Scientific Reference List / Infant PFT

Title	Author	Published where	Date	EM product used
eNO - Infant				
Breath by breath variabilty of tidal NO and NO output in healthy, unsedated infants	B. Reinmann et al (J.H. Wildhaber)			
Comparison of six different methods for exhaled nitric oxide (eNO) collection in children	P.F. Daniel et al (N.H. Valerius)			x
Exhaled nitric oxide measurements with dynamic flow restriction in children aged 4-8 yrs	M.W.H. Pijnenburg et al (J.C. de Jongste)	Eur Respir J 2002; 20: 919-924	2002	
Exhaled nitric oxide measured after birth predicts subsequent respiratory infections in infants	Claudia E. Kuehni et al (Urs Frey)			
Effect of natural grass pollen exposure on exhaled nitric oxide in asthmatic children	Eugenio Baraldi et al (Franco Zacchello)	Am J Respir Crit Care Med 1999; 159: 262-2661999		x
Exhaled nitric oxide concentrations during treatment of wheezing exacerbation in infants and young children	Eugenio Baraldi et al (Franco Zacchello)	Am J Respir Crit Care Med 1999; 159: 1284-1288	1999	x
e-NO peak versus e-NO plateau values in evaluating e-NO production in steroid-naive and in steroid-treated asthmatic children and in detecting response to inhaled steroid treatment	Michela Silvestri et al (Giovanni A. Rossi, MD)			
Assessment of exhaled nitric oxide kinetics in healthy infants	T. Martinez et al (R.S. Tepper)			
Determination of intrapulmonary tidal nitric oxide after cross correlations with end-expiratory CO2 in healthy, unsedated infants	G. L. Hall, B. Reinmann, J. Wildhaber, U. Frey			x
Exhaled NO measured at fixed flow during tidal breathing in young children of 2-5 years	F. Buchvald, H. Bisgaard			x
Exhaled nitric oxide in wheezy infants: comparison of tidal breathing and single-breath techniques	P. Franklin et al (S.M. Stick)			
Facemask measurements do not reflect lower airway production of exhaled nitric oxide in children	A. Fall et al (D.A. Spencer			
Flow-dependency of exhaled nitric oxide in children with asthma and cystic fibrosis	A. Kroesbergen et al (J.C. de Jongste)	Eur Respir J 1999; 14: 871-875	1999	
Evaluation of different exhalation flow rates in exhaled nitric oxide (ENO) measurements in schoolchildren	C. Pedroletti et al (S.L. Nordvall)			
Tidal exhaled nitric oxide in healthy, unsedated newborn infants with prenatal tobacco exposure	G. L. Hall, B. Reinmann, J. Wildhaber, U. Frey			x
Nitric oxide in exhaled gas Studies on physiological regulation and measurements in infants and children	Andreas Artlich	ERS 2002, Stockholm	1999	
Noninvasive assessment of airway inflammation in children: induced sputum, exhaled nitric oxide, and breath condensate	P.G. Gibson, R.L. Henry, P. Thomas	Eur Respir J 2000; 16: 1008-1015	2000	

