Rabago D, Barrett B, Zgierska A. *J Fam Pract.* 53:137, 2004

**Acute Bacterial Rhinosinusitis in Adults: part II. Treatment** Scheid DC, Hamm RM. *Am Fam Physician.* 70:1697, 2004

**Concomitant Chronic Sinusitis Treatment in Children with Mild Asthma: the effect on bronchial hyperresponsiveness.** Tsao CH, Chen LC, Yeh KW, Huang JL. *Chest* 123:757, 2003

**Saline Nasal Irrigation: Its role as an adjunct treatment.** Papsin B, McTavish A. *Can Fam Physician.* 49:168, 2003

**Efficacy of Daily Hypertonic Saline Nasal Irrigation Among Patients with Sinusitis: a randomized controlled trial.** Rabago D, Zgierska A, Mundt M, Barrett B, Bobula J, Maberry R. *J Fam Pract.* 51:1049, 2002

**Nasal Irrigation for the Alleviation of Sinonasal Symptoms.** Heatley DG, McConnell KE, Kille TL, Levenson GE *Otolaryngol Head Neck Surg* 125:44, 2001

**Management of Sinusitis: current clinical strategies.** Kaliner M, Kennedy DW, en: Sinusitis Disease Management Guide. *PDR 2000, 2000*

**Clinical Study and Literature Review of Nasal Irrigation.** Tomooka LT, Murphy C, Davidson TM. *Laryngoscope* 110:1189, 2000

**Effect of Irrigation of the Nose with Isotonic Salt Solution on Adult Patients with Chronic Paranasal Sinus Disease.** Bachmann G, Hommel G, Michel O. *European Archives of Otorhinolaryngology* 257:537, 2000

**Treatment of Sinusitis in the Next Millennium.** Kaliner M. *Allergy and Asthma Proceedings,* 19:181, 1998

**Sinusitis: Acute, Chronic and Manageable.** Rachelevsky GS, Slavin RG. *Patient Care* 131:4, 1997

**Efficacy of Sinus Irrigation Versus Sinus Irrigation Followed by Functional Endoscopic Sinus Surgery.** Hartog B, van Benthem PP, Prins LC, Hordijk GJ *Annals of Otolaryngology, Rhinology and Laryngology* 106:759, 1997

**Management of Sinusitis in Adult Cystic Fibrosis.** Marks SC, Kissner DG. *American Journal of Rhinology* 11:11, 1997

**Sinusitis: Bench to Bedside.** Kaliner MA et al. Study group of sinusitis. *Otolaryngology* 116:6, 1997

**Chronic Sinusitis. A Medical or Surgical Disease?** Parson DS. En: Pediatric Sinusitis. *Otolaryngologic Clinics of North America* 29:1, 1996

**Sinus Survival.** Ivker R. *Putman Publication*. 1995

**Sinusitis: complications and sequelae. An Otolaryngologist's Perspective.** Fairbanks DNF. *Pediatric Infectious Diseases*, 74:875, 1995

**Management of Sinusitis in Cystic Fibrosis.** Moss RB, King W. *Archives of Otolaryngology Head Neck Surgery*, 21:566, 1995

**Management of Chronic Sinusitis in Cystic Fibrosis.** Davidson T. *Laryngoscope* 105:354, 1995

**Therapeutic Agents in the Medical Management of Sinusitis.** Mabry RL. En: Inflammatory Diseases of the Sinuses. *Otolaryngologic Clinics of North America* 26:561, 1993

**Pediatric Sinusitis.** Manning SC. *Otolaryngologic Clinics of North America* 26:623, 1993

**Prospects for Ancillary Treatment of Sinusitis in the 1990s.** Zeiger RS. *Journal of Allergy and Clinical Immunology*, 90:478, 1994

**Chronic rhinosinusitis: Epidemiology and medical Management.** Daniel L. Hamilos. *Clinical reviews in allergy and immunology*, 693:707, 2011

**Safety and efficacy of once-daily nasal irrigation for the treatment of pediatric chronic rhinosinusitis.** Wei JL. *Laryngoscope*, 1989:2000, 2011

