

SUPPLEMENT

Statistical analysis:

Percentile curves and look up tables for oscillometry parameters were created using the lambda, mu, sigma (LMS) method. First, this statistical method estimates the optimal power in the Box-Cox transformation to obtain normality of the transformed data (L), the median (M), and the CoV (S). They are estimated as smooth parameter curves depending on height, due to its strongest correlation with oscillometry parameters (Pearson Correlation coefficients for age = 0.67, weight = 0.59, BMI = 0.36, height = 0.69). To determine L, M and S a vector generalised additive model (VGAM v1.1-9, R-package) was fitted to estimate oscillometry parameters based on height. The degrees of freedom of the L, M, and S curves were chosen by fitting multiple models and selecting the best using the BIC (Bayesian Information Criterion). Extreme outliers (standardised residuals >5) were identified using a linear model and excluded from the LMS-model fitting process to obtain models with a good fit. The fitting approach was controlled by a maximum of n=30 iterations and a positive convergence tolerance (epsilon) of $1 \cdot e^{-7}$ with effective degrees of freedom for L (1 to 5), M (3 to 10) and S (1 to 5). The parameter curves (L, M and S) of the selected LMS-model were used to construct percentile curves (5th, 10th, 50th, 90th, and 95th) for the original data. By using the variable-specific parameters L, M and S, individuals' z-scores of each Zrs parameter can be calculated using the following formula:

$$Z = \frac{\left[\frac{y}{M(t)} \right]^{L(t)} - 1}{L(t)S(t)}$$

In our analysis, we relied on values of Rrs and Xrs as provided by the device in use. Despite the inclusion of an additional method for identifying artifacts such as glottis closure and cough, visual inspection of the data revealed the presence of data points suggesting residual artifacts not excluded by the device. To assess the susceptibility of the derived equations to measurement artifacts, we conducted a sensitivity analysis considering two main factors:

- 1) Susceptibility to Different Levels of Breathing Flows: Air flowing in small lungs, as observed in the pediatric population, may theoretically be more turbulent, potentially making Rrs and Xrs more dependent on breathing flow. To explore the effects of high minute ventilations on derived equations, we excluded data points associated with $V_e > 18$ L/min from the analysis. The results, shown in Figure S3, demonstrate that such exclusion did not significantly affect the prediction equations.
- 2) Susceptibility to Residual Artifacts Not Filtered by the Devices: Despite the application of artifact detection algorithms embedded in the used device and the use of a threshold on the intrabreath CoV of R_{tot} , following recently published evidence (*Hantos Z, Wu JKY, Dandurand RJ, Chow CW. Quality control in respiratory oscillometry: reproducibility measures ignoring reactance? ERJ Open Res. 2023;9(3):3-6. doi:10.1183/23120541.00070-2023*), we applied a similar threshold of 1) 15% and 2) 30% to the intrabreath CoV of Xrs using the formula: $X_{tot_SD}/|Z_{tot_MEAN}| \leq 15\%$. While this approach effectively identified points at the extremities of our distributions, its impact on the predicted normality ranges is minimal across most explored height ranges.

It is crucial to note that our curve is susceptible to border effects at low heights. The limited number of data points with a height of less than 115 cm makes this part of the curve more sensitive to slight changes in the distribution of values. Therefore, careful consideration of these factors is imperative when applying these equations to children smaller than 115 cm.

Figure S1 shows distribution of participants according to age, height and total lung capacity.

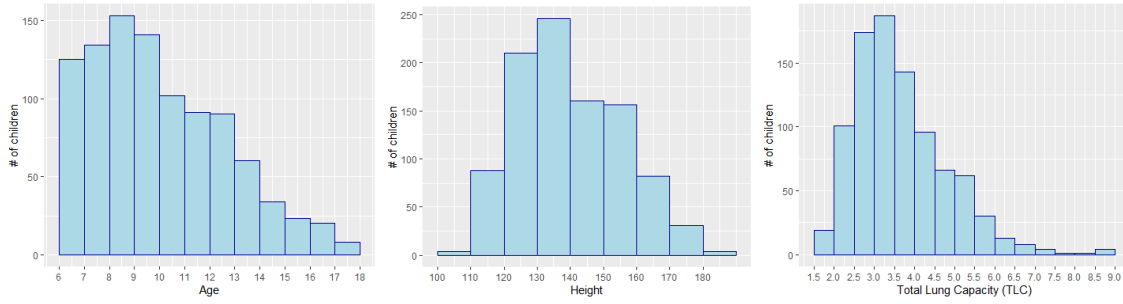


Figure S1: Distribution of participants according to age, height and total lung capacity. Age in years; height in centimetres; TLC in litres.

Table S1 shows the univariate comparisons of X and R parameters between height groups.

	120-130 F	120-130 M	p-value: height 120-130 M vs. F		p-value: height 130-140 M vs. F		p-value: height 140-150 M vs. F		
			120-130 F	130-140 F	130-140 M	140-150 F	140-150 M		
R8 exp	7.8 (6.8 to 9.3)	8.6 (7.1 to 9.7)	ns	7.2 (6.1 to 8.3)	6.4 (5.7 to 8.2)	ns	5.9 (5.1 to 6.9)	6.0 (4.8 to 7.2)	ns
R8 insp	7.0 (6.0 to 7.8)	6.7 (6.0 to 7.7)	ns	6.3 (5.4 to 7.0)	5.6 (5.1 to 6.8)	ns	5.2 (4.4 to 5.8)	5.2 (4.3 to 5.8)	ns
R8 tot	7.5 (6.5 to 8.6)	7.7 (6.4 to 8.8)	ns	6.7 (5.8 to 7.7)	6.2 (5.5 to 7.5)	ns	5.6 (4.8 to 6.4)	5.6 (4.5 to 6.6)	ns
X8 exp	-2.4 (-3.4 to -1.7)	-2.5 (-3.8 to -2.0)	ns	-2.0 (-2.7 to -1.4)	-2.0 (-3.0 to -1.3)	ns	-1.5 (-2.0 to -1.0)	-1.8 (-2.4 to -1.1)	ns
X8 insp	-1.9 (-2.5 to -1.4)	-1.6 (-2.2 to -1.2)	0.028	-1.4 (-1.8 to -1.0)	-1.4 (-1.8 to -1.0)	ns	-1.0 (-1.5 to -0.8)	-1.1 (-1.5 to -0.8)	ns
X8 tot	-2.2 (-2.9 to -1.6)	-2.1 (-2.8 to -1.8)	ns	-1.7 (-2.3 to -1.3)	-1.6 (-2.4 to -1.3)	ns	-1.3 (-1.7 to -0.9)	-1.4 (-1.9 to -1.0)	ns

Table S1: Univariate comparisons of X and R parameters between sexes in 10 cm height steps. All numbers are shown as Median (IQR). Abbreviations: R8 insp = inspiratory resistance at 8 Hz; R8 exp = expiratory

resistance at 8 Hz; R8 tot = total resistance at 8 Hz; X8 insp = inspiratory reactance at 8 Hz; X8 exp = expiratory reactance at 8 Hz; X8 tot = total reactance at 8 Hz; M = males, F = females; n = number of participants; SD = standard deviation.

Table S2 shows the univariate comparisons of X and R parameters between TLC groups.

	2-2.5 F	2-2.5 M	p-value:TLC 2-2.5 M vs. F		2.5-3 F	2.5-3 M	p-value:TLC 2.5-3 M vs. F		3-3.5 F	3-3.5 M	p-value:TLC 3-3.5 M vs. F		3.5-4 F	3.5-4 M	p-value:TLC 3.5-4 M vs. F		4-4.5 F	4-4.5 M	p-value:TLC 4-4.5 M vs. F		4.5-5 F	4.5-5 M	p-value:TLC 4.5-5 M vs. F		5-5.5 F	5-5.5 M	p-value:TLC 5-5.5 M vs. F		5.5-6 F	5.5-6 M	p-value:TLC 5.5-6 M vs. F	
R8 exp	8,5 (7.3 to 9.4)	8,2 (7.2 to 9.2)	ns		7,6 (6.3 to 8.8)	7,6 (6.7 to 9.5)	ns		6,7 (5.7 to 8.2)	6,7 (5.7 to 8.2)	ns		5,8 (4.9 to 6.9)	5,7 (5.0 to 7.1)	ns		4,9 (4.1 to 5.9)	5,0 (4.4 to 6.3)	ns		4,4 (3.8 to 5.4)	5,3 (3.7 to 5.8)	ns		3,7 (3.2 to 4.4)	4,0 (3.6 to 5.6)	ns		3,6 (3.1 to 4.0)	3,7 (3.3 to 4.6)	ns	
R8 insp	7,3 (6.4 to 8.1)	6,9 (6.3 to 7.7)	ns		6,6 (5.6 to 7.4)	6,6 (5.7 to 7.7)	ns		5,9 (5.1 to 7.0)	5,6 (5.1 to 6.9)	ns		5,0 (4.3 to 5.8)	5,1 (4.3 to 5.9)	ns		4, .4 (3.7 to 5.1)	4,4 (4.0 to 5.5)	ns		3,7 (3.3 to 4.7)	4,5 (3.4 to 5.2)	ns		3,6 (2.8 to 4.2)	3,6 (3.0 to 4.9)	ns		3,0 (2.6 to 3.4)	3,2 (2.8 to 3.6)	ns	
R8 tot	7,9 (7.0 to 8.8)	7,6 (6.6 to 8.8)	ns		7,1 (6.2 to 8.1)	7,3 (6.2 to 8.7)	ns		6,4 (5.4 to 7.6)	6,2 (5.5 to 7.6)	ns		5,4 (4.7 to 6.3)	5,3 (4.6 to 6.6)	ns		4,6 (3.9 to 5.5)	4,8 (4.2 to 6.2)	ns		4,2 (3.5 to 5.1)	4,9 (3.5 to 5.5)	ns		3,6 (3.1 to 4.4)	3,8 (3.4 to 5.4)	ns		3,4 (2.8 to 3.8)	3,5 (3.0 to 4.3)	ns	
X8 exp	-2,8 (-3,6 to -1,9)	-3,6 (4,3 to 2,9)	0,0 16		-2,1 (-3,1 to -1,7)	-2,4 (3,5 to 1,8)	ns		-1,8 (-2,5 to -1,3)	-1,9 (2,6 to -1,3)	ns		-1,3 (-1,9 to 0,9)	-1,5 (2,4 to 1,2)	0,0 08		-1,0 (-1,6 to 0,6)	-1,3 (1,9 to 0,8)	ns		-0,8 (-1,1 to 0,6)	-1,0 (1,3 to 0,8)	0,0 50		-0,6 (-0,8 to 0,4)	-1,0 (2,3 to 0,6)	0,0 33		-0,6 (-0,8 to 0,4)	-0,7 (0,8 to 0,6)	ns	
X8 insp	-2,1 (-2,6 to -1,6)	-1,9 (2,6 to 1,6)	ns		-1,8 (-2,2 to -1,3)	-1,5 (-2,0 to -1,2)	ns		-1,3 (-1,7 to 0,9)	-1,4 (1,6 to 1,0)	ns		-1,1 (-1,4 to 0,8)	-1,2 (1,6 to 0,8)	ns		-0,7 (-1,0 to 0,5)	-0,8 (-1,1 to 0,6)	ns		-0,5 (-0,9 to 0,3)	-0,8 (-1,0 to 0,4)	ns		-0,6 (-0,8 to 0,4)	-0,6 (-1,2 to 0,4)	ns		-0,5 (-0,6 to 0,3)	-0,5 (0,6 to 0,4)	ns	
X8 tot	-2,5 (-3,2 to -1,9)	-2,8 (3,5 to 2,2)	ns		-1,9 (-2,8 to -1,5)	-2,0 (2,8 to 1,7)	ns		-1,5 (-2,2 to -1,2)	-1,7 (2,1 to -1,2)	ns		-1,2 (-1,6 to 0,9)	-1,4 (1,9 to 1,1)	0,0 25		-0,8 (-1,3 to 0,6)	-1,0 (1,6 to 0,8)	ns		-0,7 (-0,9 to 0,5)	-0,9 (1,1 to 0,7)	0,0 47		-0,6 (-0,8 to 0,4)	-0,7 (1,7 to 0,6)	0,0 38		-0,6 (-0,8 to 0,4)	-0,6 (0,7 to 0,5)	ns	

Table S2: Univariate comparisons of X and R parameters between sexes in 0.5 L steps. All numbers are shown as Median (IQR). Abbreviations: R8 insp = inspiratory resistance at 8 Hz; R8 exp = expiratory resistance at 8 Hz; R8 tot = total resistance at 8 Hz; X8 insp = inspiratory reactance at 8 Hz; X8 exp = expiratory reactance at 8 Hz; X8 tot = total reactance at 8 Hz; TLC = total lung capacity; M = males, F = females; n = number of participants; SD = standard deviation.

Table S3 shows the created reference values for male children and adolescents for the parameter Rexp at 8 Hz in the form of a look up table. In all the following tables, the 10th, 50th and 90th percentiles are shown in addition to the 5th and 95th percentiles usually used as lower limit of normal (LLN) and upper limit of normal (ULN). The L, M and S values are also shown, with which individual z-scores can be calculated.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,507	10,335	1,917	7,984	8,477	10,335	12,374	12,985
102	0,481	10,236	1,902	7,882	8,375	10,236	12,291	12,909
103	0,455	10,136	1,887	7,781	8,272	10,136	12,209	12,834
104	0,429	10,037	1,873	7,680	8,170	10,037	12,126	12,760
105	0,404	9,938	1,858	7,580	8,068	9,938	12,044	12,685
106	0,378	9,839	1,844	7,480	7,967	9,839	11,962	12,611
107	0,352	9,739	1,829	7,381	7,866	9,739	11,880	12,538
108	0,326	9,640	1,814	7,282	7,765	9,640	11,798	12,465
109	0,300	9,541	1,800	7,184	7,665	9,541	11,717	12,392
110	0,274	9,441	1,785	7,086	7,565	9,441	11,635	12,319
111	0,248	9,342	1,770	6,988	7,465	9,342	11,554	12,247
112	0,222	9,243	1,756	6,891	7,365	9,243	11,473	12,175
113	0,196	9,143	1,741	6,795	7,266	9,143	11,392	12,104
114	0,170	9,044	1,727	6,699	7,168	9,044	11,311	12,033
115	0,145	8,945	1,712	6,603	7,069	8,945	11,230	11,962
116	0,119	8,845	1,697	6,508	6,971	8,845	11,149	11,892
117	0,095	8,746	1,683	6,413	6,873	8,746	11,068	11,821
118	0,072	8,646	1,668	6,318	6,776	8,646	10,987	11,750
119	0,050	8,546	1,654	6,224	6,678	8,546	10,904	11,678
120	0,029	8,446	1,640	6,129	6,581	8,446	10,821	11,605
121	0,009	8,346	1,626	6,035	6,484	8,346	10,737	11,531
122	-0,010	8,245	1,612	5,941	6,386	8,245	10,651	11,455
123	-0,029	8,143	1,598	5,847	6,289	8,143	10,564	11,377
124	-0,045	8,040	1,584	5,752	6,191	8,040	10,475	11,297
125	-0,059	7,937	1,570	5,657	6,093	7,937	10,383	11,213
126	-0,069	7,833	1,557	5,561	5,994	7,833	10,288	11,125
127	-0,072	7,728	1,544	5,463	5,894	7,728	10,189	11,030
128	-0,068	7,624	1,531	5,364	5,793	7,624	10,086	10,929
129	-0,056	7,519	1,518	5,262	5,690	7,519	9,978	10,821
130	-0,033	7,414	1,506	5,159	5,587	7,414	9,866	10,704
131	-0,001	7,310	1,493	5,053	5,482	7,310	9,749	10,578
132	0,041	7,207	1,482	4,945	5,377	7,207	9,628	10,445
133	0,091	7,105	1,470	4,835	5,270	7,105	9,503	10,305
134	0,150	7,003	1,459	4,723	5,163	7,003	9,374	10,159
135	0,215	6,902	1,448	4,609	5,055	6,902	9,242	10,007
136	0,284	6,802	1,437	4,495	4,947	6,802	9,109	9,853
137	0,355	6,702	1,427	4,381	4,839	6,702	8,973	9,697
138	0,423	6,602	1,418	4,267	4,733	6,602	8,837	9,540