Relationship between exhaled nitric oxide and childhood asthma	Timothy L. Frank et al (Philip Hannaford)	Am J Respir Crit Care med, Volume 158, no. 4, 1032-1036	1998	
Single breath exhaled nitric oxide (NO) in the newborn	A. Artlich et al (L.E. Gustafsson)			
Changes of exhaled nitric oxide during steroid treatment of childhood asthma	J. Beck-Ripp et al (P. Bufler	Eur Respir J 2002; 19: 1015-1019	2002	
Determination of intrapulmonary tidal nitric oxide after cross correlations with end-expiratory CO2 in healthy, unsedated infants				
Ups and downs of nitric oxide in chesty children	Simon Godfrey	Am J Respir Crit Care Med, Vol 166. Pp 438-439, 2002	2002	
Exhaled nitric oxide levels in atopic children: relation to specific allergic sensitisation, AHR, and respiratory symptoms	J D Leuppi et al	Thorax 2002;57:518-523	2002	x
eNO - Infant / Infant ventilated				
Exhaled nitric oxide and postnatal dexamethasone in chronically ventilator dependent, preterm infants	Olivia Williams et al (Anne Greenough)			
Flow measurement				
Advances in lung function tests: ultrasound spirometry	M. Heilmann et al (H. Fabel	Meeting of the American Thoracic Society	1998	x
Evaluation of distribution of ventilation in bronchial asthma patients using ultrasonic spirometry	A.E. Salem et al (J. Schlegel)			x
In vitro assessment of an ultrasonic flowmeter for use in ventilated infants	P. Scalfaro, J. Cotting, P.D. Sly	Eur Respir J 2000; 15: 566-569	2000	x
Measurement of tidal volume in high frequency oscillation ventilation (HFOV) with an ultrasonic and a hot wire flowmeter	P. Scalfaro, J. Cotting, P.D. Sly			x
In-vitro Untersuchungen zur Messgenauigkeit eines Ultraschall-Pneumotachographen zur Ventilationsmessung bei Neugeborenen	T. Leier et al (G. Schmalisch)			x
Gas molecular mass (MM) measurements with a time of flight ultrasonic flowmeter	P. Scalfaro et al (P. Sly)			x
Validation of an ultrasonic flow-meter for ventilated infants	P. Scalfaro, J. Cotting, P.D. Sly	Meeting of the American Thoracic Society	1998	x
Vergleich der Ultraschall-Pneumographie mit konventionellen Messverfahren bei Kindern und Jugendlichen	Lindau S et al (Lindemann H)	Monatsschr Kinderheilkd 146:292	1998	x
FRC / Gas Dilution				
Determination of functional residual capacity: a comparison of ultrasonic molecular mass analysis during nitrogen washout and conventional helium dilution	E. Eber et al (M.S. Zach)	Meeting of the American Thoracic Society	1999	x
Comparable measurements of FRC in healthy infants using three techniques	Jane J. Pillow et al (Janet Stocks)			x

The molar mass signal of an ultrasonic flowmeter accurately describes the gas concentration signal of a respiratory mass spectrometer	Andreas Schibler et al (Christopher J.L. Newth)	Pediatr. Res 49:581-588	2001	x
Measurement of functional residual capacity (FRC) determined by gas dilution in infants using an ultrasonic flowmeter and a sulfur-hexafluoride (SF6) washin/washout technique	M. Henschen et al (J. Kuehr)			x
Measurement of functional residual capacity in mechanically ventilated monkeys using the molar mass signal of an ultrasonic flow meter compared to the nitrogen washout method	A. Schibler, J. Hammer, C.J.L. Newth			x
In vitro assessment of an ultrasonic airflow meter for FRC measurements in newborns	J. Wauer et al (G. Schmalisch)			x
Measurement of functional residual capacity in rabbits and children using an ultrasonic flow meter	Andreas Schibler and Robert Henning	Pediatr. Research 0031-3998/01/4904-0581	2001	x
A new method for measuring FRC by gas washout in respirated infants after cardiac surgery	Winfried Baden et al (Michael Hofbeck)			x
Inert gas washout detects airway pathology in cf infants and children with normal spirometry findings	P. Gustafsson, S. Kallman, A. Lindblad	Meeting of the American Thoracic Society	2001	
Measurement of lung volume and ventilation distribution with an ultrasonic flow meter in healthy infants	A. Schibler et al (U. Frey)	Eur Respir J 2002; 20:912-918	2002	x
Physical effects of heliox versus oxygen on measurements of functional residual capacity by the nitrogen washout technique in small lung volumes: A model study	Roland Hentschel et al (Gerhard Jorch)	Pediatr Pulmonol.;31:255-260	2001	
Sulfur Hexafluoride washin and washout to measure FRC in unsedated healthy children	A. Schibler et al (U. Frey)	Meeting of the American Thoracic Society	2001	x
Method for assessment of volume of trapped gas in infants during multiple-breath invert gas washout	Dr. Per M. Gustafsson et al (Anders Lindblad)	Pediatric Pulmonology Volume 35, Issue 1, p. 42-49	2003	
Overall and peripheral inhomogeneity of ventilation in patients with stable cystic fibrosis	Alain Van Muylem, D. Baran	Pediatric Pulmonology Volume 30, Issue 1, p. 3-9	2000	
Measurement of lung volume and ventilation distribution with an ultrasonic flow meter in healthy infants	Schibler A. et al (Frey U.)			x
Peripheral airway involvement in asthma assessed by single-breath SF6 and He washout	P.M. Gustafsson et al	Eur Respir J 2003; 21: 1033–1039	2003	
In vitro validation of an ultrasonic flowmeter in order to measure the functional residual capacity in newborns	Wauer J. et al	Physiological Measurement, 2003, vol. 24, no. 2, pp. 355-365(11)	2003	x