**Nasal irrigation with or without drugs: the evidence.** Nithin D. Adappa. *Current Opinion*, 1068:9508, 2012

**Efficacy of nasal irrigation in the treatment of acute sinusitis in atopic children.** Yun-Hu Wang. *Journal of microbiology, Immunology and Infection*, 1-7, 2012

**Nasal Saline Irrigations for the Symptoms of Acute and Chronic Rhinosinusitis.** Nils Achilles. *Current Allergy Asthma Reports*. 229:235, 2013

**Efficacy of nasal irrigations and nebulizations for nasal symptom relief.** Dunn JD. *Curr Opin Otolaryngol Head Neck Surg*, 248:51, 2013

## 2. Rhinitis

**Clinical and Pathogenetic Characteristics of Pregnancy Rhinitis.** Ellegard EK. *Clin Rev Allergy Immunol*. 26:149, 2004

**Nasal Douching as a Valuable Adjunct in the Management of Chronic Rhinosinusitis.** Taccariello M, Parikh A, Darby Y, Scadding G. *Rhinology* 37:29, 1999

**Medical Management of Rhinitis.** Fadal R. *Otolaryngology, Gerald M English Ed. Vol 2:Ch 13*, 1996

**Atrophic Rhinitis.** deSouza FM. *Otolaryngology, Gerald M English Ed., Ch14*, 1996

**Rinitis Alérgica y no Alérgica.** Meltzer EO et al. En: Alergia: principios y práctica. Middleton E, Reed Ch, Ellis EF, Adkinson NF, Yunginger JW, eds., vol 2, *Salvat*, 1181, 1992

**Rhinitis and Nasal Obstruction.** Lucente FE. En: Nasal Obstruction. *Otolaryngologic Clinics of North America* 22:307, 1989

**Atrophic Rhinitis.** Goodman. *Otolaryngology, Gerald M English Ed. Vol 2, Ch. 14, 1984*

**Chronic Rhinitis, a Practical Approach to Diagnosis and Treatment.** Zeigler R, Shatz M. *Immunology and Allergy Practice 4:2, 1982*

**Chronic rhinosinusitis: Epidemiology and medical Management.** Daniel L. Hamilos. *Clinical reviews in allergy and immunology, 693:707, 2011*

**Nasal irrigation with or without drugs: the evidence.** Nithin D. Adappa. *Current Opinion, 1068:9508, 2012*

**Efficacy of nasal irrigation in the treatment of acute sinusitis in atopic children.** Yun-Hu Wang. *Journal of microbiology, Immunology and Infection, 1-7, 2012*

**Nasal Saline Irrigations for the Symptoms of Acute and Chronic Rhinosinusitis.** Nils Achilles. *Current Allergy Asthma Reports. 229:235, 2013*

**Efficacy of nasal irrigations and nebulizations for nasal symptom relief.** Dunn JD. *Curr Opin Otolaryngol Head Neck Surg, 248:51, 2013*

### 3. Allergy

**Nasal saline irrigation facilitates control of allergic rhinitis by topical steroid in children.** Li H, Sha Q, Zuo K, Jiang H, Cheng L, Shi J, Xu G. *ORL J Otorhinolaryngol Relat Spec. 71:50-5, 2009*

**Nasal Rinsing with Hypertonic Solution: an Adjunctive Treatment for Pediatric Seasonal Allergic Rhinoconjunctivitis.** Garavello W, Di Berardino F, Romagnoli M, Sambataro G, Gaini RM. *Int Arch Allergy Immunol. 137:310, 2005*

**Is Hypertonic Saline Better than Normal Saline for Allergic Rhinitis in Children?** Degirmencioglu H, Karadag A, Avci Z, Kurtaran H, Catal F. *Pediatr Allergy Immunol. 15:190, 2004*

**Nasal Saline for Allergic Rhinitis: an Alternative Treatment Method.** Yilmaz T, Kurtaran H, Karadag A, Uras N. *Acta Otolaryngol. 124:1240, 2004*

**Hypersaline Nasal Irrigation in Children with Symptomatic Seasonal Allergic Rhinitis: a Randomized Study.** Garavello W, Romagnoli M, Sordo L, Gaini RM, Di Berardino C, Angrisano A. *Pediatr Allergy Immunol. 14:140, 2003*