139	0,485	6,501	1,409	4,157	4,629	6,501	8,702	9,386
140	0,537	6,401	1,401	4,052	4,528	6,401	8,568	9,236
141	0,573	6,300	1,393	3,956	4,434	6,300	8,438	9,093
142	0,590	6,199	1,386	3,870	4,346	6,199	8,313	8,957
143	0,589	6,097	1,380	3,794	4,264	6,097	8,191	8,830
144	0,571	5,996	1,374	3,728	4,189	5,996	8,074	8,710
145	0,539	5,894	1,369	3,669	4,119	5,894	7,959	8,595
146	0,497	5,793	1,365	3,616	4,053	5,793	7,845	8,484
147	0,446	5,691	1,361	3,567	3,989	5,691	7,734	8,376
148	0,388	5,590	1,358	3,521	3,928	5,590	7,623	8,271
149	0,325	5,489	1,355	3,477	3,869	5,489	7,513	8,167
150	0,259	5,388	1,353	3,434	3,811	5,388	7,404	8,065
151	0,191	5,288	1,352	3,392	3,754	5,288	7,294	7,962
152	0,125	5,189	1,351	3,349	3,697	5,189	7,183	7,858
153	0,063	5,090	1,351	3,305	3,640	5,090	7,070	7,751
154	0,007	4,993	1,351	3,260	3,582	4,993	6,955	7,639
155	-0,039	4,898	1,353	3,212	3,524	4,898	6,836	7,520
156	-0,073	4,803	1,355	3,162	3,464	4,803	6,712	7,392
157	-0,093	4,709	1,357	3,109	3,403	4,709	6,583	7,253
158	-0,100	4,616	1,360	3,053	3,340	4,616	6,448	7,104
159	-0,095	4,524	1,364	2,995	3,276	4,524	6,310	6,948
160	-0,082	4,432	1,368	2,936	3,212	4,432	6,168	6,786
161	-0,061	4,341	1,373	2,876	3,147	4,341	6,025	6,620
162	-0,034	4,250	1,378	2,816	3,082	4,250	5,881	6,453
163	-0,004	4,160	1,383	2,755	3,018	4,160	5,738	6,286
164	0,028	4,071	1,389	2,696	2,954	4,071	5,596	6,120
165	0,061	3,983	1,395	2,636	2,890	3,983	5,455	5,957
166	0,095	3,895	1,402	2,577	2,827	3,895	5,315	5,795
167	0,127	3,807	1,408	2,519	2,765	3,807	5,177	5,636
168	0,159	3,720	1,415	2,462	2,703	3,720	5,041	5,481
169	0,189	3,634	1,422	2,405	2,642	3,634	4,908	5,328
170	0,217	3,548	1,429	2,350	2,582	3,548	4,776	5,179
171	0,245	3,463	1,435	2,295	2,522	3,463	4,647	5,033
172	0,273	3,379	1,442	2,240	2,463	3,379	4,520	4,889
173	0,303	3,295	1,449	2,186	2,404	3,295	4,395	4,748
174	0,334	3,212	1,456	2,131	2,345	3,212	4,271	4,608
175	0,366	3,129	1,463	2,077	2,286	3,129	4,147	4,469
176	0,400	3,047	1,470	2,022	2,227	3,047	4,025	4,333
177	0,436	2,964	1,477	1,967	2,168	2,964	3,904	4,197
178	0,471	2,882	1,484	1,913	2,109	2,882	3,784	4,064
179	0,508	2,800	1,491	1,858	2,050	2,800	3,666	3,932
180	0,544	2,718	1,498	1,803	1,991	2,718	3,548	3,801
181	0,581	2,637	1,505	1,749	1,932	2,637	3,431	3,672
182	0,618	2,555	1,511	1,694	1,873	2,555	3,316	3,545
183	0,654	2,473	1,518	1,640	1,814	2,473	3,201	3,418

Table S3: Look up table for Rexp at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S4 shows the created reference values for female children and adolescents for the parameter Rexp at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,848	10,129	1,861	7,592	8,143	10,129	12,177	12,768
102	0,836	10,034	1,851	7,500	8,049	10,034	12,087	12,680
103	0,825	9,940	1,840	7,407	7,955	9,940	11,997	12,592
104	0,813	9,846	1,830	7,315	7,862	9,846	11,908	12,505
105	0,802	9,752	1,819	7,223	7,769	9,752	11,820	12,420
106	0,791	9,659	1,808	7,131	7,675	9,659	11,733	12,336
107	0,779	9,567	1,796	7,038	7,582	9,567	11,648	12,254
108	0,768	9,475	1,784	6,945	7,488	9,475	11,565	12,175
109	0,756	9,385	1,771	6,851	7,394	9,385	11,485	12,098
110	0,745	9,295	1,757	6,756	7,299	9,295	11,407	12,026
111	0,733	9,206	1,742	6,660	7,203	9,206	11,333	11,957
112	0,722	9,118	1,726	6,563	7,107	9,118	11,261	11,891
113	0,710	9,031	1,710	6,464	7,009	9,031	11,193	11,830
114	0,699	8,945	1,692	6,365	6,912	8,945	11,128	11,772
115	0,687	8,859	1,674	6,265	6,814	8,859	11,065	11,718
116	0,676	8,775	1,656	6,164	6,715	8,775	11,006	11,667
117	0,664	8,691	1,636	6,063	6,616	8,691	10,948	11,619
118	0,653	8,607	1,617	5,961	6,517	8,607	10,892	11,573
119	0,642	8,524	1,597	5,861	6,418	8,524	10,836	11,527
120	0,630	8,441	1,578	5,762	6,321	8,441	10,780	11,481
121	0,619	8,358	1,560	5,665	6,225	8,358	10,722	11,432
122	0,607	8,274	1,542	5,569	6,130	8,274	10,663	11,383
123	0,596	8,191	1,524	5,474	6,036	8,191	10,605	11,334
124	0,584	8,108	1,506	5,379	5,941	8,108	10,547	11,286
125	0,573	8,023	1,487	5,283	5,846	8,023	10,489	11,238
126	0,561	7,938	1,469	5,187	5,751	7,938	10,428	11,188
127	0,550	7,851	1,452	5,095	5,657	7,851	10,363	11,131
128	0,538	7,762	1,439	5,008	5,569	7,762	10,286	11,061
129	0,527	7,670	1,429	4,932	5,487	7,670	10,195	10,972
130	0,515	7,576	1,424	4,866	5,415	7,576	10,087	10,861
131	0,504	7,479	1,425	4,810	5,350	7,479	9,961	10,729
132	0,492	7,379	1,430	4,763	5,291	7,379	9,820	10,576
133	0,481	7,276	1,438	4,722	5,237	7,276	9,664	10,405
134	0,470	7,169	1,449	4,682	5,183	7,169	9,499	10,223
135	0,458	7,058	1,460	4,639	5,126	7,058	9,329	10,035
136	0,447	6,943	1,471	4,590	5,063	6,943	9,155	9,845

137	0,435	6,824	1,479	4,534	4,994	6,824	8,982	9,656
138	0,424	6,702	1,486	4,469	4,918	6,702	8,811	9,470
139	0,412	6,576	1,489	4,396	4,833	6,576	8,643	9,289
140	0,401	6,448	1,488	4,313	4,741	6,448	8,478	9,114
141	0,389	6,316	1,485	4,223	4,641	6,316	8,316	8,945
142	0,378	6,183	1,478	4,126	4,536	6,183	8,158	8,781
143	0,366	6,048	1,469	4,025	4,427	6,048	8,003	8,621
144	0,355	5,914	1,459	3,922	4,317	5,914	7,850	8,464
145	0,343	5,782	1,448	3,819	4,207	5,782	7,700	8,311
146	0,332	5,651	1,437	3,717	4,099	5,651	7,553	8,161
147	0,321	5,521	1,425	3,617	3,991	5,521	7,408	8,013
148	0,309	5,393	1,413	3,517	3,885	5,393	7,265	7,868
149	0,298	5,267	1,401	3,420	3,780	5,267	7,124	7,724
150	0,286	5,144	1,389	3,325	3,679	5,144	6,983	7,580
151	0,275	5,022	1,379	3,235	3,582	5,022	6,842	7,435
152	0,263	4,904	1,370	3,150	3,490	4,904	6,702	7,289
153	0,252	4,790	1,363	3,070	3,402	4,790	6,563	7,145
154	0,240	4,679	1,357	2,994	3,318	4,679	6,428	7,003
155	0,229	4,574	1,352	2,923	3,240	4,574	6,296	6,866
156	0,217	4,473	1,347	2,856	3,166	4,473	6,170	6,732
157	0,206	4,378	1,344	2,794	3,097	4,378	6,048	6,603
158	0,194	4,288	1,343	2,738	3,034	4,288	5,929	6,476
159	0,183	4,202	1,344	2,688	2,976	4,202	5,813	6,351
160	0,171	4,122	1,347	2,643	2,924	4,122	5,699	6,228
161	0,160	4,047	1,353	2,605	2,879	4,047	5,589	6,106
162	0,149	3,977	1,362	2,573	2,840	3,977	5,479	5,984
163	0,137	3,910	1,374	2,547	2,806	3,910	5,371	5,862
164	0,126	3,847	1,389	2,526	2,777	3,847	5,262	5,737
165	0,114	3,785	1,408	2,507	2,751	3,785	5,150	5,609
166	0,103	3,724	1,430	2,492	2,727	3,724	5,037	5,478
167	0,091	3,663	1,454	2,477	2,704	3,663	4,922	5,344
168	0,080	3,602	1,480	2,464	2,682	3,602	4,806	5,209
169	0,068	3,542	1,509	2,450	2,660	3,542	4,689	5,073
170	0,057	3,481	1,540	2,437	2,638	3,481	4,572	4,936
171	0,045	3,419	1,572	2,423	2,616	3,419	4,454	4,798
172	0,034	3,356	1,606	2,408	2,592	3,356	4,336	4,660
173	0,022	3,292	1,641	2,391	2,567	3,292	4,217	4,523
174	0,011	3,228	1,678	2,373	2,540	3,228	4,099	4,386
175	-0,001	3,162	1,716	2,353	2,512	3,162	3,982	4,251
176	-0,012	3,097	1,755	2,331	2,482	3,097	3,866	4,118
177	-0,023	3,031	1,794	2,308	2,451	3,031	3,753	3,988
178	-0,035	2,966	1,834	2,283	2,419	2,966	3,642	3,862
179	-0,046	2,901	1,875	2,257	2,385	2,901	3,534	3,738
180	-0,058	2,835	1,916	2,229	2,350	2,835	3,428	3,618
181	-0,069	2,770	1,957	2,200	2,314	2,770	3,324	3,502
182	-0,081	2,705	1,998	2,168	2,276	2,705	3,222	3,387

183	-0,092	2,639	2,039	2,135	2,237	2,639	3,122	3,276
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Table S4: Look up table for Rexp at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S5 shows the created reference values for male children and adolescents for the parameter Rinsp at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	-2,484	6,476	2,042	5,457	5,634	6,476	8,024	8,775
102	-2,404	6,505	2,029	5,465	5,647	6,505	8,074	8,828
103	-2,324	6,535	2,015	5,474	5,659	6,535	8,124	8,880
104	-2,245	6,564	2,001	5,481	5,671	6,564	8,174	8,931
105	-2,165	6,594	1,988	5,488	5,682	6,594	8,224	8,983
106	-2,085	6,624	1,974	5,495	5,693	6,624	8,274	9,034
107	-2,006	6,653	1,960	5,501	5,704	6,653	8,324	9,085
108	-1,926	6,683	1,947	5,506	5,713	6,683	8,374	9,135
109	-1,846	6,713	1,933	5,510	5,723	6,713	8,424	9,185
110	-1,767	6,742	1,919	5,514	5,732	6,742	8,473	9,235
111	-1,687	6,772	1,905	5,518	5,740	6,772	8,523	9,284
112	-1,607	6,801	1,892	5,520	5,748	6,801	8,572	9,333
113	-1,528	6,831	1,878	5,521	5,755	6,831	8,621	9,381
114	-1,448	6,860	1,864	5,522	5,761	6,860	8,670	9,429
115	-1,368	6,889	1,851	5,521	5,767	6,889	8,719	9,477
116	-1,288	6,918	1,837	5,520	5,771	6,918	8,766	9,523
117	-1,208	6,945	1,824	5,517	5,774	6,945	8,813	9,567
118	-1,127	6,970	1,810	5,510	5,774	6,970	8,854	9,606
119	-1,046	6,987	1,796	5,496	5,767	6,987	8,887	9,634
120	-0,963	6,995	1,783	5,474	5,751	6,995	8,905	9,648
121	-0,880	6,989	1,770	5,440	5,723	6,989	8,907	9,642
122	-0,796	6,967	1,756	5,393	5,682	6,967	8,887	9,613
123	-0,709	6,925	1,743	5,330	5,624	6,925	8,841	9,555
124	-0,622	6,861	1,730	5,248	5,548	6,861	8,765	9,465
125	-0,532	6,775	1,717	5,149	5,453	6,775	8,660	9,343
126	-0,442	6,670	1,704	5,036	5,343	6,670	8,531	9,194
127	-0,351	6,554	1,692	4,914	5,224	6,554	8,385	9,029
128	-0,259	6,434	1,679	4,789	5,102	6,434	8,235	8,858
129	-0,167	6,317	1,667	4,666	4,982	6,317	8,087	8,690
130	-0,075	6,207	1,654	4,549	4,869	6,207	7,949	8,533
131	0,016	6,110	1,643	4,441	4,766	6,110	7,826	8,393
132	0,105	6,029	1,631	4,345	4,675	6,029	7,723	8,275
133	0,192	5,965	1,619	4,261	4,598	5,965	7,642	8,181
134	0,276	5,915	1,608	4,188	4,533	5,915	7,580	8,108
135	0,356	5,876	1,597	4,122	4,475	5,876	7,531	8,049

136	0,430	5,838	1,586	4,059	4,420	5,838	7,485	7,995
137	0,498	5,796	1,576	3,993	4,362	5,796	7,433	7,935
138	0,557	5,741	1,566	3,921	4,297	5,741	7,367	7,861
139	0,607	5,673	1,557	3,844	4,224	5,673	7,285	7,770
140	0,646	5,592	1,548	3,762	4,144	5,592	7,188	7,665
141	0,671	5,504	1,540	3,680	4,062	5,504	7,083	7,554
142	0,682	5,415	1,532	3,604	3,983	5,415	6,978	7,444
143	0,679	5,328	1,525	3,535	3,910	5,328	6,879	7,342
144	0,665	5,242	1,518	3,472	3,841	5,242	6,782	7,243
145	0,641	5,155	1,512	3,411	3,774	5,155	6,684	7,143
146	0,609	5,063	1,506	3,351	3,706	5,063	6,581	7,040
147	0,572	4,969	1,501	3,292	3,637	4,969	6,475	6,933
148	0,531	4,873	1,496	3,234	3,569	4,873	6,366	6,823
149	0,488	4,778	1,492	3,177	3,502	4,778	6,257	6,714
150	0,444	4,679	1,488	3,118	3,433	4,679	6,143	6,599
151	0,402	4,574	1,485	3,055	3,359	4,574	6,019	6,472
152	0,363	4,469	1,483	2,992	3,286	4,469	5,893	6,344
153	0,328	4,375	1,481	2,935	3,220	4,375	5,779	6,226
154	0,299	4,294	1,480	2,887	3,165	4,294	5,681	6,124
155	0,277	4,227	1,479	2,846	3,118	4,227	5,597	6,038
156	0,262	4,169	1,479	2,811	3,077	4,169	5,524	5,961
157	0,256	4,117	1,480	2,777	3,040	4,117	5,455	5,887
158	0,258	4,066	1,481	2,744	3,003	4,066	5,385	5,811
159	0,269	4,013	1,483	2,707	2,964	4,013	5,310	5,727
160	0,289	3,951	1,485	2,664	2,918	3,951	5,221	5,629
161	0,316	3,878	1,488	2,612	2,863	3,878	5,116	5,510
162	0,352	3,797	1,491	2,554	2,801	3,797	4,998	5,378
163	0,394	3,714	1,495	2,493	2,737	3,714	4,876	5,240
164	0,443	3,627	1,499	2,429	2,671	3,627	4,749	5,098
165	0,499	3,536	1,504	2,362	2,601	3,536	4,615	4,947
166	0,559	3,436	1,509	2,288	2,524	3,436	4,470	4,784
167	0,624	3,325	1,515	2,206	2,438	3,325	4,310	4,607
168	0,692	3,207	1,520	2,121	2,349	3,207	4,143	4,422
169	0,764	3,091	1,526	2,036	2,260	3,091	3,979	4,240
170	0,838	2,982	1,532	1,956	2,176	2,982	3,826	4,071
171	0,914	2,890	1,538	1,886	2,105	2,890	3,694	3,924
172	0,992	2,817	1,545	1,830	2,048	2,817	3,589	3,807
173	1,071	2,760	1,551	1,784	2,002	2,760	3,504	3,712
174	1,151	2,712	1,557	1,743	1,963	2,712	3,431	3,630
175	1,233	2,668	1,564	1,704	1,926	2,668	3,364	3,555
176	1,315	2,627	1,570	1,668	1,892	2,627	3,302	3,485
177	1,398	2,587	1,576	1,631	1,859	2,587	3,241	3,417
178	1,482	2,546	1,583	1,593	1,823	2,546	3,179	3,348
179	1,566	2,500	1,589	1,552	1,786	2,500	3,113	3,274
180	1,651	2,450	1,595	1,509	1,745	2,450	3,042	3,196
181	1,736	2,395	1,602	1,462	1,700	2,395	2,965	3,113

182	1,822	2,338	1,608	1,413	1,654	2,338	2,886	3,026
183	1,908	2,279	1,614	1,363	1,606	2,279	2,805	2,939

