Table 4: Characteristics (mean and standard deviation) of the 766 subjects considered for estimation and validation of the reference values

Gender	Age (yrs)	N	Height (cm) m *(sd)*§	Weight (kg) m *(sd)*§	BMI* m *(sd)*§
Males	3	19	104.6 *(3.5)*	16.3 *(1.9)*	14.9 *(1.5)*
	4	181	107.3 *(4.9)*	17.8 *(2.6)*	15.4 *(1.8)*
	5	177	113.3 *(4.6)*	19.9 *(2.8)*	15.4 *(1.8)*
	6	29	118.7 *(5.5)*	22.9 *(4.2)*	16.2 *(2.2)*
	Total	**406**	**110.5*(5.9)***	**18.9 *(3.1)***	**15.4 *(1.8)***
Females	3	15	105.1 *(4.4)*	17.9 *(1.8)*	16.2 *(1.2)*
	4	163	108.9 *(4.7)*	18.7 *(2.5)*	15.7 *(1.7)*
	5	162	114.7 *(5.5)*	21.1 *(3.7)*	16.0 *(2.1)*
	6	20	119.3 *(5.7)*	24.3 *(6.0)*	17.0 *(3.3)*
	Total	**360**	**112.0 *(5.6)***	**20.1 *(3.0)***	**16.0 *(1.9)***
Whole group	3	34	104.9 *(4.0)*	17.4 *(1.9)*	15.8 *(1.4)*
	4	344	108.2 *(4.9)*	18.3 *(2.6)*	15.6 *(1.8)*
	5	329	114.0 *(5.1)*	20.5 *(3.4)*	15.7 *(2.0)*
	6	49	119.1 *(5.6)*	23.8 *(5.4)*	16.7 *(2.9)*
	Total	**766**	**111.3 *(6.2)***	**19.6 *(3.5)***	**15.7*(1.9)***

* BMI = Body Mass Index
§ m (*sd*) = mean (standard deviation)

ity control criteria and to examine the possible differences.

A more recent guideline[16] has marginally discussed the issues peculiar to spirometric examination in young children and it says that the examination is considered just as feasible in this age group as it is in adults; indices derived from blowing and recording the expiratory times of <1 second were considered to have clinical usefulness. However, the data shown for recommending the use of FEV0.5 and FEV0.75 for clinical purposes were insufficient. Furthermore, in the criteria to evaluate the duration of the test, these guidelines recommend that "*the V-T curve shows no changes for = 1 second and the subject tries to exhale for ≥ 3 seconds in children aged <10 years*"[16], without any additional specification.

This study confirms the feasibility of spirometric examinations in symptomatic or asymptomatic young children, but our results suggest that, because of the too short expiration time, the last guideline indication is not applicable in children younger than 6. The mean FET observed in our children were all around 1 second.

In 3-year-old subjects the cooperation rate was low (83.7%) but high enough to justify the use of spirometry

Table 5: Distribution (mean and standard deviation) of lung function parameter by symptom status

	Asymptomatic		Symptomatic		Total	
	N	m *(sd)*§	N	m *(sd)*§	N	m *(sd)*§
FVC (lt)[a]	327	1.10*(0.22)*	128	1.07*(0.24)*	455	1.09*(0.23)*
FEV_1 (lt)[b]	409	1.09*(0.20)*	169	1.05*(0.21)*	578	1.08*(0.21)*
$FEV_{0.75}$(lt)[d]	493	1.04*(0.19)*	190	0.98*(0.19)*	683	1.02*(0.19)*
$FEV_{0.5}$ (lt)[c]	562	0.90*(0.16)*	205	0.86*(0.16)*	767	0.89*(0.16)*
FEV_1/FVC	285	0.96*(0.04)*	116	0.96*(0.04)*	401	0.96*(0.04)*
$FEV_{0.75}$/FVC	311	0.92*(0.05)*	123	0.91*(0.07)*	434	0.92*(0.06)*
$FEV_{0.5}$/FVC	327	0.81*(0.07)*	128	0.80*(0.09)*	455	0.81*(0.08)*
MEF_{75}(lt/s)[e]	327	2.32*(0.50)*	128	2.18*(0.53)*	455	2.28*(0.51)*
MEF_{50}(lt/s)[f]	327	1.66*(0.38)*	128	1.57*(0.40)*	455	1.64*(0.39)*
MEF_{25}(lt/s)[g]	327	0.85*(0.24)*	128	0.82*(0.28)*	455	0.84*(0.25)*

§m(sd) = mean (standard deviation)
[a]FVC = forced vital capacity;
[b]FEV_1 = forced expiratory volume in one second;
[c]$FEV_{0.75}$ = forced expiratory volume in 3/4 of a second;
[d]$FEV_{0.5}$ = forced expiratory volume in half a second;
[e]MEF_{75} = instantaneous expiratory flow when 25% of FVC has to be expired
[f]MEF_{50} = instantaneous expiratory flow when 50% of FVC has to be expired
[g]MEF_{25} = instantaneous expiratory flow when 75% of FVC has to be expired