Infant PFT general				
Clinical applications of infant lung funktion testing: Does infant lung function contribute to clinical decision making?	Urs Frey			x
A simple new technique to measure the effective dead space of the face mask with a water volumeter in infants	M.G. Morris	Eur Respir J 1999; 14:1163-1168	1999	
Effect of jaw-thrust and Cpap on tidal breathing in deeply sedated infants	J. Hammer et al (F. Frei)	Meeting of the American Thoracic Society	2000	x
Annual lung function changes in young patients with chronic lung disease	P.J.F.M. Merkus, H.A.W.M. Tiddens, J.C. de Jongste	Eur Respir J 2002; 19:886-891	2002	
Normal lung function of preterm infants with chronic lung disease at 48 weeks of postconceptional age	M. Zanolari et al (U. Frey)			x
Gewichtsspezifische Perzentile wichtiger atemphysiologischer Parameter von gesunden Neugeborenen und Säuglingen				
A new approach to measure energy expenditure in the neonate	Paul B. Pencharz			
Abnormal lung function in healthy preterm infants	Ola Hjalmarson and Kenneth Sandberg	Am J Respir Crit Care Med Vol. 165. pp 83-87	2002	
The economic impact of preschool asthma and wheeze	C.A. Stevens et al (M. Silverman)	Eur Respir J 2003; 21: 1000–1006	2003	
Repeatability of lung function tests during methacholine challenge in wheezy infants	Christophe Delacourt et al	Thorax 1998;53: 933–938	1998	
Lung function at one month of age as a risk factor for infant respiratory symptoms in a high risk population	C S Murray et al	Thorax 2002;57: 388–392	2002	
RV-RTC				
The raised volume rapid thoracoabdominal compression technique	Julian Allen et al (Robert Tepper)	Am J Respir Crit Care Med. Vol 161, pp 1760-1762	2000	
Effect of different inflation pressures on parameters derived from forced expiratory manoeuvres at raised lung volume in infants	S. Lum et al (J. Stocks)			
The influence of an oropharyngeal airway on forced expiratory volume in infant lung function testing using raised volume rapid thoracic compression	G.M. Nixon, C.F. Robertson and A. Olinsky			
Relative ability of full and partial forced expiratory maneuvers to identify diminished airway function in infants with cystic fibrosis	Sarath C. Ranganathan et al (Janet Stocks)	Am J Respir Crit Care Med. Vol 166, pp. 1350-1357	2002	
Sensitivity of spirometric measurements to detect airways obstruction in infants	Marcus H Jones et al (Robert S Tepper)	Am J Respir Crit. Care Med. doi: 10.1164/rccm.200204-339OC	2003	
Methacholine responsiveness in infants assessed with low frequency forced oscillation and forced expiration techniques	Hall G. et al (P D Sly)	Thorax 2001;56:42–47	2001	

SOT / Shutter				
Evaluation of the interrupter technique in healthy, unsedated infants	G.L. Hall et al (U. Frey)	Eur Respir J 2001; 18: 982-988	2001	x
Measurements of interrupter resistance: reference values for children 3-13 yrs of age	P.J.F.M Merkus et al (C.K. van der Ent)	Eur Respir J 2002; 20: 907-911	2002	
Measurements of resistance by the interrupter technique and of transcutaneous partial pressure of oxygen in young children during methacholine challenge	Nicole Beydon et al (Claude Gaultier)		2000	
Nebulized saline bronchial challenge in infants	I. Brookes et al (M. Silverman)			