Table S5: Look up table for Rinsp at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S6 shows the created reference values for female children and adolescents for the parameter Rinsp at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	-0,058	8,544	2,069	6,949	7,272	8,544	10,053	10,531
102	-0,044	8,477	2,051	6,867	7,193	8,477	10,001	10,484
103	-0,031	8,410	2,034	6,786	7,114	8,410	9,950	10,437
104	-0,018	8,343	2,016	6,704	7,036	8,343	9,898	10,391
105	-0,005	8,276	1,999	6,623	6,957	8,276	9,847	10,344
106	0,008	8,210	1,981	6,543	6,879	8,210	9,796	10,298
107	0,021	8,144	1,964	6,462	6,802	8,144	9,745	10,253
108	0,035	8,079	1,947	6,382	6,724	8,079	9,695	10,207
109	0,048	8,014	1,929	6,302	6,647	8,014	9,646	10,163
110	0,062	7,949	1,911	6,221	6,569	7,949	9,598	10,121
111	0,075	7,884	1,892	6,138	6,490	7,884	9,552	10,081
112	0,089	7,820	1,872	6,054	6,409	7,820	9,508	10,044
113	0,103	7,755	1,850	5,967	6,326	7,755	9,467	10,010
114	0,118	7,690	1,827	5,878	6,242	7,690	9,428	9,980
115	0,133	7,625	1,803	5,786	6,155	7,625	9,391	9,952
116	0,148	7,560	1,778	5,692	6,066	7,560	9,357	9,928
117	0,164	7,494	1,751	5,595	5,975	7,494	9,324	9,905
118	0,180	7,428	1,725	5,496	5,883	7,428	9,292	9,884
119	0,196	7,361	1,698	5,397	5,789	7,361	9,259	9,863
120	0,213	7,294	1,672	5,298	5,696	7,294	9,224	9,839
121	0,230	7,225	1,647	5,200	5,604	7,225	9,186	9,810
122	0,248	7,156	1,624	5,104	5,513	7,156	9,143	9,775
123	0,266	7,087	1,602	5,009	5,423	7,087	9,097	9,735
124	0,284	7,016	1,581	4,916	5,334	7,016	9,047	9,692
125	0,302	6,944	1,560	4,821	5,244	6,944	8,996	9,646
126	0,320	6,871	1,540	4,727	5,155	6,871	8,940	9,595
127	0,337	6,796	1,523	4,636	5,067	6,796	8,877	9,535
128	0,355	6,719	1,508	4,551	4,983	6,719	8,803	9,461
129	0,372	6,640	1,499	4,472	4,906	6,640	8,717	9,371
130	0,388	6,559	1,494	4,403	4,835	6,559	8,616	9,263
131	0,402	6,477	1,494	4,344	4,771	6,477	8,502	9,137
132	0,415	6,392	1,500	4,292	4,714	6,392	8,376	8,996
133	0,426	6,305	1,509	4,247	4,662	6,305	8,240	8,843
134	0,436	6,216	1,520	4,203	4,609	6,216	8,098	8,683

135	0,444	6,123	1,531	4,156	4,555	6,123	7,953	8,521
136	0,451	6,027	1,541	4,106	4,496	6,027	7,808	8,359
137	0,456	5,928	1,549	4,051	4,432	5,928	7,662	8,198
138	0,460	5,825	1,556	3,991	4,364	5,825	7,517	8,039
139	0,461	5,720	1,560	3,926	4,291	5,720	7,373	7,883
140	0,461	5,612	1,562	3,855	4,212	5,612	7,230	7,729
141	0,458	5,501	1,562	3,779	4,130	5,501	7,089	7,579
142	0,453	5,389	1,559	3,699	4,043	5,389	6,950	7,432
143	0,445	5,277	1,554	3,617	3,954	5,277	6,814	7,290
144	0,435	5,164	1,548	3,533	3,864	5,164	6,681	7,152
145	0,421	5,052	1,540	3,450	3,774	5,052	6,552	7,018
146	0,405	4,942	1,532	3,366	3,684	4,942	6,426	6,889
147	0,385	4,833	1,521	3,283	3,594	4,833	6,305	6,766
148	0,363	4,726	1,510	3,201	3,505	4,726	6,187	6,648
149	0,337	4,620	1,498	3,120	3,418	4,620	6,072	6,533
150	0,309	4,515	1,487	3,042	3,333	4,515	5,960	6,421
151	0,277	4,413	1,476	2,967	3,251	4,413	5,849	6,311
152	0,241	4,313	1,466	2,896	3,173	4,313	5,741	6,204
153	0,203	4,216	1,457	2,829	3,098	4,216	5,634	6,098
154	0,161	4,122	1,449	2,766	3,027	4,122	5,530	5,996
155	0,116	4,030	1,442	2,707	2,960	4,030	5,429	5,897
156	0,068	3,943	1,436	2,652	2,897	3,943	5,332	5,802
157	0,018	3,859	1,432	2,601	2,839	3,859	5,237	5,709
158	-0,035	3,779	1,429	2,555	2,784	3,779	5,144	5,618
159	-0,089	3,702	1,430	2,514	2,735	3,702	5,053	5,527
160	-0,145	3,629	1,433	2,478	2,691	3,629	4,962	5,436
161	-0,202	3,561	1,440	2,447	2,652	3,561	4,871	5,343
162	-0,261	3,496	1,451	2,422	2,619	3,496	4,779	5,248
163	-0,320	3,434	1,466	2,400	2,589	3,434	4,686	5,148
164	-0,381	3,374	1,485	2,382	2,562	3,374	4,590	5,043
165	-0,441	3,315	1,508	2,365	2,538	3,315	4,490	4,932
166	-0,502	3,257	1,533	2,349	2,514	3,257	4,387	4,815
167	-0,564	3,198	1,561	2,333	2,490	3,198	4,282	4,695
168	-0,626	3,140	1,592	2,317	2,466	3,140	4,174	4,572
169	-0,688	3,081	1,625	2,300	2,441	3,081	4,065	4,445
170	-0,750	3,021	1,660	2,281	2,415	3,021	3,955	4,316
171	-0,813	2,960	1,696	2,261	2,388	2,960	3,842	4,184
172	-0,876	2,898	1,735	2,238	2,358	2,898	3,728	4,050
173	-0,939	2,835	1,776	2,214	2,327	2,835	3,613	3,915
174	-1,002	2,771	1,819	2,187	2,294	2,771	3,498	3,779
175	-1,065	2,706	1,864	2,159	2,259	2,706	3,383	3,644
176	-1,129	2,640	1,909	2,129	2,223	2,640	3,269	3,511
177	-1,192	2,574	1,956	2,096	2,185	2,574	3,157	3,380
178	-1,255	2,508	2,004	2,062	2,145	2,508	3,047	3,252
179	-1,318	2,442	2,052	2,026	2,104	2,442	2,940	3,128
180	-1,382	2,375	2,100	1,989	2,061	2,375	2,835	3,007

181	-1,445	2,309	2,149	1,949	2,017	2,309	2,732	2,890
182	-1,508	2,242	2,198	1,908	1,971	2,242	2,631	2,776
183	-1,571	2,175	2,247	1,865	1,924	2,175	2,533	2,665

Table S6: Look up table for Rinsp at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S7 shows the created reference values for male children and adolescents for the parameter Rtot at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,012	9,267	1,979	7,380	7,761	9,267	11,061	11,629
102	-0,002	9,187	1,965	7,296	7,677	9,187	10,996	11,570
103	-0,017	9,108	1,951	7,213	7,594	9,108	10,931	11,512
104	-0,032	9,029	1,937	7,130	7,510	9,029	10,865	11,453
105	-0,046	8,949	1,924	7,047	7,427	8,949	10,801	11,395
106	-0,061	8,870	1,910	6,964	7,344	8,870	10,736	11,337
107	-0,076	8,790	1,896	6,882	7,261	8,790	10,671	11,280
108	-0,090	8,711	1,882	6,800	7,179	8,711	10,606	11,222
109	-0,105	8,631	1,868	6,718	7,096	8,631	10,542	11,165
110	-0,120	8,552	1,855	6,637	7,014	8,552	10,477	11,108
111	-0,134	8,473	1,841	6,555	6,932	8,473	10,413	11,051
112	-0,149	8,393	1,827	6,474	6,851	8,393	10,349	10,995
113	-0,164	8,314	1,813	6,394	6,769	8,314	10,284	10,939
114	-0,178	8,234	1,799	6,313	6,687	8,234	10,220	10,882
115	-0,192	8,154	1,786	6,232	6,606	8,154	10,156	10,826
116	-0,204	8,075	1,772	6,152	6,524	8,075	10,090	10,769
117	-0,215	7,994	1,758	6,071	6,443	7,994	10,025	10,711
118	-0,224	7,914	1,744	5,990	6,361	7,914	9,958	10,652
119	-0,231	7,833	1,731	5,908	6,278	7,833	9,890	10,591
120	-0,236	7,752	1,717	5,826	6,195	7,752	9,821	10,528
121	-0,238	7,669	1,704	5,743	6,112	7,669	9,749	10,463
122	-0,238	7,586	1,690	5,660	6,027	7,586	9,675	10,394
123	-0,234	7,501	1,677	5,575	5,942	7,501	9,598	10,321
124	-0,226	7,416	1,664	5,488	5,855	7,416	9,518	10,243
125	-0,213	7,329	1,651	5,400	5,768	7,329	9,434	10,160
126	-0,194	7,241	1,638	5,311	5,678	7,241	9,347	10,072
127	-0,169	7,153	1,626	5,220	5,588	7,153	9,255	9,978
128	-0,136	7,064	1,613	5,126	5,496	7,064	9,160	9,877
129	-0,095	6,974	1,601	5,031	5,403	6,974	9,060	9,770
130	-0,044	6,885	1,589	4,933	5,308	6,885	8,957	9,656
131	0,015	6,795	1,577	4,834	5,212	6,795	8,850	9,536
132	0,082	6,706	1,566	4,732	5,115	6,706	8,740	9,411
133	0,155	6,617	1,554	4,629	5,018	6,617	8,627	9,283

134	0,235	6,528	1,543	4,524	4,919	6,528	8,512	9,151
135	0,319	6,440	1,533	4,418	4,820	6,440	8,396	9,016
136	0,404	6,352	1,523	4,310	4,721	6,352	8,278	8,880
137	0,488	6,263	1,513	4,203	4,622	6,263	8,159	8,744
138	0,566	6,174	1,503	4,098	4,524	6,174	8,041	8,609
139	0,637	6,084	1,494	3,995	4,429	6,084	7,923	8,475
140	0,694	5,994	1,486	3,897	4,336	5,994	7,806	8,346
141	0,731	5,903	1,478	3,808	4,249	5,903	7,693	8,223
142	0,748	5,812	1,471	3,728	4,168	5,812	7,583	8,106
143	0,743	5,720	1,464	3,658	4,093	5,720	7,477	7,996
144	0,719	5,628	1,458	3,598	4,024	5,628	7,373	7,892
145	0,680	5,536	1,453	3,544	3,959	5,536	7,272	7,791
146	0,629	5,443	1,448	3,495	3,897	5,443	7,173	7,695
147	0,568	5,351	1,443	3,450	3,839	5,351	7,074	7,600
148	0,500	5,258	1,439	3,407	3,781	5,258	6,977	7,508
149	0,427	5,165	1,436	3,366	3,726	5,165	6,879	7,417
150	0,351	5,072	1,433	3,325	3,671	5,072	6,781	7,326
151	0,277	4,980	1,431	3,284	3,615	4,980	6,682	7,233
152	0,205	4,888	1,429	3,242	3,560	4,888	6,582	7,138
153	0,139	4,796	1,429	3,198	3,504	4,796	6,479	7,040
154	0,080	4,706	1,428	3,152	3,448	4,706	6,374	6,938
155	0,033	4,616	1,429	3,104	3,390	4,616	6,266	6,829
156	-0,001	4,527	1,430	3,054	3,331	4,527	6,153	6,712
157	-0,020	4,439	1,431	3,001	3,271	4,439	6,035	6,587
158	-0,023	4,351	1,433	2,945	3,209	4,351	5,913	6,453
159	-0,014	4,264	1,436	2,886	3,146	4,264	5,787	6,312
160	0,007	4,177	1,439	2,827	3,081	4,177	5,658	6,165
161	0,038	4,090	1,443	2,765	3,017	4,090	5,526	6,015
162	0,077	4,004	1,447	2,703	2,951	4,004	5,394	5,862
163	0,122	3,918	1,452	2,641	2,886	3,918	5,261	5,709
164	0,173	3,833	1,457	2,579	2,821	3,833	5,129	5,556
165	0,227	3,749	1,462	2,516	2,757	3,749	4,997	5,404
166	0,283	3,665	1,468	2,454	2,692	3,665	4,867	5,254
167	0,340	3,581	1,473	2,393	2,628	3,581	4,738	5,106
168	0,397	3,498	1,479	2,332	2,565	3,498	4,611	4,961
169	0,454	3,416	1,486	2,272	2,503	3,416	4,487	4,819
170	0,510	3,335	1,492	2,213	2,442	3,335	4,364	4,681
171	0,565	3,255	1,498	2,155	2,381	3,255	4,245	4,546
172	0,620	3,176	1,504	2,099	2,322	3,176	4,128	4,415
173	0,676	3,098	1,511	2,042	2,263	3,098	4,013	4,287
174	0,733	3,021	1,517	1,987	2,205	3,021	3,900	4,160
175	0,792	2,944	1,523	1,931	2,147	2,944	3,789	4,036
176	0,851	2,868	1,530	1,876	2,089	2,868	3,679	3,914
177	0,912	2,792	1,536	1,820	2,032	2,792	3,571	3,794
178	0,974	2,716	1,542	1,766	1,975	2,716	3,463	3,676
179	1,036	2,641	1,548	1,711	1,918	2,641	3,357	3,559

180	1,098	2,566	1,555	1,656	1,861	2,566	3,252	3,444
181	1,161	2,491	1,561	1,602	1,804	2,491	3,148	3,330
182	1,224	2,416	1,567	1,548	1,747	2,416	3,045	3,218
183	1,287	2,341	1,573	1,494	1,691	2,341	2,942	3,106

Table S7: Look up table for Rtot at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S8 shows the created reference values for female children and adolescents for the parameter Rtot at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,291	9,401	1,891	7,265	7,704	9,401	11,347	11,947
102	0,298	9,318	1,885	7,188	7,625	9,318	11,258	11,856
103	0,305	9,235	1,879	7,110	7,547	9,235	11,170	11,766
104	0,312	9,153	1,872	7,033	7,468	9,153	11,082	11,676
105	0,318	9,071	1,865	6,955	7,390	9,071	10,996	11,588
106	0,325	8,989	1,858	6,877	7,311	8,989	10,910	11,501
107	0,332	8,908	1,850	6,798	7,232	8,908	10,826	11,416
108	0,339	8,828	1,842	6,719	7,153	8,828	10,744	11,333
109	0,346	8,748	1,833	6,639	7,073	8,748	10,664	11,253
110	0,353	8,669	1,823	6,558	6,992	8,669	10,587	11,177
111	0,360	8,591	1,811	6,475	6,909	8,591	10,513	11,104
112	0,367	8,513	1,798	6,389	6,825	8,513	10,443	11,037
113	0,374	8,436	1,783	6,301	6,739	8,436	10,377	10,974
114	0,381	8,359	1,767	6,210	6,651	8,359	10,314	10,916
115	0,388	8,283	1,750	6,117	6,561	8,283	10,255	10,862
116	0,396	8,207	1,731	6,022	6,469	8,207	10,200	10,814
117	0,403	8,132	1,710	5,924	6,376	8,132	10,148	10,769
118	0,411	8,056	1,689	5,824	6,280	8,056	10,098	10,727
119	0,419	7,981	1,667	5,723	6,184	7,981	10,049	10,686
120	0,427	7,906	1,646	5,622	6,089	7,906	10,000	10,645
121	0,435	7,830	1,625	5,523	5,994	7,830	9,948	10,601
122	0,443	7,755	1,605	5,426	5,900	7,755	9,895	10,555
123	0,452	7,679	1,586	5,329	5,808	7,679	9,840	10,506
124	0,460	7,603	1,567	5,232	5,715	7,603	9,784	10,456
125	0,469	7,526	1,548	5,135	5,622	7,526	9,727	10,405
126	0,477	7,447	1,529	5,038	5,528	7,447	9,666	10,350
127	0,486	7,367	1,513	4,945	5,437	7,367	9,599	10,287
128	0,495	7,285	1,499	4,857	5,351	7,285	9,520	10,209
129	0,504	7,201	1,491	4,778	5,271	7,201	9,428	10,113
130	0,513	7,114	1,487	4,709	5,199	7,114	9,320	9,998
131	0,520	7,025	1,489	4,651	5,135	7,025	9,197	9,863
132	0,527	6,933	1,495	4,601	5,077	6,933	9,060	9,711

