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Title: Sleep disordered breathing (SDB) at age 5 in a cohort of very preterm (VP) children and controls

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Body: Available data on SDB in former prematurely born children are scarce. All infants born at 22-31 wks gestational age (GA) (Tuscany, Italy, July '03-June '04) were followed up to 5-6 yrs. Their parents and those of a control group (matched by age, sex, and residence area) filled in a questionnaire on respiratory health. Data were available for 188 cases on 239 and 362 controls. In addition, we obtained data also on 48 ex-preterm <28 wks GA born July '04-June '05. Frequencies of snoring when asleep and mouth breathing when awake, defined as: never, occasional (< once/week), frequent (1-4 times/week), and constant (5-7 times/week), in 188 VP and 362 controls were as follows:

	Never (%)	Occasional (%)	Frequent (%)	Constant (%)
Snoring asleep *				
Very preterm	50.8	23.0	15.5	10.7
Controls	61.6	22.0	10.2	6.2
Mouth breathing**				
Very preterm	67.4	9.7	13.7	9.1
Controls	65.1	17.7	11.1	6.0

Chi square test: *P value=0.036; **P value: 0.06

In VP children, frequent or constant “stop breathing during sleep” and “difficulty breathing when asleep” were very rare (2%). Considering both groups of VP: 10 children had already undergone adenoidectomy. After adjusting for sex, risk factors for frequent or constant snoring or adenoidectomy: GA < 25 wks (OR: 2.3; 95% CI: 1.0; 5.1) and smoke exposure in utero or in the first year of life (OR: 2.3; 95% CI: 1.0; 4.9). In conclusion, being born VP is associated with a higher risk of habitual snoring and mouth breathing up to 5-6 years; this could be relevant for both growth and neurocognitive impairment. The reason why extremely low

GA and maternal smoking exposure increase habitual snoring still needs to be elucidated.