**Inhibition of the Seasonal IgE Increase to *Dactylis glomerata* by Daily Sodium Chloride Nasal-sinus Irrigation During the Grass Pollen Season.** Subiza JL, Subiza J, Barjau MC, Rodríguez R, Gavilán MJ. *Journal of Allergy and Clinical Immunology, 104:711, 1999*

**Pathophysiology and Treatment of Allergic Sinusitis.** Kaliner, M.A. En: *Current Review of Allergic Diseases, Michael A. Kaliner (ed.), Current Medicine, p.125, 1998*

**Nasal Hyperthermia and Simple Irrigation for Perennial Rhinitis. Changes in Inflammatory Mediators.** Georgitis JW. *Chest, 106:1487, 1994*

**Efficacy of nasal irrigation in the treatment of acute sinusitis in atopic children.** Yun-Hu Wang. *Journal of microbiology, Immunology and Infection, 1-7, 2012*

**Nasal irrigation as an adjunctive treatment in allergic rhinitis: a systematic review and meta-analysis.** Hermelingmeier KE. *Am J Rhinol Allergy*, 119:25, 2012.

**Hypertonic saline is more effective than normal saline in seasonal allergic rhinitis in children.** Marchisio P. *Int J Immunopathol Pharmacol*, 721:30, 2012.

**Efficacy of buffered hypertonic saline nasal irrigation in children with symptomatic allergic rhinitis: a randomized double-blind study.** Satdhabudha A. *Int J Pediatr Otorhinolaryngol*, 583:8, 2012

**Tap water nasal irrigation in adults with seasonal allergic rhinitis: a randomized double-blind study.** Min Xiong. *Eur Arch Otorhinolaryngol*, 2741:4, 2013.

## 4. Mucociliary clearance

**Impact of isotonic and hypertonic saline solutions on mucociliary activity in various nasal pathologies: clinical study.** Ural A, Oktemer TK, Kizil Y, Ileri F, Uslu S. *Laryngol Otol*. 28:1-5, 2008

**Ringer-Lactate Solution Versus Isotonic Saline Solution on Mucociliary Function after Nasal Septal Surgery.** Unal M, Gorur K, Ozcan C. *J Laryngol Otol*. 115:796, 2001

**Mucociliary Clearance and Buffered Hypertonic Saline Solution.** Talbot A, et al *Laryngoscope* 107:500, 1997

**Enhancing the Mucociliary System.** Grossan M. *Advances for Respiratory Care Practitioners*, 8:12, 1995

**Office Measurement of Nasal Mucociliary Clearance.** Grossan M. *Otolaryngology, Gerald M English Ed. Vol 2, Ch 7*, 1994

**Effect of Amiloride and Saline on Nasal Mucociliary Clearance and Potential Difference in Cystic Fibrosis and Normal Subjects.** Middleton PG, Geddes DM, Alton EW. *Thorax* 48:812, 1993

**Mucociliary Flow in Otolaryngology Practice.** Grossan M. *Insights in Otolaryngology*, 8:2, 1993

**Ciliary Beating Frequency in Chronic Sinusitis.** Nuutinen J. *Archives of Otolaryngology Head Neck Surgery*, 119:645, 1993

**A Device to Aid Nasal Mucociliary Flow.** Grossan M. *A.N.L.* 3:65, 1976

**The Saccharin Test of Nasal Mucociliary Function.** Grossan M. *Eye, Ear, Nose and Throat Monthly*, 54:415, 1975

**The impact of hypertonic saline inhalation on mucociliary clearance and nasal nitric oxide.** A. Bencova. *Journal of physiology and pharmacology*, 309:313, 2012

## 5. Nasal surgery

**A preliminary randomised controlled trial evaluating the efficacy of saline douching following endoscopic sinus surgery.** Freeman SR, Sivayoham ES, Jepson K, de Carpentier J. *Clin Otolaryngol.* 33:462-5, 2008

**Effects of endoscopic sinus surgery and delivery device on cadaver sinus irrigation.** Harvey RJ, Goddard JC, Wise SK, Schlosser RJ. *Otolaryngol Head Neck Surg.* 139:137-42, 2008