133	0,534	6,838	1,506	4,557	5,024	6,838	8,911	9,545
134	0,540	6,740	1,518	4,514	4,970	6,740	8,755	9,370
135	0,545	6,638	1,530	4,468	4,914	6,638	8,596	9,192
136	0,550	6,533	1,541	4,417	4,852	6,533	8,435	9,013
137	0,554	6,424	1,551	4,360	4,785	6,424	8,274	8,837
138	0,557	6,311	1,558	4,295	4,711	6,311	8,115	8,663
139	0,559	6,196	1,562	4,223	4,630	6,196	7,958	8,493
140	0,559	6,077	1,563	4,144	4,543	6,077	7,804	8,328
141	0,558	5,956	1,561	4,058	4,449	5,956	7,653	8,168
142	0,555	5,833	1,556	3,967	4,351	5,833	7,504	8,012
143	0,550	5,709	1,549	3,872	4,250	5,709	7,358	7,860
144	0,543	5,586	1,540	3,777	4,149	5,586	7,215	7,712
145	0,533	5,463	1,531	3,682	4,047	5,463	7,075	7,567
146	0,521	5,342	1,521	3,588	3,947	5,342	6,938	7,426
147	0,506	5,222	1,510	3,495	3,847	5,222	6,804	7,290
148	0,488	5,104	1,498	3,403	3,749	5,104	6,674	7,159
149	0,467	4,987	1,486	3,313	3,651	4,987	6,547	7,030
150	0,443	4,872	1,473	3,226	3,557	4,872	6,421	6,904
151	0,415	4,759	1,462	3,143	3,466	4,759	6,297	6,779
152	0,385	4,648	1,452	3,064	3,379	4,648	6,175	6,657
153	0,351	4,541	1,443	2,990	3,297	4,541	6,055	6,537
154	0,315	4,437	1,434	2,920	3,218	4,437	5,939	6,421
155	0,276	4,337	1,426	2,854	3,143	4,337	5,828	6,310
156	0,235	4,241	1,419	2,792	3,073	4,241	5,720	6,204
157	0,192	4,149	1,413	2,736	3,008	4,149	5,617	6,102
158	0,147	4,062	1,409	2,684	2,948	4,062	5,517	6,002
159	0,101	3,979	1,407	2,638	2,893	3,979	5,419	5,904
160	0,054	3,901	1,409	2,598	2,844	3,901	5,322	5,807
161	0,006	3,828	1,413	2,563	2,801	3,828	5,227	5,709
162	-0,042	3,759	1,421	2,535	2,764	3,759	5,132	5,610
163	-0,091	3,693	1,433	2,511	2,731	3,693	5,036	5,508
164	-0,140	3,630	1,448	2,491	2,703	3,630	4,938	5,401
165	-0,189	3,568	1,468	2,474	2,677	3,568	4,836	5,288
166	-0,238	3,507	1,490	2,459	2,653	3,507	4,731	5,170
167	-0,287	3,447	1,515	2,444	2,629	3,447	4,623	5,049
168	-0,336	3,386	1,543	2,429	2,606	3,386	4,514	4,923
169	-0,386	3,326	1,573	2,414	2,582	3,326	4,402	4,795
170	-0,435	3,265	1,605	2,398	2,558	3,265	4,289	4,663
171	-0,485	3,203	1,640	2,381	2,533	3,203	4,174	4,530
172	-0,534	3,140	1,676	2,362	2,506	3,140	4,058	4,394
173	-0,584	3,076	1,715	2,341	2,477	3,076	3,941	4,257
174	-0,634	3,011	1,755	2,318	2,447	3,011	3,823	4,120
175	-0,684	2,945	1,797	2,294	2,415	2,945	3,706	3,984
176	-0,734	2,879	1,840	2,267	2,382	2,879	3,590	3,849
177	-0,784	2,813	1,883	2,239	2,347	2,813	3,476	3,717
178	-0,833	2,747	1,928	2,209	2,310	2,747	3,364	3,587

179	-0,883	2,681	1,973	2,177	2,272	2,681	3,255	3,462
180	-0,933	2,615	2,019	2,144	2,233	2,615	3,148	3,339
181	-0,983	2,549	2,064	2,109	2,192	2,549	3,044	3,220
182	-1,033	2,483	2,110	2,072	2,150	2,483	2,941	3,104
183	-1,083	2,417	2,156	2,033	2,106	2,417	2,842	2,992

Table S8: Look up table for Rtot at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S9 shows the created reference values for male children and adolescents for the parameter X_{exp} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,060	-4,493	0,803	-9,349	-7,979	-4,493	-2,460	-2,061
102	0,060	-4,420	0,799	-9,222	-7,866	-4,420	-2,413	-2,020
103	0,061	-4,346	0,795	-9,095	-7,753	-4,346	-2,366	-1,978
104	0,062	-4,272	0,791	-8,966	-7,639	-4,272	-2,319	-1,937
105	0,063	-4,199	0,787	-8,837	-7,525	-4,199	-2,272	-1,896
106	0,063	-4,125	0,783	-8,707	-7,410	-4,125	-2,226	-1,855
107	0,064	-4,051	0,779	-8,577	-7,295	-4,051	-2,179	-1,815
108	0,065	-3,978	0,775	-8,446	-7,179	-3,978	-2,133	-1,775
109	0,065	-3,904	0,771	-8,314	-7,063	-3,904	-2,087	-1,734
110	0,066	-3,830	0,767	-8,181	-6,947	-3,830	-2,041	-1,695
111	0,067	-3,757	0,763	-8,048	-6,829	-3,757	-1,996	-1,655
112	0,068	-3,683	0,759	-7,914	-6,712	-3,683	-1,950	-1,615
113	0,068	-3,609	0,755	-7,780	-6,594	-3,609	-1,905	-1,576
114	0,069	-3,536	0,751	-7,644	-6,475	-3,536	-1,860	-1,537
115	0,070	-3,462	0,747	-7,508	-6,356	-3,462	-1,815	-1,498
116	0,070	-3,388	0,743	-7,371	-6,237	-3,388	-1,771	-1,460
117	0,071	-3,315	0,739	-7,234	-6,117	-3,315	-1,726	-1,422
118	0,072	-3,241	0,735	-7,096	-5,996	-3,241	-1,682	-1,384
119	0,073	-3,168	0,731	-6,957	-5,875	-3,168	-1,638	-1,346
120	0,073	-3,094	0,727	-6,818	-5,754	-3,094	-1,595	-1,308
121	0,074	-3,021	0,723	-6,678	-5,633	-3,021	-1,551	-1,271
122	0,075	-2,948	0,719	-6,537	-5,511	-2,948	-1,508	-1,234
123	0,076	-2,875	0,715	-6,397	-5,389	-2,875	-1,466	-1,197
124	0,076	-2,803	0,711	-6,257	-5,268	-2,803	-1,423	-1,161
125	0,077	-2,731	0,707	-6,117	-5,147	-2,731	-1,382	-1,126
126	0,078	-2,660	0,703	-5,978	-5,027	-2,660	-1,340	-1,090
127	0,078	-2,590	0,699	-5,841	-4,908	-2,590	-1,300	-1,056
128	0,079	-2,521	0,695	-5,705	-4,790	-2,521	-1,260	-1,022
129	0,080	-2,453	0,691	-5,570	-4,675	-2,453	-1,221	-0,989
130	0,081	-2,387	0,687	-5,438	-4,561	-2,387	-1,183	-0,956
131	0,081	-2,321	0,683	-5,308	-4,449	-2,321	-1,146	-0,925
132	0,082	-2,258	0,679	-5,181	-4,339	-2,258	-1,109	-0,894
133	0,083	-2,195	0,675	-5,056	-4,232	-2,195	-1,074	-0,864
134	0,083	-2,134	0,672	-4,934	-4,127	-2,134	-1,039	-0,835
135	0,084	-2,075	0,668	-4,813	-4,023	-2,075	-1,006	-0,806
136	0,085	-2,016	0,664	-4,696	-3,922	-2,016	-0,973	-0,779
137	0,086	-1,959	0,660	-4,581	-3,824	-1,959	-0,941	-0,752
138	0,086	-1,904	0,656	-4,468	-3,727	-1,904	-0,910	-0,726
139	0,087	-1,850	0,652	-4,358	-3,633	-1,850	-0,880	-0,700
140	0,088	-1,798	0,648	-4,251	-3,541	-1,798	-0,851	-0,675
141	0,088	-1,747	0,644	-4,146	-3,451	-1,747	-0,822	-0,652
142	0,089	-1,697	0,640	-4,044	-3,364	-1,697	-0,795	-0,628

143	0,090	-1,648	0,636	-3,944	-3,279	-1,648	-0,768	-0,606
144	0,091	-1,601	0,632	-3,847	-3,195	-1,601	-0,742	-0,584
145	0,091	-1,555	0,628	-3,751	-3,114	-1,555	-0,717	-0,563
146	0,092	-1,510	0,624	-3,658	-3,034	-1,510	-0,692	-0,542
147	0,093	-1,466	0,620	-3,565	-2,955	-1,466	-0,668	-0,522
148	0,093	-1,423	0,616	-3,475	-2,878	-1,423	-0,644	-0,502
149	0,094	-1,380	0,612	-3,386	-2,802	-1,380	-0,621	-0,483
150	0,095	-1,339	0,608	-3,299	-2,728	-1,339	-0,599	-0,464
151	0,096	-1,298	0,604	-3,213	-2,655	-1,298	-0,577	-0,446
152	0,096	-1,259	0,600	-3,129	-2,583	-1,259	-0,556	-0,428
153	0,097	-1,220	0,596	-3,046	-2,513	-1,220	-0,535	-0,411
154	0,098	-1,182	0,592	-2,965	-2,444	-1,182	-0,515	-0,394
155	0,098	-1,145	0,588	-2,886	-2,377	-1,145	-0,495	-0,378
156	0,099	-1,108	0,584	-2,806	-2,310	-1,108	-0,476	-0,362
157	0,100	-1,072	0,580	-2,728	-2,243	-1,072	-0,457	-0,346
158	0,101	-1,036	0,576	-2,649	-2,176	-1,036	-0,438	-0,330
159	0,101	-0,999	0,572	-2,569	-2,109	-0,999	-0,419	-0,315
160	0,102	-0,963	0,568	-2,490	-2,042	-0,963	-0,400	-0,299
161	0,103	-0,927	0,564	-2,409	-1,974	-0,927	-0,381	-0,284
162	0,103	-0,890	0,560	-2,327	-1,905	-0,890	-0,363	-0,269
163	0,104	-0,854	0,556	-2,245	-1,836	-0,854	-0,344	-0,254
164	0,105	-0,817	0,552	-2,162	-1,766	-0,817	-0,326	-0,238
165	0,106	-0,780	0,548	-2,078	-1,696	-0,780	-0,307	-0,223
166	0,106	-0,743	0,544	-1,993	-1,625	-0,743	-0,289	-0,208
167	0,107	-0,707	0,540	-1,908	-1,554	-0,707	-0,271	-0,194
168	0,108	-0,671	0,536	-1,824	-1,484	-0,671	-0,253	-0,179
169	0,108	-0,635	0,533	-1,741	-1,415	-0,635	-0,235	-0,165
170	0,109	-0,600	0,529	-1,660	-1,347	-0,600	-0,218	-0,151
171	0,110	-0,566	0,525	-1,580	-1,281	-0,566	-0,202	-0,138
172	0,111	-0,534	0,521	-1,503	-1,216	-0,534	-0,186	-0,125
173	0,111	-0,502	0,517	-1,427	-1,154	-0,502	-0,171	-0,113
174	0,112	-0,471	0,513	-1,353	-1,092	-0,471	-0,156	-0,101
175	0,113	-0,440	0,509	-1,280	-1,031	-0,440	-0,141	-0,089
176	0,113	-0,410	0,505	-1,207	-0,971	-0,410	-0,127	-0,078
177	0,114	-0,381	0,501	-1,136	-0,912	-0,381	-0,113	-0,067
178	0,115	-0,351	0,497	-1,064	-0,853	-0,351	-0,099	-0,056
179	0,116	-0,322	0,493	-0,992	-0,793	-0,322	-0,086	-0,045
180	0,116	-0,293	0,489	-0,920	-0,734	-0,293	-0,072	-0,034
181	0,117	-0,264	0,485	-0,847	-0,674	-0,264	-0,059	-0,024
182	0,118	-0,235	0,481	-0,774	-0,614	-0,235	-0,046	-0,013
183	0,118	-0,205	0,477	-0,701	-0,553	-0,205	-0,032	-0,003

Table S9: Look up table for Xexp at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S10 shows the created reference values for female children and adolescents for the parameter X_{exp} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,260	-3,825	1,190	-6,183	-5,590	-3,825	-2,502	-2,196
102	0,259	-3,769	1,172	-6,142	-5,544	-3,769	-2,445	-2,141
103	0,258	-3,713	1,155	-6,101	-5,498	-3,713	-2,389	-2,086
104	0,257	-3,657	1,138	-6,060	-5,452	-3,657	-2,334	-2,032
105	0,256	-3,601	1,120	-6,019	-5,405	-3,601	-2,278	-1,978
106	0,255	-3,545	1,103	-5,977	-5,359	-3,545	-2,224	-1,925
107	0,253	-3,489	1,085	-5,935	-5,312	-3,489	-2,169	-1,872
108	0,252	-3,433	1,068	-5,893	-5,264	-3,433	-2,115	-1,820
109	0,251	-3,377	1,051	-5,850	-5,216	-3,377	-2,061	-1,768
110	0,250	-3,321	1,033	-5,806	-5,168	-3,321	-2,008	-1,717
111	0,249	-3,265	1,016	-5,762	-5,119	-3,265	-1,955	-1,666
112	0,248	-3,208	0,999	-5,718	-5,070	-3,208	-1,903	-1,616
113	0,247	-3,152	0,982	-5,672	-5,020	-3,152	-1,851	-1,566
114	0,246	-3,096	0,964	-5,626	-4,969	-3,096	-1,799	-1,517
115	0,245	-3,040	0,947	-5,579	-4,918	-3,040	-1,748	-1,469
116	0,244	-2,983	0,930	-5,532	-4,867	-2,983	-1,697	-1,421
117	0,243	-2,927	0,912	-5,486	-4,817	-2,927	-1,646	-1,373
118	0,242	-2,870	0,894	-5,441	-4,766	-2,870	-1,596	-1,325
119	0,241	-2,814	0,875	-5,397	-4,717	-2,814	-1,545	-1,278
120	0,240	-2,758	0,856	-5,354	-4,668	-2,758	-1,494	-1,230
121	0,238	-2,702	0,835	-5,315	-4,622	-2,702	-1,443	-1,182
122	0,237	-2,646	0,813	-5,281	-4,580	-2,646	-1,391	-1,132
123	0,236	-2,590	0,790	-5,250	-4,540	-2,590	-1,338	-1,083
124	0,235	-2,534	0,766	-5,221	-4,500	-2,534	-1,286	-1,033
125	0,234	-2,478	0,742	-5,192	-4,460	-2,478	-1,234	-0,985
126	0,233	-2,422	0,719	-5,158	-4,417	-2,422	-1,185	-0,939
127	0,232	-2,366	0,699	-5,115	-4,368	-2,366	-1,138	-0,896
128	0,231	-2,311	0,682	-5,058	-4,309	-2,311	-1,095	-0,857
129	0,230	-2,255	0,670	-4,982	-4,236	-2,255	-1,057	-0,824
130	0,229	-2,199	0,664	-4,884	-4,149	-2,199	-1,024	-0,797
131	0,228	-2,143	0,664	-4,765	-4,047	-2,143	-0,997	-0,776
132	0,227	-2,087	0,669	-4,627	-3,932	-2,087	-0,975	-0,759
133	0,226	-2,031	0,679	-4,476	-3,808	-2,031	-0,955	-0,746
134	0,225	-1,975	0,692	-4,317	-3,678	-1,975	-0,938	-0,735
135	0,224	-1,918	0,706	-4,156	-3,547	-1,918	-0,921	-0,724
136	0,222	-1,862	0,721	-3,995	-3,416	-1,862	-0,903	-0,713
137	0,221	-1,806	0,736	-3,841	-3,289	-1,806	-0,885	-0,701
138	0,220	-1,749	0,748	-3,694	-3,168	-1,749	-0,864	-0,687
139	0,219	-1,693	0,757	-3,557	-3,053	-1,693	-0,841	-0,670
140	0,218	-1,636	0,763	-3,429	-2,945	-1,636	-0,815	-0,650
141	0,217	-1,580	0,765	-3,310	-2,843	-1,580	-0,787	-0,628
142	0,216	-1,524	0,764	-3,200	-2,747	-1,524	-0,758	-0,603

143	0,215	-1,469	0,760	-3,097	-2,657	-1,469	-0,726	-0,577
144	0,214	-1,414	0,752	-3,002	-2,572	-1,414	-0,693	-0,549
145	0,213	-1,360	0,742	-2,912	-2,491	-1,360	-0,660	-0,520
146	0,212	-1,308	0,732	-2,826	-2,413	-1,308	-0,627	-0,492
147	0,211	-1,256	0,720	-2,741	-2,336	-1,256	-0,595	-0,464
148	0,210	-1,206	0,708	-2,660	-2,262	-1,206	-0,563	-0,437
149	0,209	-1,157	0,696	-2,580	-2,190	-1,157	-0,533	-0,411
150	0,208	-1,109	0,683	-2,501	-2,119	-1,109	-0,504	-0,386
151	0,206	-1,063	0,671	-2,426	-2,050	-1,063	-0,475	-0,362
152	0,205	-1,019	0,658	-2,353	-1,985	-1,019	-0,448	-0,339
153	0,204	-0,977	0,644	-2,285	-1,923	-0,977	-0,422	-0,316
154	0,203	-0,936	0,629	-2,222	-1,864	-0,936	-0,396	-0,294
155	0,202	-0,897	0,612	-2,164	-1,810	-0,897	-0,372	-0,273
156	0,201	-0,860	0,595	-2,110	-1,760	-0,860	-0,348	-0,253
157	0,200	-0,825	0,577	-2,060	-1,713	-0,825	-0,325	-0,233
158	0,199	-0,792	0,559	-2,013	-1,668	-0,792	-0,304	-0,215
159	0,198	-0,760	0,541	-1,967	-1,625	-0,760	-0,284	-0,198
160	0,197	-0,730	0,525	-1,922	-1,583	-0,730	-0,265	-0,182
161	0,196	-0,702	0,510	-1,878	-1,542	-0,702	-0,248	-0,168
162	0,195	-0,676	0,496	-1,836	-1,503	-0,676	-0,233	-0,155
163	0,194	-0,650	0,484	-1,794	-1,465	-0,650	-0,218	-0,143
164	0,193	-0,627	0,473	-1,751	-1,427	-0,627	-0,205	-0,132
165	0,191	-0,604	0,465	-1,707	-1,388	-0,604	-0,194	-0,123
166	0,190	-0,582	0,460	-1,660	-1,348	-0,582	-0,183	-0,114
167	0,189	-0,561	0,458	-1,609	-1,305	-0,561	-0,174	-0,107
168	0,188	-0,541	0,460	-1,554	-1,260	-0,541	-0,166	-0,102
169	0,187	-0,521	0,465	-1,496	-1,214	-0,521	-0,159	-0,097
170	0,186	-0,501	0,473	-1,436	-1,165	-0,501	-0,153	-0,093
171	0,185	-0,482	0,484	-1,374	-1,117	-0,482	-0,148	-0,090
172	0,184	-0,464	0,497	-1,313	-1,068	-0,464	-0,143	-0,086
173	0,183	-0,446	0,510	-1,252	-1,021	-0,446	-0,138	-0,084
174	0,182	-0,428	0,525	-1,193	-0,974	-0,428	-0,134	-0,081
175	0,181	-0,410	0,541	-1,134	-0,928	-0,410	-0,129	-0,078
176	0,180	-0,393	0,557	-1,078	-0,883	-0,393	-0,125	-0,076
177	0,179	-0,377	0,574	-1,023	-0,840	-0,377	-0,120	-0,073
178	0,178	-0,360	0,591	-0,970	-0,797	-0,360	-0,116	-0,070
179	0,177	-0,344	0,609	-0,918	-0,756	-0,344	-0,111	-0,068
180	0,175	-0,327	0,626	-0,868	-0,716	-0,327	-0,106	-0,064
181	0,174	-0,311	0,644	-0,819	-0,677	-0,311	-0,101	-0,061
182	0,173	-0,295	0,662	-0,771	-0,638	-0,295	-0,096	-0,058
183	0,172	-0,279	0,680	-0,725	-0,601	-0,279	-0,090	-0,054

