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Title: Importance of nutrition status in lung function of infants born preterm with or without bronchopulmonary dysplasia

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Body: Aims: To know if nutrition status (as measured by BMI) is associated to lung function of infants born preterm (PT) with or without bronchopulmonary dysplasia (BPD) Methods: By means of the raised volume rapid thoracoabdominal compression (RVRTC) technique, FVC, $FEV_{0.5}$, FEF_{50}, FEF_{75}, and FEF_{25-75} were measured in 61 PT without BPD (65.6% male; corrected age 7.2±0.7 mo.) and in 55 PT with BPD (59.8% male; corrected age 7.75±0.9 mo.). A multiple regression analysis -stratified for BPD- was performed for BMI z-score (as calculated according to WHO values) and each lung function parameter (dependent variable), controlling for gender, gestational age, current corrected age, height, birth weight, smoking exposure in pregnancy. Results: The coefficients of the regression analyses and their significance are shown in table.

	BPD - (n=61)		BPD+ (n=57)	
	Coef. (95% CI)	p value	Coef. (95% CI)	p value
FVC	9.79 (-1.24;20.8)	0.038	8.54 (-2.18;19.2)	0.200
FEV0.5	9.55 (0.57;18.5)	0.015	5.97 (-1.48;13.4)	0.113
FEF50	14.8 (-3.12;32.7)	0.060	3.51 (-16.5;23.5)	0.477
FEF75	15.7 (2.74;28.7)	0.007	8.48 (-2.89;19.8)	0.158
FEF25-75	23.3 (1.50;45.0)	0.027	8.09 (-10.3;26.5)	0.252

Conclusions: Lung function of infants 7-8 months of age, born PT without BPD, increases with BMI. This does not seem to be the case in infants of similar age born PT but with BPD.