**Effects of buffered 2.3%, buffered 0.9%, and non-buffered 0.9% irrigation solutions on nasal mucosa after septoplasty.** Süslü N, Bajin MD, Süslü AE, Öğretmenoğlu O. *Eur Arch Otorhinolaryngol.* 2008

**Evaluación de Métodos de Irrigación Nasosinusal en Postoperatorio de C.E.N.S.** Cenjor C, Gutiérrez R, Sanabria J, Márquez F, Martínez D, Pastormeloc G. *Actas del XVII Congreso de la Sociedad Española de Otorrinolaringología y Patología Cérvico facial, Las Palmas de Gran Canaria, 12-16 Octubre, 1998*

**Perioperative Care in Functional Endoscopic Sinus Surgery.** Sonkens JW, Miller RJ, *Highlights of The Instructional Courses. Lucente Ed. Ch 24, 267, 1997.*

**Management of sinusitis in cystic fibrosis by endoscopic surgery and serial antimicrobial lavage. Reduction in recurrence requiring surgery.** Moss RB, King VV. *Arch Otolaryngol Head Neck Surg* 121:566, 1995

**Endoscopic Paranasal Sinus Surgery.** Rice D. *Ravens Press, 1993.*

**Surgical approach to tumors of the nasal cavity.** Pope TH Jr. *Laryngoscope* 88: 1743, 1978

**The impact of intraoperative saline irrigations on bacterial load within the maxillary sinus.** Seiberling KA. *Int Forum Allergy Rhinol,* 351:5, 2011

**Role of Medical Therapy in the Management of Nasal Polyps.** Isma Alobid. *Curr Allergy Asthma Rep,* 144:153, 2012

**Single-blind randomized controlled trial of surfactant vs hypertonic saline irrigation following endoscopic endonasal surgery.** Farag AA. *Int Forum Allergy Rhinol,* 276:80, 2013.

**A prospective randomized single-blinded clinical trial comparing the efficacy and tolerability of the nasal douching products Sterimar™ and Sinus Rinse™ following functional endoscopic sinus surgery.** Salib RJ. *Clin Otolaryngo,* 297:305, 2013.

## **6. Irrigationn vs. Nebulization/Sprays**

**Does nasal irrigation enter paranasal sinuses in chronic rhinosinusitis?** Snidvongs K, Chaowanapanja P, Aeumjaturapat S, Chusakul S, Praweswararat P *Am J Rhinol.* 22:483-6, 2008

**Nasal saline for chronic sinonasal symptoms: a randomized controlled trial.** Pynnonen MA, Mukerji SS, Kim HM, Adams ME, Terrell JE. *Arch Otolaryngol Head Neck Surg.* 133:1115-20 2007

**Nebulized bacitracin/colimycin: a treatment option in recalcitrant chronic rhinosinusitis with Staphylococcus aureus?** A double-blind, randomized, placebo-controlled, cross-over pilot study. Videler WJ, van Drunen CM, Reitsma JB, Fokkens WJ. *Rhinology.*46:92-8, 2008

**A comparative Study of Three Methods of Nasal Irrigation.** Wormald PJ, Cain T, Oates L, Hawke L, Wong I. *Laryngoscope* 114:2224, 2004

**Radiographic Comparison of Three Methods for Nasal Saline Irrigation.** Olson DE, Rasgon BM, Hilsinger RL Jr. *Laryngoscope*. 112:1394, 2000

**Decontaminating the Nasal Passages.** Berger ME, Jones OW, Ricks RC, Garrett S. *Health Phys.* 84(5 Suppl):S80, 2003

**Comparison of nasal sprays and irrigations in the delivery of topical agents to the olfactory mucosa.** Lam K. *Laryngoscope*, 2013

## 7. Xilitol

**Reglamento de la Unión Europea nº: 1129/2011.** Diario oficial de la UE. *Noviembre de 2011*

**Guía para la aplicación de la legislación de aditivos y contaminantes de la UE en productos pesqueros y acuícolas.** Ministerio de Agricultura, Alimentación y Medio Ambiente. *Madrid, 2012*

**Ministerio de Sanidad, Política Social e Igualdad, BOE nº 219 de Septiembre de 2011 sobre la lucha contra el dopaje en el Deport.**

**Effect of Xylitol on Growth of Nasopharyngeal Bacteria In Vitro.** TERO KONTIOKARI. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*, 1820:1823, 1995.