Table S10: Look up table for Xexp at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S11 shows the created reference values for male children and adolescents for the parameter X_{insp} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,943	-2,533	1,106	-3,986	-3,662	-2,533	-1,432	-1,127
102	0,931	-2,500	1,099	-3,947	-3,624	-2,500	-1,409	-1,108
103	0,920	-2,466	1,093	-3,909	-3,586	-2,466	-1,385	-1,089
104	0,908	-2,432	1,086	-3,869	-3,547	-2,432	-1,362	-1,070
105	0,897	-2,399	1,080	-3,830	-3,508	-2,399	-1,339	-1,051
106	0,885	-2,365	1,073	-3,791	-3,470	-2,365	-1,316	-1,032
107	0,874	-2,331	1,067	-3,751	-3,431	-2,331	-1,293	-1,014
108	0,862	-2,298	1,060	-3,711	-3,392	-2,298	-1,270	-0,995
109	0,850	-2,264	1,054	-3,671	-3,352	-2,264	-1,247	-0,977
110	0,839	-2,230	1,047	-3,631	-3,313	-2,230	-1,225	-0,958
111	0,827	-2,197	1,041	-3,591	-3,273	-2,197	-1,202	-0,940
112	0,816	-2,163	1,034	-3,550	-3,234	-2,163	-1,180	-0,922
113	0,804	-2,129	1,027	-3,510	-3,194	-2,129	-1,158	-0,904
114	0,793	-2,095	1,021	-3,469	-3,154	-2,095	-1,136	-0,886
115	0,781	-2,062	1,014	-3,427	-3,114	-2,062	-1,113	-0,868
116	0,770	-2,028	1,008	-3,386	-3,073	-2,028	-1,091	-0,851
117	0,758	-1,994	1,001	-3,344	-3,032	-1,994	-1,069	-0,833
118	0,747	-1,960	0,995	-3,301	-2,991	-1,960	-1,048	-0,815
119	0,735	-1,926	0,988	-3,258	-2,949	-1,926	-1,026	-0,798
120	0,723	-1,891	0,982	-3,215	-2,907	-1,891	-1,004	-0,781
121	0,712	-1,857	0,975	-3,172	-2,865	-1,857	-0,982	-0,763
122	0,700	-1,823	0,969	-3,128	-2,822	-1,823	-0,961	-0,746
123	0,689	-1,788	0,962	-3,083	-2,780	-1,788	-0,939	-0,729
124	0,677	-1,754	0,955	-3,038	-2,736	-1,754	-0,917	-0,711
125	0,666	-1,719	0,949	-2,993	-2,693	-1,719	-0,896	-0,694
126	0,654	-1,684	0,942	-2,947	-2,648	-1,684	-0,874	-0,677
127	0,643	-1,649	0,936	-2,901	-2,604	-1,649	-0,853	-0,660
128	0,631	-1,614	0,929	-2,855	-2,560	-1,614	-0,832	-0,643
129	0,620	-1,580	0,923	-2,808	-2,515	-1,580	-0,811	-0,627
130	0,608	-1,545	0,916	-2,762	-2,471	-1,545	-0,790	-0,610
131	0,597	-1,511	0,910	-2,715	-2,426	-1,511	-0,769	-0,594
132	0,585	-1,477	0,903	-2,668	-2,381	-1,477	-0,749	-0,577
133	0,573	-1,442	0,897	-2,621	-2,337	-1,442	-0,728	-0,561
134	0,562	-1,408	0,890	-2,574	-2,292	-1,408	-0,708	-0,545
135	0,550	-1,374	0,883	-2,527	-2,247	-1,374	-0,688	-0,529

136	0,539	-1,340	0,877	-2,479	-2,202	-1,340	-0,668	-0,513
137	0,527	-1,307	0,870	-2,432	-2,157	-1,307	-0,649	-0,498
138	0,516	-1,273	0,864	-2,385	-2,112	-1,273	-0,629	-0,482
139	0,504	-1,240	0,857	-2,337	-2,067	-1,240	-0,610	-0,467
140	0,493	-1,207	0,851	-2,290	-2,023	-1,207	-0,591	-0,452
141	0,481	-1,175	0,844	-2,244	-1,979	-1,175	-0,572	-0,437
142	0,470	-1,143	0,838	-2,197	-1,935	-1,143	-0,554	-0,423
143	0,458	-1,112	0,831	-2,151	-1,892	-1,112	-0,536	-0,408
144	0,446	-1,081	0,825	-2,106	-1,849	-1,081	-0,518	-0,394
145	0,435	-1,050	0,818	-2,061	-1,807	-1,050	-0,501	-0,381
146	0,423	-1,020	0,811	-2,017	-1,766	-1,020	-0,484	-0,367
147	0,412	-0,991	0,805	-1,974	-1,724	-0,991	-0,467	-0,354
148	0,400	-0,962	0,798	-1,930	-1,684	-0,962	-0,451	-0,341
149	0,389	-0,933	0,792	-1,888	-1,644	-0,933	-0,435	-0,329
150	0,377	-0,905	0,785	-1,845	-1,604	-0,905	-0,419	-0,316
151	0,366	-0,878	0,779	-1,804	-1,566	-0,878	-0,404	-0,304
152	0,354	-0,851	0,772	-1,764	-1,528	-0,851	-0,389	-0,292
153	0,343	-0,825	0,766	-1,724	-1,491	-0,825	-0,375	-0,281
154	0,331	-0,799	0,759	-1,686	-1,455	-0,799	-0,361	-0,270
155	0,319	-0,775	0,753	-1,648	-1,419	-0,775	-0,347	-0,259
156	0,308	-0,750	0,746	-1,611	-1,385	-0,750	-0,334	-0,248
157	0,296	-0,727	0,739	-1,575	-1,351	-0,727	-0,321	-0,238
158	0,285	-0,704	0,733	-1,540	-1,318	-0,704	-0,308	-0,228
159	0,273	-0,681	0,726	-1,505	-1,285	-0,681	-0,296	-0,219
160	0,262	-0,659	0,720	-1,470	-1,253	-0,659	-0,284	-0,209
161	0,250	-0,637	0,713	-1,436	-1,220	-0,637	-0,272	-0,200
162	0,239	-0,615	0,707	-1,401	-1,188	-0,615	-0,260	-0,190
163	0,227	-0,593	0,700	-1,367	-1,156	-0,593	-0,249	-0,181
164	0,216	-0,572	0,694	-1,332	-1,124	-0,572	-0,237	-0,172
165	0,204	-0,550	0,687	-1,296	-1,091	-0,550	-0,226	-0,163
166	0,193	-0,528	0,681	-1,261	-1,058	-0,528	-0,214	-0,154
167	0,181	-0,507	0,674	-1,224	-1,025	-0,507	-0,203	-0,144
168	0,169	-0,485	0,667	-1,188	-0,991	-0,485	-0,191	-0,135
169	0,158	-0,464	0,661	-1,151	-0,958	-0,464	-0,180	-0,126
170	0,146	-0,442	0,654	-1,113	-0,923	-0,442	-0,169	-0,117
171	0,135	-0,421	0,648	-1,075	-0,889	-0,421	-0,158	-0,109
172	0,123	-0,399	0,641	-1,037	-0,855	-0,399	-0,147	-0,100
173	0,112	-0,378	0,635	-0,999	-0,820	-0,378	-0,136	-0,091
174	0,100	-0,357	0,628	-0,960	-0,785	-0,357	-0,125	-0,082
175	0,089	-0,336	0,622	-0,920	-0,750	-0,336	-0,114	-0,074
176	0,077	-0,315	0,615	-0,880	-0,714	-0,315	-0,103	-0,065
177	0,066	-0,294	0,609	-0,839	-0,678	-0,294	-0,093	-0,056
178	0,054	-0,272	0,602	-0,797	-0,641	-0,272	-0,082	-0,048
179	0,042	-0,251	0,595	-0,754	-0,604	-0,251	-0,071	-0,039
180	0,031	-0,229	0,589	-0,710	-0,565	-0,229	-0,060	-0,030
181	0,019	-0,207	0,582	-0,664	-0,526	-0,207	-0,049	-0,022

182	0,008	-0,186	0,576	-0,618	-0,486	-0,186	-0,039	-0,013
183	-0,004	-0,164	0,569	-0,570	-0,445	-0,164	-0,028	-0,004

Table S11: Look up table for X_{insp} at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S12 shows the created reference values for female children and adolescents for the parameter X_{insp} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,467	-3,110	1,142	-5,034	-4,568	-3,110	-1,939	-1,658
102	0,473	-3,060	1,141	-4,952	-4,494	-3,060	-1,904	-1,627
103	0,479	-3,009	1,140	-4,871	-4,420	-3,009	-1,869	-1,595
104	0,486	-2,958	1,138	-4,789	-4,347	-2,958	-1,834	-1,563
105	0,492	-2,907	1,137	-4,707	-4,273	-2,907	-1,799	-1,532
106	0,498	-2,856	1,136	-4,625	-4,199	-2,856	-1,765	-1,501
107	0,504	-2,805	1,135	-4,543	-4,125	-2,805	-1,730	-1,470
108	0,511	-2,755	1,134	-4,461	-4,051	-2,755	-1,696	-1,440
109	0,517	-2,704	1,133	-4,379	-3,976	-2,704	-1,662	-1,409
110	0,523	-2,653	1,132	-4,296	-3,902	-2,653	-1,628	-1,379
111	0,530	-2,602	1,131	-4,214	-3,828	-2,602	-1,594	-1,349
112	0,536	-2,551	1,129	-4,133	-3,755	-2,551	-1,560	-1,318
113	0,542	-2,501	1,127	-4,053	-3,682	-2,501	-1,525	-1,287
114	0,548	-2,450	1,125	-3,974	-3,610	-2,450	-1,490	-1,255
115	0,555	-2,399	1,121	-3,897	-3,540	-2,399	-1,454	-1,223
116	0,561	-2,349	1,116	-3,822	-3,470	-2,349	-1,417	-1,189
117	0,567	-2,298	1,109	-3,749	-3,403	-2,298	-1,379	-1,154
118	0,573	-2,248	1,101	-3,678	-3,338	-2,248	-1,340	-1,118
119	0,580	-2,198	1,090	-3,611	-3,275	-2,198	-1,300	-1,080
120	0,586	-2,148	1,078	-3,547	-3,215	-2,148	-1,258	-1,041
121	0,592	-2,098	1,064	-3,486	-3,156	-2,098	-1,216	-1,000
122	0,599	-2,048	1,048	-3,426	-3,098	-2,048	-1,173	-0,959
123	0,605	-1,999	1,031	-3,368	-3,042	-1,999	-1,130	-0,918
124	0,611	-1,950	1,013	-3,311	-2,988	-1,950	-1,086	-0,875
125	0,617	-1,902	0,994	-3,256	-2,935	-1,902	-1,042	-0,833
126	0,624	-1,853	0,974	-3,202	-2,881	-1,853	-0,998	-0,791
127	0,630	-1,805	0,956	-3,145	-2,827	-1,805	-0,956	-0,750
128	0,636	-1,758	0,940	-3,084	-2,769	-1,758	-0,917	-0,713
129	0,642	-1,711	0,926	-3,020	-2,709	-1,711	-0,880	-0,679
130	0,649	-1,664	0,915	-2,953	-2,648	-1,664	-0,845	-0,647
131	0,655	-1,618	0,905	-2,885	-2,585	-1,618	-0,812	-0,617
132	0,661	-1,573	0,896	-2,815	-2,521	-1,573	-0,781	-0,589
133	0,667	-1,528	0,888	-2,746	-2,458	-1,528	-0,750	-0,562
134	0,674	-1,484	0,880	-2,676	-2,395	-1,484	-0,721	-0,536

135	0,680	-1,441	0,872	-2,608	-2,333	-1,441	-0,692	-0,510
136	0,686	-1,398	0,864	-2,541	-2,271	-1,398	-0,663	-0,484
137	0,693	-1,356	0,855	-2,475	-2,211	-1,356	-0,634	-0,459
138	0,699	-1,314	0,846	-2,410	-2,152	-1,314	-0,607	-0,435
139	0,705	-1,273	0,838	-2,344	-2,092	-1,273	-0,580	-0,411
140	0,711	-1,233	0,832	-2,277	-2,032	-1,233	-0,555	-0,390
141	0,718	-1,193	0,826	-2,210	-1,971	-1,193	-0,531	-0,370
142	0,724	-1,154	0,823	-2,142	-1,910	-1,154	-0,508	-0,351
143	0,730	-1,115	0,820	-2,074	-1,850	-1,115	-0,487	-0,333
144	0,736	-1,078	0,818	-2,007	-1,790	-1,078	-0,467	-0,317
145	0,743	-1,041	0,817	-1,941	-1,731	-1,041	-0,448	-0,302
146	0,749	-1,006	0,817	-1,875	-1,673	-1,006	-0,429	-0,287
147	0,755	-0,971	0,817	-1,811	-1,616	-0,971	-0,412	-0,273
148	0,761	-0,937	0,817	-1,750	-1,561	-0,937	-0,395	-0,260
149	0,768	-0,905	0,816	-1,690	-1,508	-0,905	-0,378	-0,247
150	0,774	-0,873	0,815	-1,634	-1,457	-0,873	-0,361	-0,233
151	0,780	-0,842	0,812	-1,580	-1,409	-0,842	-0,344	-0,220
152	0,787	-0,813	0,808	-1,528	-1,363	-0,813	-0,328	-0,206
153	0,793	-0,784	0,804	-1,479	-1,319	-0,784	-0,311	-0,193
154	0,799	-0,757	0,799	-1,432	-1,276	-0,757	-0,296	-0,180
155	0,805	-0,730	0,794	-1,386	-1,235	-0,730	-0,280	-0,167
156	0,812	-0,704	0,791	-1,340	-1,194	-0,704	-0,266	-0,155
157	0,818	-0,678	0,788	-1,295	-1,153	-0,678	-0,252	-0,145
158	0,824	-0,653	0,786	-1,250	-1,113	-0,653	-0,240	-0,135
159	0,830	-0,629	0,786	-1,205	-1,073	-0,629	-0,228	-0,126
160	0,837	-0,605	0,789	-1,160	-1,033	-0,605	-0,218	-0,118
161	0,843	-0,582	0,795	-1,115	-0,993	-0,582	-0,208	-0,112
162	0,849	-0,560	0,803	-1,069	-0,953	-0,560	-0,200	-0,108
163	0,855	-0,538	0,816	-1,024	-0,913	-0,538	-0,194	-0,105
164	0,862	-0,517	0,832	-0,977	-0,873	-0,517	-0,189	-0,103
165	0,868	-0,496	0,853	-0,931	-0,833	-0,496	-0,185	-0,103
166	0,874	-0,476	0,878	-0,885	-0,792	-0,476	-0,182	-0,104
167	0,881	-0,457	0,908	-0,839	-0,753	-0,457	-0,179	-0,106
168	0,887	-0,438	0,941	-0,795	-0,714	-0,438	-0,178	-0,108
169	0,893	-0,420	0,977	-0,751	-0,677	-0,420	-0,177	-0,111
170	0,899	-0,403	1,016	-0,710	-0,641	-0,403	-0,176	-0,114
171	0,906	-0,386	1,057	-0,670	-0,606	-0,386	-0,175	-0,117
172	0,912	-0,370	1,100	-0,632	-0,574	-0,370	-0,174	-0,120
173	0,918	-0,354	1,143	-0,597	-0,542	-0,354	-0,172	-0,122
174	0,924	-0,339	1,187	-0,563	-0,513	-0,339	-0,170	-0,124
175	0,931	-0,325	1,232	-0,531	-0,485	-0,325	-0,168	-0,125
176	0,937	-0,311	1,278	-0,502	-0,459	-0,311	-0,166	-0,126
177	0,943	-0,297	1,323	-0,473	-0,434	-0,297	-0,163	-0,126
178	0,949	-0,284	1,369	-0,446	-0,410	-0,284	-0,160	-0,125
179	0,956	-0,271	1,415	-0,421	-0,387	-0,271	-0,156	-0,124
180	0,962	-0,258	1,461	-0,396	-0,365	-0,258	-0,152	-0,123

181	0,968	-0,245	1,507	-0,372	-0,344	-0,245	-0,148	-0,120
182	0,975	-0,233	1,553	-0,349	-0,323	-0,233	-0,143	-0,117
183	0,981	-0,220	1,600	-0,326	-0,303	-0,220	-0,137	-0,114

Table S12: Look up table for X_{insp} at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S13 shows the created reference values for male children and adolescents for the parameter X_{tot} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	-0,151	-3,621	1,121	-6,410	-5,629	-3,621	-2,381	-2,122
102	-0,144	-3,564	1,113	-6,330	-5,556	-3,564	-2,335	-2,077
103	-0,137	-3,507	1,106	-6,250	-5,483	-3,507	-2,288	-2,034
104	-0,130	-3,450	1,098	-6,170	-5,409	-3,450	-2,242	-1,990
105	-0,123	-3,393	1,091	-6,089	-5,335	-3,393	-2,196	-1,947
106	-0,116	-3,336	1,084	-6,008	-5,261	-3,336	-2,151	-1,904
107	-0,108	-3,279	1,076	-5,925	-5,186	-3,279	-2,105	-1,861
108	-0,101	-3,222	1,069	-5,843	-5,111	-3,222	-2,060	-1,818
109	-0,094	-3,165	1,062	-5,760	-5,035	-3,165	-2,015	-1,776
110	-0,087	-3,108	1,054	-5,676	-4,959	-3,108	-1,970	-1,734
111	-0,080	-3,051	1,047	-5,591	-4,883	-3,051	-1,925	-1,692
112	-0,073	-2,994	1,039	-5,507	-4,806	-2,994	-1,881	-1,650
113	-0,065	-2,937	1,032	-5,421	-4,729	-2,937	-1,837	-1,609
114	-0,058	-2,880	1,025	-5,335	-4,651	-2,880	-1,793	-1,568
115	-0,051	-2,824	1,017	-5,248	-4,573	-2,824	-1,749	-1,527
116	-0,044	-2,767	1,010	-5,161	-4,494	-2,767	-1,706	-1,487
117	-0,037	-2,710	1,002	-5,073	-4,415	-2,710	-1,663	-1,447
118	-0,030	-2,653	0,995	-4,985	-4,336	-2,653	-1,620	-1,407
119	-0,022	-2,596	0,988	-4,896	-4,257	-2,596	-1,577	-1,367
120	-0,015	-2,540	0,980	-4,807	-4,177	-2,540	-1,535	-1,328
121	-0,008	-2,483	0,973	-4,717	-4,097	-2,483	-1,493	-1,289
122	-0,001	-2,427	0,966	-4,628	-4,017	-2,427	-1,451	-1,251
123	0,006	-2,371	0,958	-4,538	-3,936	-2,371	-1,410	-1,213
124	0,014	-2,315	0,951	-4,448	-3,856	-2,315	-1,369	-1,176
125	0,021	-2,260	0,943	-4,358	-3,777	-2,260	-1,329	-1,139
126	0,028	-2,205	0,936	-4,269	-3,697	-2,205	-1,290	-1,102
127	0,035	-2,151	0,929	-4,180	-3,619	-2,151	-1,251	-1,067
128	0,042	-2,098	0,921	-4,092	-3,541	-2,098	-1,212	-1,032
129	0,049	-2,045	0,914	-4,006	-3,464	-2,045	-1,175	-0,997
130	0,057	-1,994	0,907	-3,920	-3,388	-1,994	-1,138	-0,964
131	0,064	-1,943	0,899	-3,836	-3,313	-1,943	-1,102	-0,931
132	0,071	-1,894	0,892	-3,752	-3,240	-1,894	-1,067	-0,899
133	0,078	-1,845	0,884	-3,670	-3,167	-1,845	-1,033	-0,868
134	0,085	-1,797	0,877	-3,590	-3,096	-1,797	-0,999	-0,837

135	0,092	-1,750	0,870	-3,510	-3,025	-1,750	-0,967	-0,808
136	0,100	-1,704	0,862	-3,431	-2,956	-1,704	-0,934	-0,778
137	0,107	-1,659	0,855	-3,354	-2,888	-1,659	-0,903	-0,750
138	0,114	-1,615	0,847	-3,278	-2,821	-1,615	-0,873	-0,722
139	0,121	-1,572	0,840	-3,203	-2,756	-1,572	-0,843	-0,696
140	0,128	-1,529	0,833	-3,130	-2,691	-1,529	-0,814	-0,670
141	0,135	-1,488	0,825	-3,059	-2,629	-1,488	-0,786	-0,644
142	0,143	-1,448	0,818	-2,989	-2,567	-1,448	-0,759	-0,620
143	0,150	-1,409	0,811	-2,921	-2,507	-1,409	-0,732	-0,596
144	0,157	-1,371	0,803	-2,854	-2,449	-1,371	-0,706	-0,572
145	0,164	-1,334	0,796	-2,788	-2,391	-1,334	-0,681	-0,550
146	0,171	-1,297	0,788	-2,724	-2,335	-1,297	-0,656	-0,528
147	0,178	-1,261	0,781	-2,660	-2,279	-1,261	-0,632	-0,506
148	0,186	-1,226	0,774	-2,597	-2,224	-1,226	-0,609	-0,485
149	0,193	-1,192	0,766	-2,535	-2,170	-1,192	-0,586	-0,465
150	0,200	-1,158	0,759	-2,474	-2,117	-1,158	-0,564	-0,445
151	0,207	-1,125	0,752	-2,414	-2,064	-1,125	-0,542	-0,426
152	0,214	-1,092	0,744	-2,355	-2,013	-1,092	-0,521	-0,407
153	0,221	-1,060	0,737	-2,297	-1,962	-1,060	-0,500	-0,388
154	0,229	-1,029	0,729	-2,240	-1,913	-1,029	-0,480	-0,371
155	0,236	-0,998	0,722	-2,184	-1,863	-0,998	-0,460	-0,353
156	0,243	-0,968	0,715	-2,128	-1,815	-0,968	-0,441	-0,336
157	0,250	-0,938	0,707	-2,072	-1,766	-0,938	-0,422	-0,319
158	0,257	-0,908	0,700	-2,016	-1,718	-0,908	-0,403	-0,303
159	0,264	-0,878	0,692	-1,960	-1,669	-0,878	-0,385	-0,287
160	0,272	-0,848	0,685	-1,903	-1,620	-0,848	-0,366	-0,271
161	0,279	-0,819	0,678	-1,846	-1,570	-0,819	-0,348	-0,255
162	0,286	-0,788	0,670	-1,788	-1,520	-0,788	-0,330	-0,239
163	0,293	-0,758	0,663	-1,730	-1,470	-0,758	-0,312	-0,224
164	0,300	-0,728	0,656	-1,670	-1,418	-0,728	-0,294	-0,209
165	0,307	-0,697	0,648	-1,610	-1,366	-0,697	-0,276	-0,194
166	0,315	-0,667	0,641	-1,550	-1,314	-0,667	-0,259	-0,179
167	0,322	-0,636	0,633	-1,489	-1,262	-0,636	-0,242	-0,164
168	0,329	-0,606	0,626	-1,428	-1,209	-0,606	-0,225	-0,150
169	0,336	-0,576	0,619	-1,367	-1,157	-0,576	-0,208	-0,136
170	0,343	-0,546	0,611	-1,307	-1,105	-0,546	-0,192	-0,123
171	0,350	-0,517	0,604	-1,248	-1,054	-0,517	-0,176	-0,109
172	0,358	-0,488	0,597	-1,189	-1,004	-0,488	-0,161	-0,097
173	0,365	-0,460	0,589	-1,131	-0,954	-0,460	-0,146	-0,085
174	0,372	-0,432	0,582	-1,073	-0,904	-0,432	-0,131	-0,073
175	0,379	-0,404	0,574	-1,015	-0,854	-0,404	-0,117	-0,061
176	0,386	-0,377	0,567	-0,957	-0,805	-0,377	-0,103	-0,050
177	0,393	-0,349	0,560	-0,899	-0,755	-0,349	-0,089	-0,039
178	0,401	-0,321	0,552	-0,840	-0,704	-0,321	-0,076	-0,028
179	0,408	-0,293	0,545	-0,781	-0,653	-0,293	-0,062	-0,018
180	0,415	-0,265	0,537	-0,720	-0,601	-0,265	-0,049	-0,007

181	0,422	-0,237	0,530	-0,659	-0,549	-0,237	-0,036	0,003
182	0,429	-0,209	0,523	-0,598	-0,496	-0,209	-0,023	0,013
183	0,437	-0,181	0,515	-0,536	-0,443	-0,181	-0,011	0,022

Table S13: Look up table for Xtot at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S14 shows the created reference values for female children and adolescents for the parameter Xtot at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	0,343	-3,547	1,235	-5,579	-5,079	-3,547	-2,348	-2,063
102	0,343	-3,493	1,229	-5,510	-5,013	-3,493	-2,305	-2,023
103	0,344	-3,439	1,222	-5,440	-4,947	-3,439	-2,261	-1,983
104	0,344	-3,385	1,215	-5,371	-4,881	-3,385	-2,218	-1,943
105	0,345	-3,331	1,209	-5,301	-4,815	-3,331	-2,176	-1,903
106	0,346	-3,277	1,202	-5,230	-4,748	-3,277	-2,133	-1,863
107	0,346	-3,222	1,195	-5,160	-4,681	-3,222	-2,091	-1,824
108	0,347	-3,168	1,188	-5,088	-4,614	-3,168	-2,048	-1,785
109	0,347	-3,114	1,182	-5,017	-4,546	-3,114	-2,006	-1,746
110	0,348	-3,060	1,175	-4,945	-4,479	-3,060	-1,965	-1,707
111	0,348	-3,006	1,168	-4,873	-4,411	-3,006	-1,923	-1,669
112	0,349	-2,952	1,161	-4,802	-4,344	-2,952	-1,880	-1,630
113	0,349	-2,898	1,153	-4,731	-4,277	-2,898	-1,838	-1,590
114	0,350	-2,843	1,144	-4,661	-4,211	-2,843	-1,795	-1,550
115	0,350	-2,789	1,135	-4,593	-4,145	-2,789	-1,752	-1,510
116	0,351	-2,735	1,124	-4,527	-4,082	-2,735	-1,707	-1,468
117	0,351	-2,681	1,112	-4,463	-4,020	-2,681	-1,662	-1,426
118	0,352	-2,626	1,098	-4,402	-3,960	-2,626	-1,616	-1,382
119	0,352	-2,572	1,083	-4,343	-3,901	-2,572	-1,569	-1,338
120	0,353	-2,518	1,066	-4,287	-3,845	-2,518	-1,521	-1,292
121	0,353	-2,464	1,048	-4,234	-3,791	-2,464	-1,472	-1,246
122	0,354	-2,410	1,029	-4,183	-3,739	-2,410	-1,423	-1,198
123	0,354	-2,357	1,007	-4,135	-3,688	-2,357	-1,373	-1,150
124	0,355	-2,303	0,986	-4,088	-3,638	-2,303	-1,323	-1,103
125	0,356	-2,250	0,963	-4,042	-3,589	-2,250	-1,273	-1,055
126	0,356	-2,197	0,940	-3,996	-3,540	-2,197	-1,224	-1,008
127	0,357	-2,144	0,919	-3,946	-3,489	-2,144	-1,176	-0,963
128	0,357	-2,091	0,901	-3,889	-3,432	-2,091	-1,132	-0,921
129	0,358	-2,039	0,887	-3,823	-3,368	-2,039	-1,091	-0,884
130	0,358	-1,986	0,878	-3,744	-3,296	-1,986	-1,056	-0,853
131	0,359	-1,934	0,875	-3,654	-3,215	-1,934	-1,024	-0,826
132	0,359	-1,882	0,877	-3,554	-3,127	-1,882	-0,997	-0,804
133	0,360	-1,830	0,883	-3,447	-3,035	-1,830	-0,972	-0,784

134	0,360	-1,778	0,890	-3,338	-2,941	-1,778	-0,948	-0,766
135	0,361	-1,726	0,898	-3,228	-2,847	-1,726	-0,924	-0,748
136	0,361	-1,675	0,906	-3,121	-2,754	-1,675	-0,900	-0,730
137	0,362	-1,624	0,912	-3,016	-2,663	-1,624	-0,875	-0,710
138	0,362	-1,573	0,917	-2,917	-2,576	-1,573	-0,849	-0,689
139	0,363	-1,522	0,918	-2,823	-2,494	-1,522	-0,821	-0,666
140	0,363	-1,472	0,917	-2,734	-2,414	-1,472	-0,791	-0,641
141	0,364	-1,422	0,912	-2,650	-2,339	-1,422	-0,761	-0,615
142	0,365	-1,372	0,905	-2,571	-2,267	-1,372	-0,729	-0,587
143	0,365	-1,324	0,896	-2,495	-2,198	-1,324	-0,697	-0,559
144	0,366	-1,276	0,884	-2,424	-2,132	-1,276	-0,664	-0,530
145	0,366	-1,229	0,872	-2,354	-2,067	-1,229	-0,632	-0,502
146	0,367	-1,183	0,861	-2,284	-2,003	-1,183	-0,601	-0,475
147	0,367	-1,139	0,850	-2,215	-1,940	-1,139	-0,572	-0,449
148	0,368	-1,095	0,839	-2,147	-1,878	-1,095	-0,543	-0,424
149	0,368	-1,053	0,829	-2,080	-1,817	-1,053	-0,516	-0,401
150	0,369	-1,012	0,819	-2,015	-1,758	-1,012	-0,490	-0,378
151	0,369	-0,972	0,809	-1,951	-1,700	-0,972	-0,465	-0,356
152	0,370	-0,934	0,798	-1,890	-1,645	-0,934	-0,441	-0,335
153	0,370	-0,898	0,787	-1,833	-1,592	-0,898	-0,417	-0,315
154	0,371	-0,863	0,774	-1,778	-1,543	-0,863	-0,394	-0,295
155	0,371	-0,829	0,761	-1,727	-1,495	-0,829	-0,372	-0,276
156	0,372	-0,797	0,747	-1,678	-1,451	-0,797	-0,351	-0,257
157	0,372	-0,766	0,732	-1,632	-1,408	-0,766	-0,330	-0,239
158	0,373	-0,736	0,718	-1,587	-1,367	-0,736	-0,310	-0,222
159	0,373	-0,708	0,704	-1,543	-1,326	-0,708	-0,292	-0,206
160	0,374	-0,680	0,693	-1,499	-1,286	-0,680	-0,275	-0,192
161	0,375	-0,654	0,683	-1,455	-1,247	-0,654	-0,260	-0,179
162	0,375	-0,630	0,676	-1,411	-1,208	-0,630	-0,245	-0,167
163	0,376	-0,606	0,670	-1,367	-1,169	-0,606	-0,233	-0,157
164	0,376	-0,583	0,667	-1,323	-1,130	-0,583	-0,221	-0,148
165	0,377	-0,562	0,667	-1,277	-1,091	-0,562	-0,211	-0,140
166	0,377	-0,541	0,670	-1,230	-1,051	-0,541	-0,202	-0,133
167	0,378	-0,520	0,677	-1,182	-1,010	-0,520	-0,194	-0,127
168	0,378	-0,500	0,688	-1,132	-0,968	-0,500	-0,187	-0,123
169	0,379	-0,481	0,703	-1,081	-0,926	-0,481	-0,181	-0,119
170	0,379	-0,462	0,721	-1,030	-0,883	-0,462	-0,176	-0,117
171	0,380	-0,444	0,741	-0,980	-0,842	-0,444	-0,171	-0,114
172	0,380	-0,426	0,762	-0,930	-0,801	-0,426	-0,167	-0,112
173	0,381	-0,408	0,785	-0,882	-0,761	-0,408	-0,162	-0,110
174	0,381	-0,391	0,809	-0,836	-0,722	-0,391	-0,158	-0,108
175	0,382	-0,374	0,834	-0,791	-0,685	-0,374	-0,153	-0,106
176	0,382	-0,357	0,859	-0,748	-0,649	-0,357	-0,149	-0,103
177	0,383	-0,341	0,885	-0,707	-0,614	-0,341	-0,144	-0,101
178	0,384	-0,325	0,911	-0,667	-0,581	-0,325	-0,139	-0,098
179	0,384	-0,309	0,937	-0,628	-0,548	-0,309	-0,134	-0,095

180	0,385	-0,294	0,963	-0,591	-0,517	-0,294	-0,129	-0,092
181	0,385	-0,278	0,989	-0,555	-0,486	-0,278	-0,123	-0,088
182	0,386	-0,263	1,016	-0,520	-0,456	-0,263	-0,117	-0,084
183	0,386	-0,247	1,043	-0,485	-0,426	-0,247	-0,111	-0,080

Table S14: Look up table for X_{tot} at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile. Since X occurs in the range of negative values X parameters were shifted with the following function: $f(x) = X * (-1) + 0.1$