**Antiadhesive effects of xylitol on otopathogenic bacteria.** Tero Kontiokari. *Journal of Antimicrobial Chemotherapy*, 563:565, 1998.

**Xylitol Nasal Irrigation in the Management of Chronic Rhinosinusitis.** Joshua D. Department of Otolaryngology – Head and Neck Surgery Stanford University School of Medicine

**The osmolyte xylitol reduces the salt concentration of airway surface liquid and may enhance bacterial killing.** Joseph Zabner. *Proceedings of the National Academy of Sciences of the United States of America*, 11614:9, 2000

**Xylitol in preventing acute otitis media.** Matti Uhari. *Vaccine*, 144:147, 2001.

**Xylitol enhances bacterial killing in the rabbit maxillary sinus.** Brown CL, *Laryngoscope*, 2021:4, 2004

**In vitro susceptibility of established biofilms composed of a clinical wound isolate of Pseudomonas aeruginosa treated with lactoferrin and xylitol** Mary Cloud B. Ammons. *International Journal of Antimicrobial Agents*, 230:236, 2009

**Xylitol nasal irrigation in the management of chronic rhinosinusitis: a pilot study.** Weissman JD. *Laryngoscope*, 2468:72, 2011

**European position paper on rhinosinusitis and nasal polyps.** Official journal of the European and International Societies. 2012

**Efficacy of nasal irrigations and nebulizations for nasal symptom relief.** Dunn JD. *Curr Opin Otolaryngol Head Neck Surg*,248:51, 2013

## 8. Miscellaneous

**Topical antimicrobials in the management of chronic rhinosinusitis: a systematic review.**

Lim M, Citardi MJ, Leong JL. *Am J Rhinol.*22 (4):381-9,2008

**Nasal lavage with mupirocin for the treatment of surgically recalcitrant chronic rhinosinusitis.** Uren B, Psaltis A, Wormald PJ. *Laryngoscope.* 118:1677-80, 2008

**Nebulized bacitracin/colimycin: a treatment option in recalcitrant chronic rhinosinusitis with *Staphylococcus aureus*? A double-blind, randomized, placebo-controlled, cross-over pilot study.** Videler WJ, van Drunen CM, Reitsma JB, Fokkens WJ. *Rhinology.*46:92-8, 2008

**Nasal irrigation reduces postirradiation rhinosinusitis in patients with nasopharyngeal carcinoma.** Liang KL, Kao TC, Lin JC, Tseng HC, Su MC, Hsin CH, Shiao JY, Jiang RS. *Am J Rhinol.* 22:258-62, 2008

**Evidence-based Recommendations for Antimicrobial Nasal Washes in Chronic Rhinosinusitis.** Elliott KA, Stringer SP. *Am J Rhinol.* 20:1, 2006

**Non-invasive Treatment of Intractable Posterior Epistaxis with Hot-water Irrigation.** Schlegel-Wagner C, Siekmann U, Linder T. *Rhinology.* 44:90, 2006

**New Modification of Hot-water Irrigation in the Treatment of Posterior Epistaxis.** Stangerup SE, Dommerby H, Siim C, Kemp L, Stage J. *Arch Otolaryngol Head Neck Surg* 125:686, 1999

**Rhinovirus Infection Induces Mucus Hypersecretion.** Yuta A, Doyle WJ, Gaumond E, Ali M, Tamarkin L, Baraniuk JN, Van Deusen M, Cohen S, Skoner DP. *Am J Physiol* 274:1017, 1998

**Effect of Nasal Lavage on Nasal Symptoms and Physiology in Wood Industry Workers.** Holmstrom M, Rosen G, Wahlander L. *Rhinology* 35:108, 1997

**Nasal saline irrigation in children: a study of compliance and tolerance.** Jeffe JS. *Int J Pediatr Otorhinolaryngol*, 409:13, 2012