Table S15 shows the created reference values for male children and adolescents for the parameter Z_{tot} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	-0,033	10,086	1,920	7,931	8,362	10,086	12,179	12,850
102	-0,053	9,990	1,907	7,836	8,265	9,990	12,097	12,776
103	-0,072	9,894	1,894	7,741	8,169	9,894	12,016	12,702
104	-0,092	9,798	1,881	7,646	8,073	9,798	11,934	12,629
105	-0,111	9,702	1,868	7,552	7,977	9,702	11,853	12,556
106	-0,131	9,607	1,855	7,458	7,881	9,607	11,772	12,483
107	-0,150	9,511	1,842	7,364	7,785	9,511	11,691	12,410
108	-0,170	9,415	1,829	7,270	7,690	9,415	11,610	12,338
109	-0,189	9,319	1,816	7,177	7,595	9,319	11,529	12,265
110	-0,209	9,223	1,803	7,085	7,500	9,223	11,448	12,194
111	-0,228	9,127	1,790	6,992	7,406	9,127	11,367	12,122
112	-0,248	9,032	1,777	6,900	7,312	9,032	11,287	12,051
113	-0,267	8,936	1,764	6,809	7,218	8,936	11,206	11,980
114	-0,286	8,840	1,751	6,717	7,124	8,840	11,126	11,909
115	-0,305	8,744	1,738	6,626	7,030	8,744	11,044	11,838
116	-0,322	8,647	1,725	6,534	6,937	8,647	10,963	11,766
117	-0,337	8,551	1,712	6,443	6,843	8,551	10,880	11,693
118	-0,350	8,454	1,699	6,351	6,749	8,454	10,797	11,618
119	-0,359	8,357	1,686	6,258	6,654	8,357	10,711	11,541
120	-0,366	8,259	1,673	6,164	6,558	8,259	10,624	11,460
121	-0,368	8,160	1,660	6,070	6,462	8,160	10,533	11,376
122	-0,367	8,061	1,648	5,974	6,365	8,061	10,440	11,287
123	-0,360	7,961	1,635	5,877	6,267	7,961	10,343	11,193
124	-0,350	7,859	1,623	5,779	6,168	7,859	10,242	11,093
125	-0,334	7,757	1,611	5,679	6,068	7,757	10,138	10,987
126	-0,312	7,655	1,598	5,578	5,966	7,655	10,030	10,875
127	-0,284	7,551	1,587	5,475	5,864	7,551	9,917	10,756
128	-0,249	7,448	1,575	5,371	5,760	7,448	9,800	10,631
129	-0,205	7,344	1,563	5,265	5,656	7,344	9,679	10,498
130	-0,153	7,241	1,552	5,157	5,550	7,241	9,554	10,358
131	-0,091	7,138	1,541	5,047	5,444	7,138	9,425	10,211
132	-0,021	7,036	1,530	4,935	5,336	7,036	9,293	10,059
133	0,055	6,935	1,520	4,822	5,228	6,935	9,159	9,902

134	0,139	6,834	1,510	4,707	5,120	6,834	9,022	9,742
135	0,227	6,734	1,500	4,591	5,011	6,734	8,883	9,579
136	0,317	6,634	1,491	4,474	4,902	6,634	8,744	9,416
137	0,407	6,534	1,482	4,357	4,793	6,534	8,604	9,253
138	0,492	6,435	1,474	4,241	4,686	6,435	8,465	9,092
139	0,571	6,335	1,466	4,128	4,581	6,335	8,327	8,934
140	0,637	6,235	1,458	4,021	4,479	6,235	8,192	8,782
141	0,684	6,135	1,451	3,922	4,383	6,135	8,061	8,637
142	0,711	6,035	1,445	3,833	4,294	6,035	7,935	8,500
143	0,715	5,935	1,439	3,756	4,212	5,935	7,814	8,372
144	0,701	5,835	1,433	3,688	4,136	5,835	7,697	8,252
145	0,671	5,735	1,428	3,628	4,066	5,735	7,583	8,137
146	0,627	5,635	1,424	3,575	3,999	5,635	7,471	8,026
147	0,572	5,535	1,420	3,526	3,936	5,535	7,362	7,919
148	0,510	5,436	1,417	3,480	3,875	5,436	7,254	7,816
149	0,441	5,337	1,414	3,437	3,816	5,337	7,147	7,714
150	0,370	5,238	1,411	3,394	3,758	5,238	7,040	7,613
151	0,298	5,140	1,410	3,351	3,701	5,140	6,932	7,511
152	0,228	5,042	1,409	3,307	3,643	5,042	6,824	7,408
153	0,163	4,945	1,408	3,262	3,585	4,945	6,714	7,302
154	0,105	4,850	1,408	3,215	3,526	4,850	6,601	7,191
155	0,057	4,755	1,409	3,166	3,466	4,755	6,486	7,075
156	0,022	4,661	1,410	3,114	3,405	4,661	6,366	6,951
157	0,001	4,568	1,412	3,060	3,343	4,568	6,241	6,818
158	-0,006	4,475	1,415	3,002	3,279	4,475	6,112	6,677
159	-0,001	4,383	1,418	2,943	3,213	4,383	5,979	6,529
160	0,015	4,291	1,421	2,881	3,147	4,291	5,843	6,376
161	0,040	4,200	1,425	2,819	3,080	4,200	5,704	6,218
162	0,074	4,108	1,430	2,755	3,012	4,108	5,565	6,057
163	0,114	4,018	1,434	2,691	2,945	4,018	5,424	5,895
164	0,159	3,928	1,440	2,626	2,877	3,928	5,284	5,733
165	0,208	3,838	1,445	2,562	2,809	3,838	5,145	5,573
166	0,259	3,749	1,451	2,498	2,742	3,749	5,006	5,414
167	0,312	3,660	1,457	2,434	2,676	3,660	4,870	5,257
168	0,364	3,572	1,463	2,371	2,610	3,572	4,735	5,103
169	0,416	3,485	1,469	2,309	2,544	3,485	4,603	4,953
170	0,467	3,399	1,476	2,248	2,480	3,399	4,473	4,806
171	0,518	3,314	1,482	2,188	2,417	3,314	4,347	4,664
172	0,568	3,231	1,488	2,129	2,355	3,231	4,223	4,525
173	0,619	3,148	1,495	2,071	2,294	3,148	4,102	4,389
174	0,672	3,067	1,501	2,013	2,233	3,067	3,982	4,256
175	0,726	2,985	1,508	1,956	2,173	2,985	3,864	4,124
176	0,780	2,905	1,514	1,899	2,113	2,905	3,748	3,995
177	0,836	2,825	1,521	1,842	2,053	2,825	3,633	3,868
178	0,893	2,745	1,527	1,785	1,993	2,745	3,520	3,743
179	0,951	2,665	1,533	1,729	1,934	2,665	3,407	3,619

180	1,009	2,586	1,540	1,672	1,874	2,586	3,296	3,497
181	1,067	2,506	1,546	1,616	1,815	2,506	3,185	3,376
182	1,125	2,427	1,552	1,560	1,756	2,427	3,076	3,256
183	1,184	2,348	1,559	1,504	1,697	2,348	2,967	3,138

Table S15: Look up table for Z_{tot} at 8 Hz for male children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S16 shows the created reference values for female children and adolescents for the parameter Z_{tot} at 8 Hz in the form of a look up table.

Height	lambda	mu	sigma	5%	10%	50%	90%	95%
101	-0,345	10,028	1,687	7,508	7,984	10,028	12,842	13,831
102	-0,316	9,938	1,694	7,446	7,919	9,938	12,694	13,654
103	-0,286	9,849	1,701	7,384	7,853	9,849	12,547	13,481
104	-0,256	9,759	1,707	7,321	7,787	9,759	12,403	13,311
105	-0,226	9,670	1,713	7,257	7,719	9,670	12,261	13,146
106	-0,197	9,581	1,718	7,191	7,651	9,581	12,123	12,986
107	-0,167	9,492	1,722	7,124	7,581	9,492	11,988	12,830
108	-0,137	9,403	1,725	7,055	7,510	9,403	11,858	12,681
109	-0,107	9,314	1,727	6,984	7,437	9,314	11,731	12,537
110	-0,078	9,226	1,727	6,909	7,361	9,226	11,610	12,401
111	-0,048	9,137	1,726	6,831	7,282	9,137	11,494	12,272
112	-0,019	9,048	1,722	6,749	7,200	9,048	11,384	12,151
113	0,010	8,960	1,716	6,662	7,113	8,960	11,280	12,039
114	0,039	8,871	1,707	6,570	7,023	8,871	11,182	11,936
115	0,068	8,783	1,695	6,474	6,929	8,783	11,091	11,841
116	0,097	8,694	1,682	6,372	6,830	8,694	11,006	11,755
117	0,125	8,605	1,665	6,265	6,728	8,605	10,926	11,676
118	0,153	8,516	1,647	6,155	6,622	8,516	10,851	11,604
119	0,181	8,428	1,628	6,042	6,515	8,428	10,779	11,535
120	0,208	8,340	1,608	5,928	6,406	8,340	10,709	11,469
121	0,235	8,251	1,588	5,814	6,297	8,251	10,639	11,403
122	0,261	8,163	1,568	5,700	6,189	8,163	10,568	11,336
123	0,286	8,075	1,549	5,587	6,081	8,075	10,496	11,267
124	0,311	7,986	1,530	5,474	5,974	7,986	10,423	11,198
125	0,335	7,897	1,510	5,361	5,866	7,897	10,350	11,127
126	0,358	7,807	1,492	5,250	5,759	7,807	10,272	11,051
127	0,380	7,716	1,476	5,142	5,656	7,716	10,186	10,965
128	0,402	7,622	1,463	5,042	5,558	7,622	10,087	10,862
129	0,423	7,527	1,456	4,953	5,468	7,527	9,973	10,740
130	0,442	7,429	1,454	4,875	5,388	7,429	9,842	10,596
131	0,459	7,330	1,457	4,809	5,317	7,330	9,695	10,431
132	0,475	7,227	1,465	4,754	5,254	7,227	9,534	10,249

133	0,489	7,122	1,478	4,705	5,195	7,122	9,361	10,052
134	0,501	7,014	1,492	4,658	5,137	7,014	9,181	9,848
135	0,513	6,902	1,507	4,610	5,077	6,902	8,998	9,641
136	0,522	6,786	1,520	4,556	5,012	6,786	8,814	9,435
137	0,531	6,667	1,532	4,497	4,942	6,667	8,631	9,232
138	0,537	6,544	1,542	4,430	4,864	6,544	8,452	9,033
139	0,542	6,418	1,548	4,355	4,780	6,418	8,275	8,840
140	0,546	6,290	1,552	4,273	4,688	6,290	8,102	8,654
141	0,547	6,159	1,552	4,184	4,590	6,159	7,933	8,473
142	0,546	6,026	1,549	4,089	4,487	6,026	7,768	8,298
143	0,543	5,893	1,543	3,990	4,381	5,893	7,607	8,129
144	0,538	5,760	1,536	3,890	4,274	5,760	7,450	7,965
145	0,530	5,629	1,528	3,789	4,166	5,629	7,297	7,807
146	0,519	5,500	1,518	3,689	4,059	5,500	7,149	7,654
147	0,506	5,372	1,507	3,590	3,953	5,372	7,005	7,507
148	0,489	5,246	1,494	3,492	3,848	5,246	6,866	7,365
149	0,470	5,122	1,482	3,395	3,744	5,122	6,729	7,227
150	0,448	5,000	1,469	3,302	3,644	5,000	6,595	7,092
151	0,423	4,880	1,457	3,213	3,547	4,880	6,463	6,959
152	0,395	4,763	1,446	3,129	3,454	4,763	6,333	6,829
153	0,363	4,649	1,437	3,049	3,366	4,649	6,207	6,701
154	0,330	4,539	1,427	2,974	3,282	4,539	6,084	6,579
155	0,293	4,434	1,419	2,904	3,203	4,434	5,966	6,461
156	0,255	4,333	1,411	2,838	3,129	4,333	5,853	6,349
157	0,214	4,237	1,405	2,778	3,059	4,237	5,745	6,241
158	0,172	4,146	1,400	2,723	2,995	4,146	5,639	6,135
159	0,129	4,059	1,398	2,673	2,937	4,059	5,536	6,032
160	0,085	3,977	1,398	2,630	2,885	3,977	5,435	5,929
161	0,040	3,900	1,402	2,593	2,840	3,900	5,335	5,827
162	-0,005	3,828	1,410	2,563	2,800	3,828	5,236	5,723
163	-0,051	3,760	1,421	2,538	2,766	3,760	5,137	5,617
164	-0,097	3,695	1,436	2,516	2,736	3,695	5,035	5,506
165	-0,143	3,630	1,454	2,498	2,708	3,630	4,930	5,390
166	-0,190	3,567	1,476	2,481	2,682	3,567	4,821	5,268
167	-0,236	3,504	1,501	2,465	2,658	3,504	4,711	5,143
168	-0,282	3,441	1,528	2,449	2,633	3,441	4,598	5,014
169	-0,329	3,378	1,557	2,433	2,608	3,378	4,483	4,881
170	-0,375	3,315	1,589	2,416	2,583	3,315	4,366	4,746
171	-0,422	3,251	1,623	2,398	2,556	3,251	4,247	4,608
172	-0,468	3,186	1,659	2,379	2,529	3,186	4,127	4,469
173	-0,515	3,119	1,697	2,357	2,499	3,119	4,006	4,328
174	-0,562	3,052	1,736	2,333	2,468	3,052	3,885	4,187
175	-0,609	2,984	1,777	2,308	2,434	2,984	3,765	4,047
176	-0,655	2,916	1,819	2,281	2,400	2,916	3,645	3,909
177	-0,702	2,848	1,863	2,251	2,364	2,848	3,528	3,773
178	-0,749	2,779	1,906	2,221	2,326	2,779	3,413	3,641

179	-0,796	2,711	1,951	2,188	2,287	2,711	3,301	3,512
180	-0,843	2,643	1,996	2,154	2,247	2,643	3,191	3,386
181	-0,890	2,575	2,041	2,118	2,205	2,575	3,084	3,264
182	-0,936	2,507	2,086	2,080	2,162	2,507	2,979	3,146
183	-0,983	2,439	2,131	2,040	2,117	2,439	2,876	3,030

Table S16: Look up table for Ztot at 8 Hz for female children and adolescents. Height in cm; 5th, 10th, 50th, 90th and 95th percentile.

Table S17 shows the Pearson correlation coefficients between age, weight and height and all measured oscillometry parameters.

	Mean	SD	Mean Pearson correlation coefficient for each oscillometry parameter						
Age	0.67	0.07	0.71	0.73	0.73	0.56	0.61	0.6	0.73
Weight	0.59	0.06	0.63	0.64	0.64	0.49	0.57	0.54	0.65
BMI	0.36	0.04	0.38	0.39	0.39	0.29	0.37	0.33	0.39
Height	0.69	0.06	0.73	0.74	0.75	0.58	0.67	0.64	0.75
			R8 exp	R8 insp	R8 tot	X8 exp	X8 insp	X8 tot	Z8 tot

Table S17: Pearson correlation coefficients between age, weight and height for all oscillometry parameters together and separated for Rexp, Rinsp, Rtot, Xinsp, Xexp, Xtot and Ztot.

Figure S2 shows the reference values of Ducharme et al. from 2022 for R_{tot} and X_{tot} at 8 Hz applied to the current LEAD cohort.

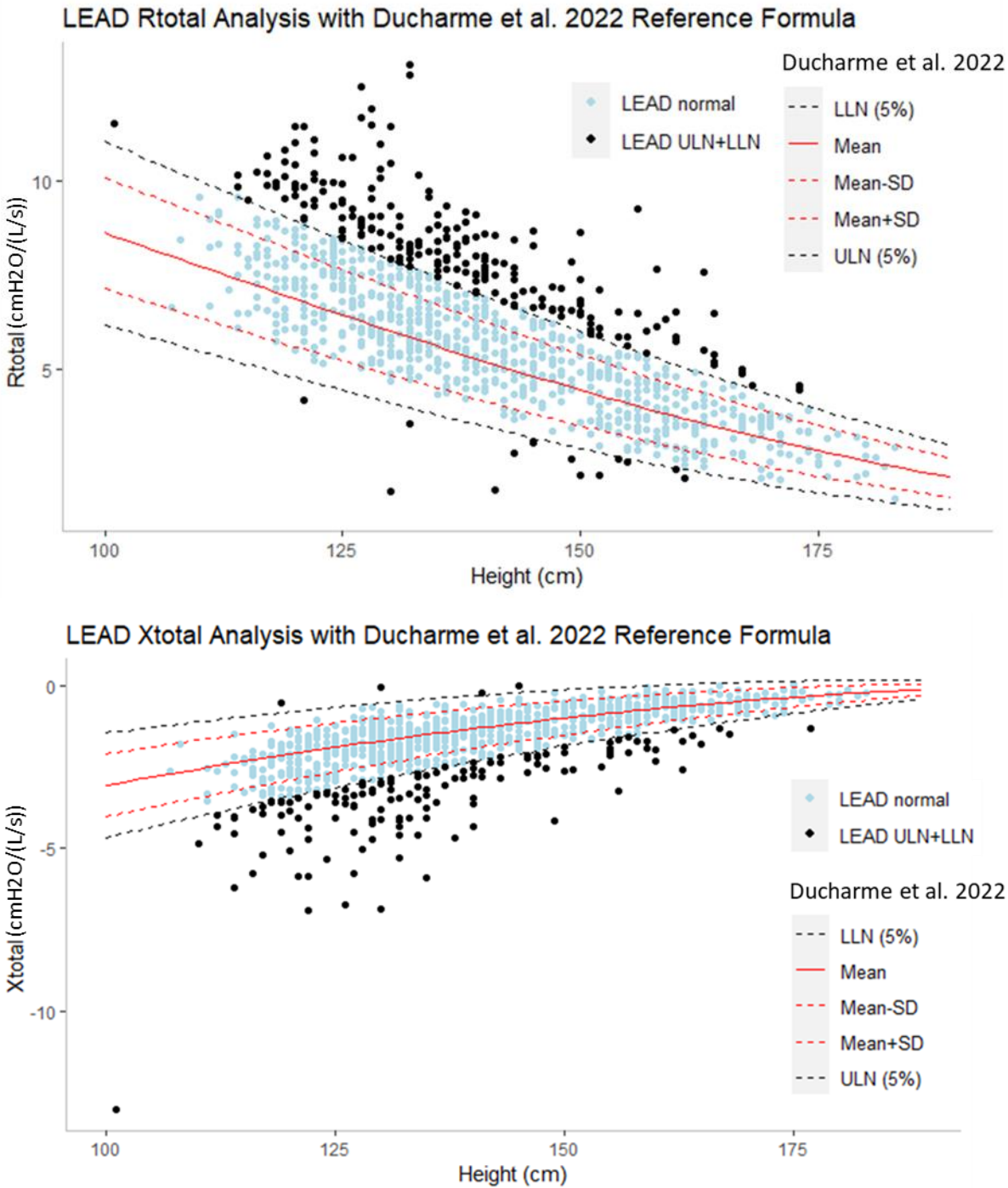


Figure S2: Application of the reference values of Ducharme et al. from 2022 for R_{tot} and X_{tot} at 8 Hz applied to the current LEAD cohort.

Figure S3 shows the sensitivity analysis with regard to high minute ventilation.

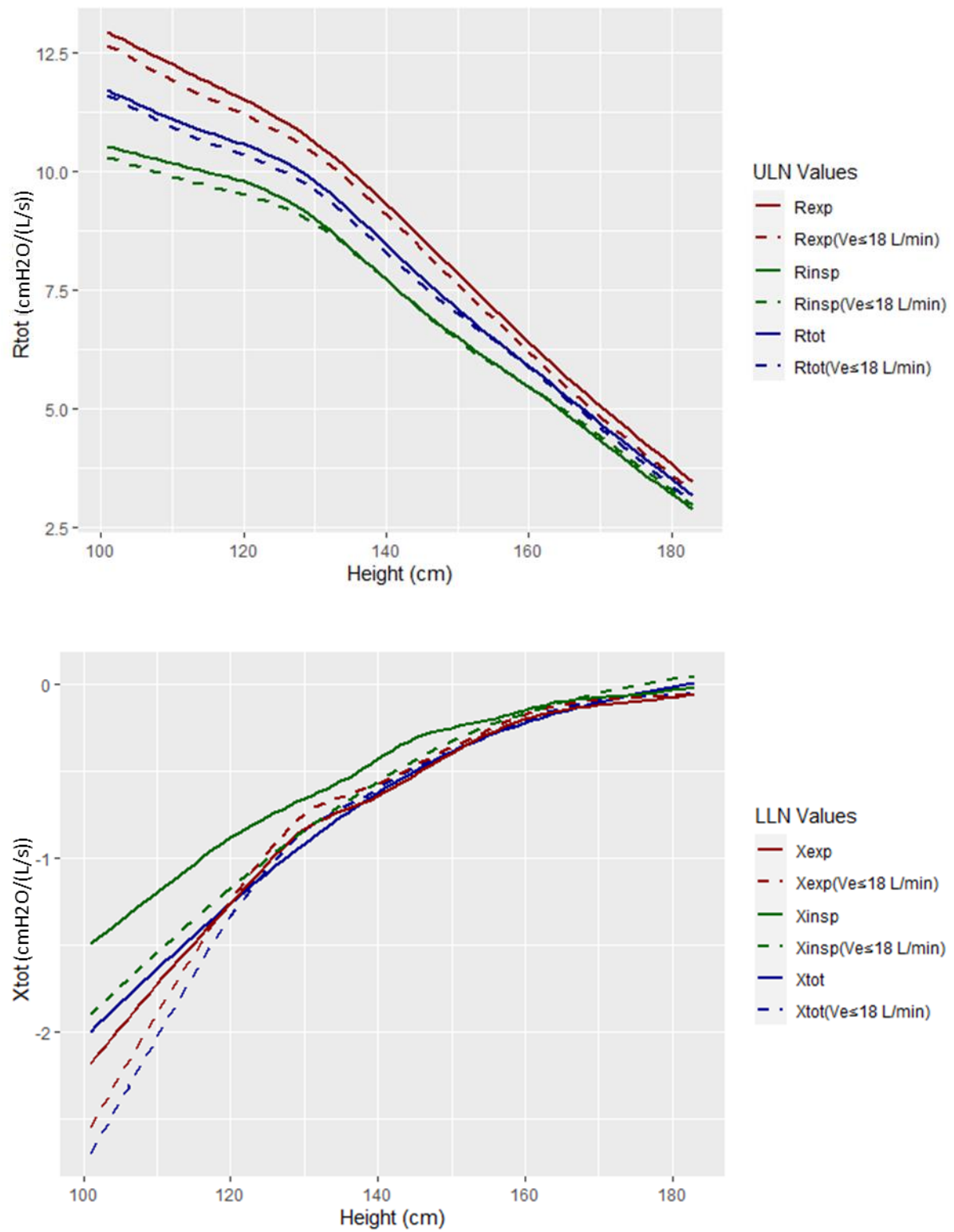
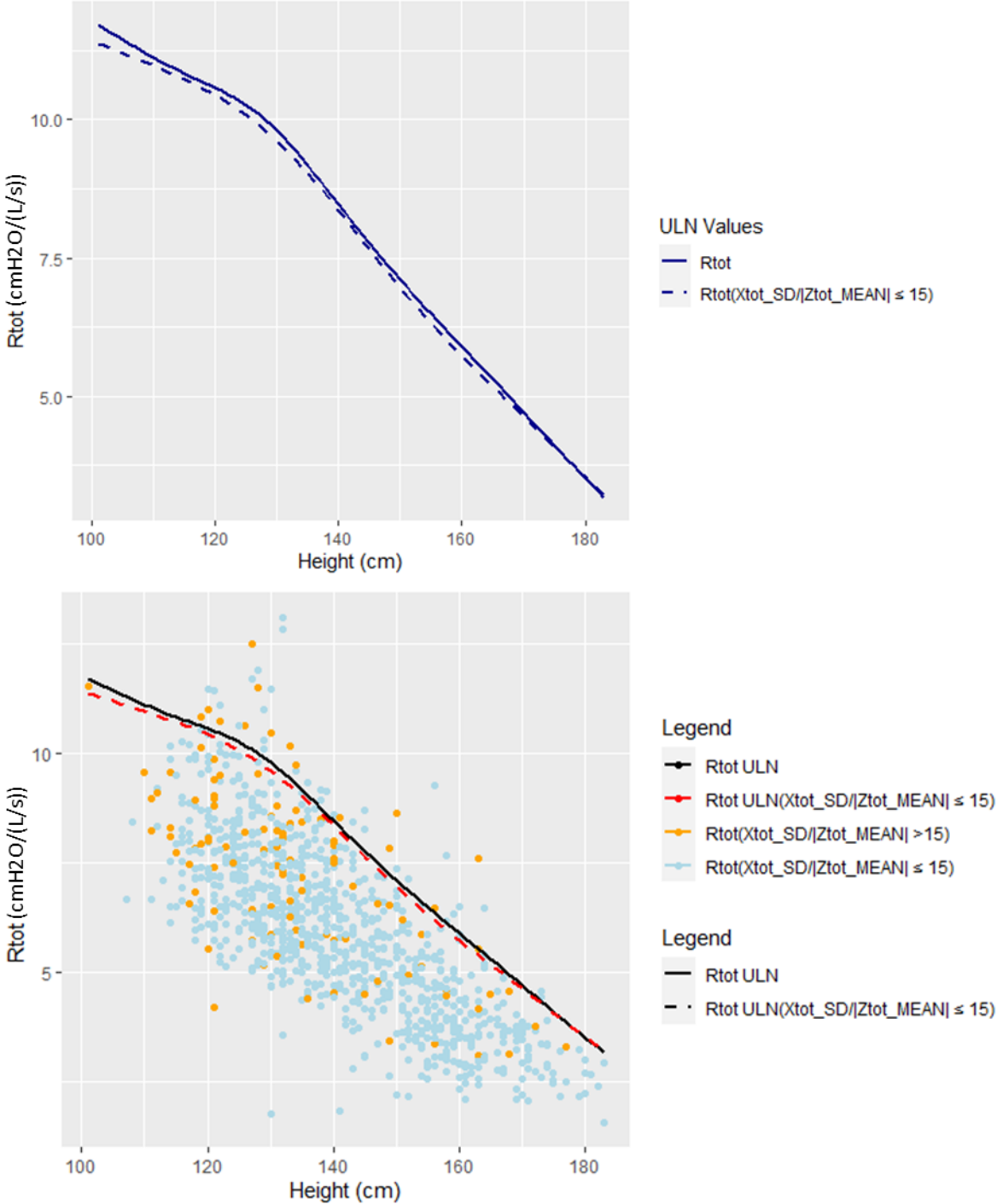
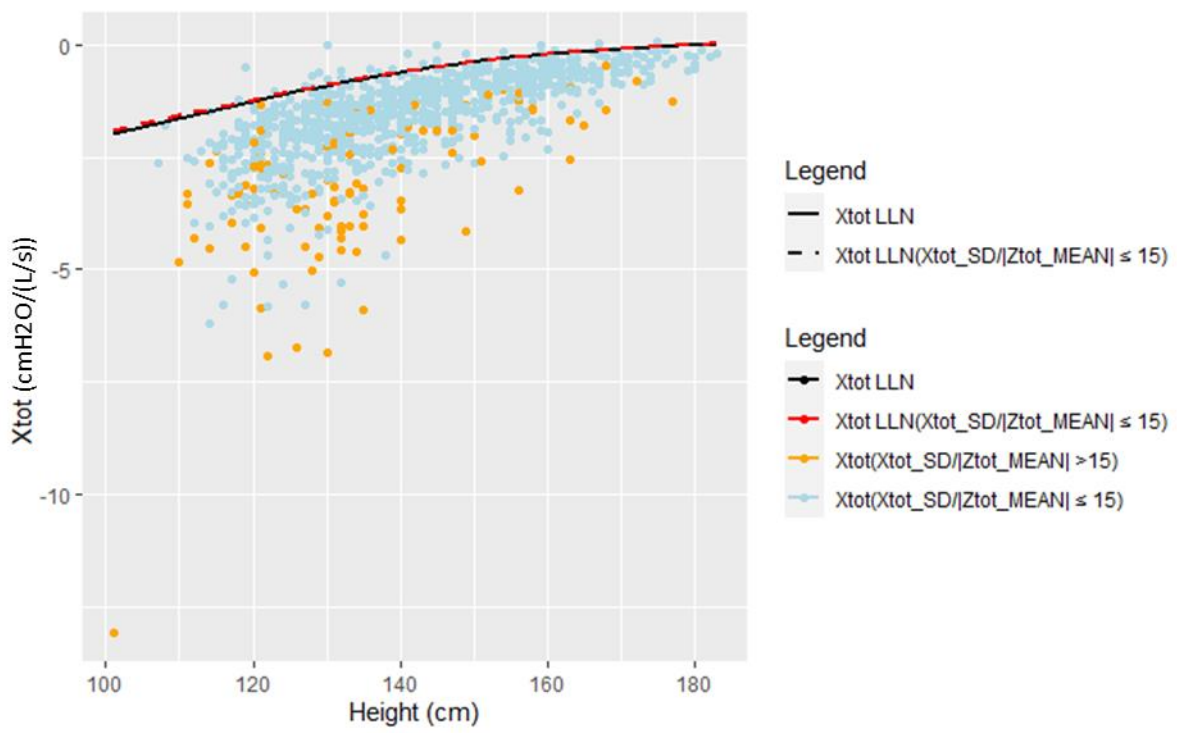
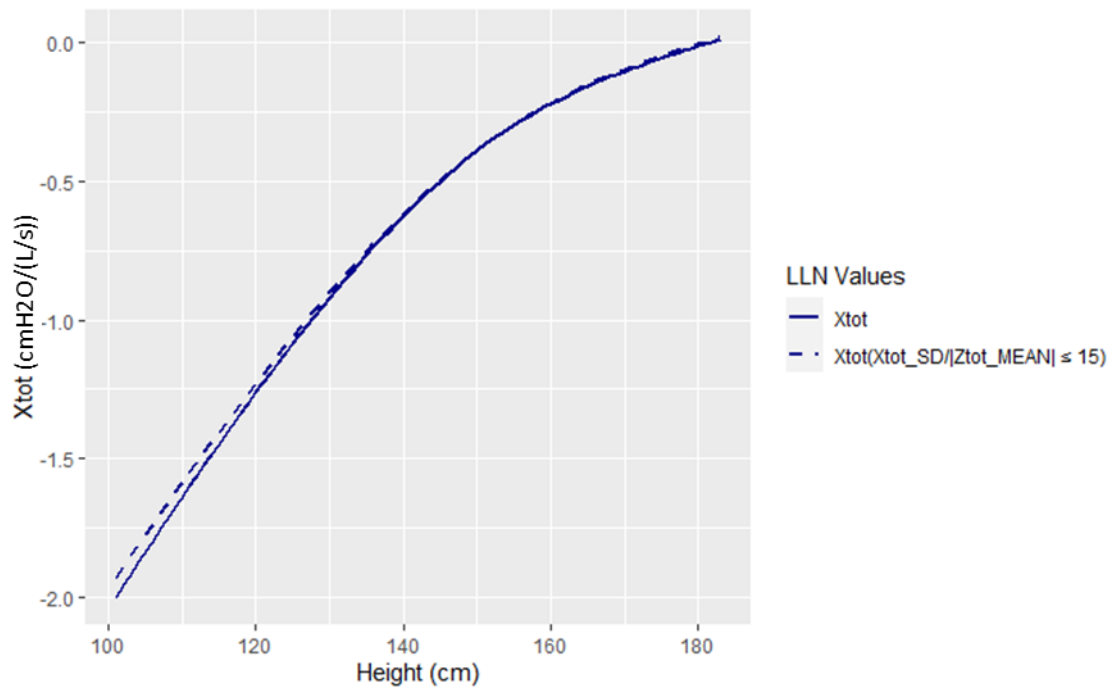


Figure S3: sensitivity analysis considering susceptibility to different levels of breathing flows

Figure S4a shows the sensitivity analysis with regard to residual artifacts not filtered by the device by applying a threshold on the intrabreath CoV of Xtot of 15%.





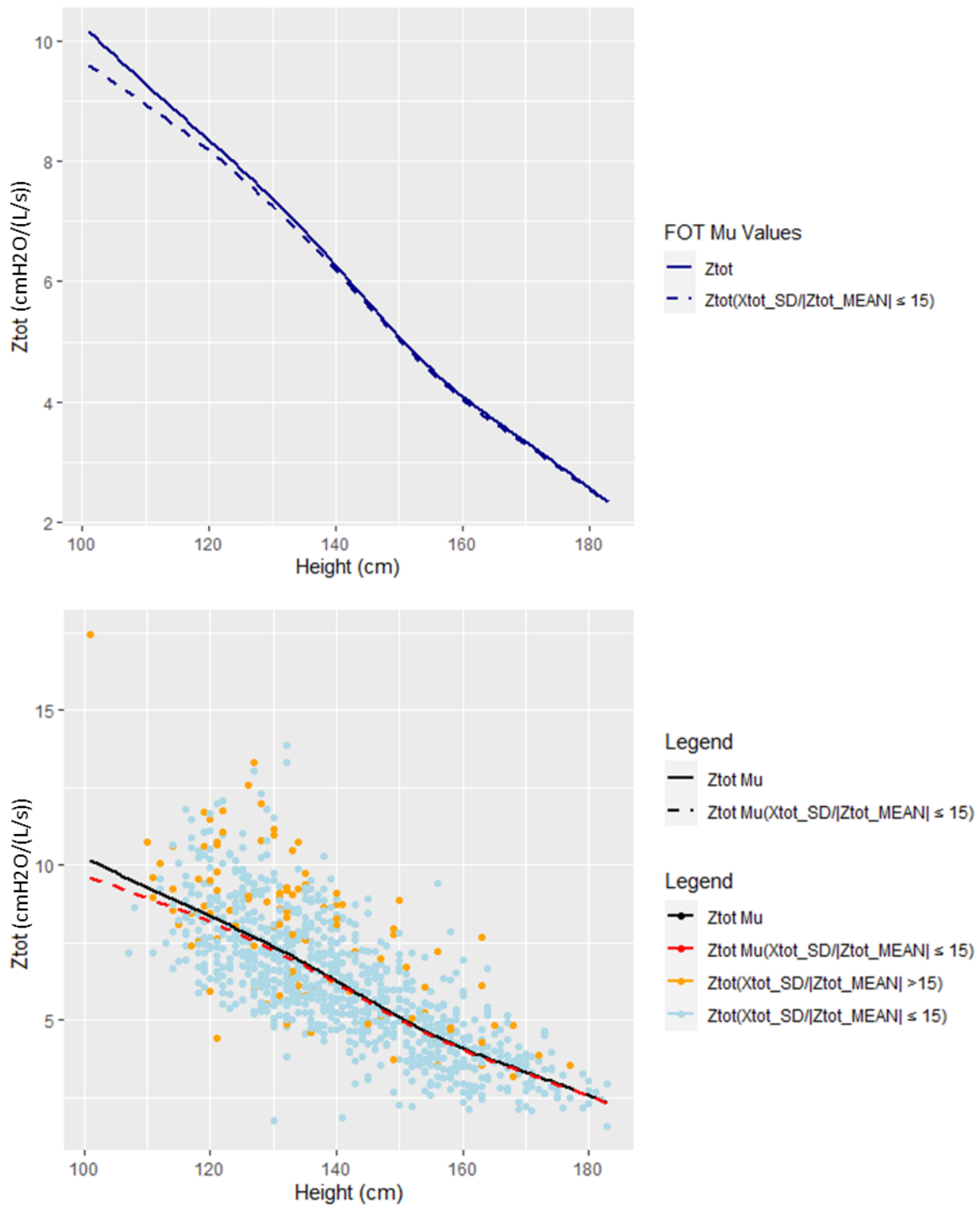
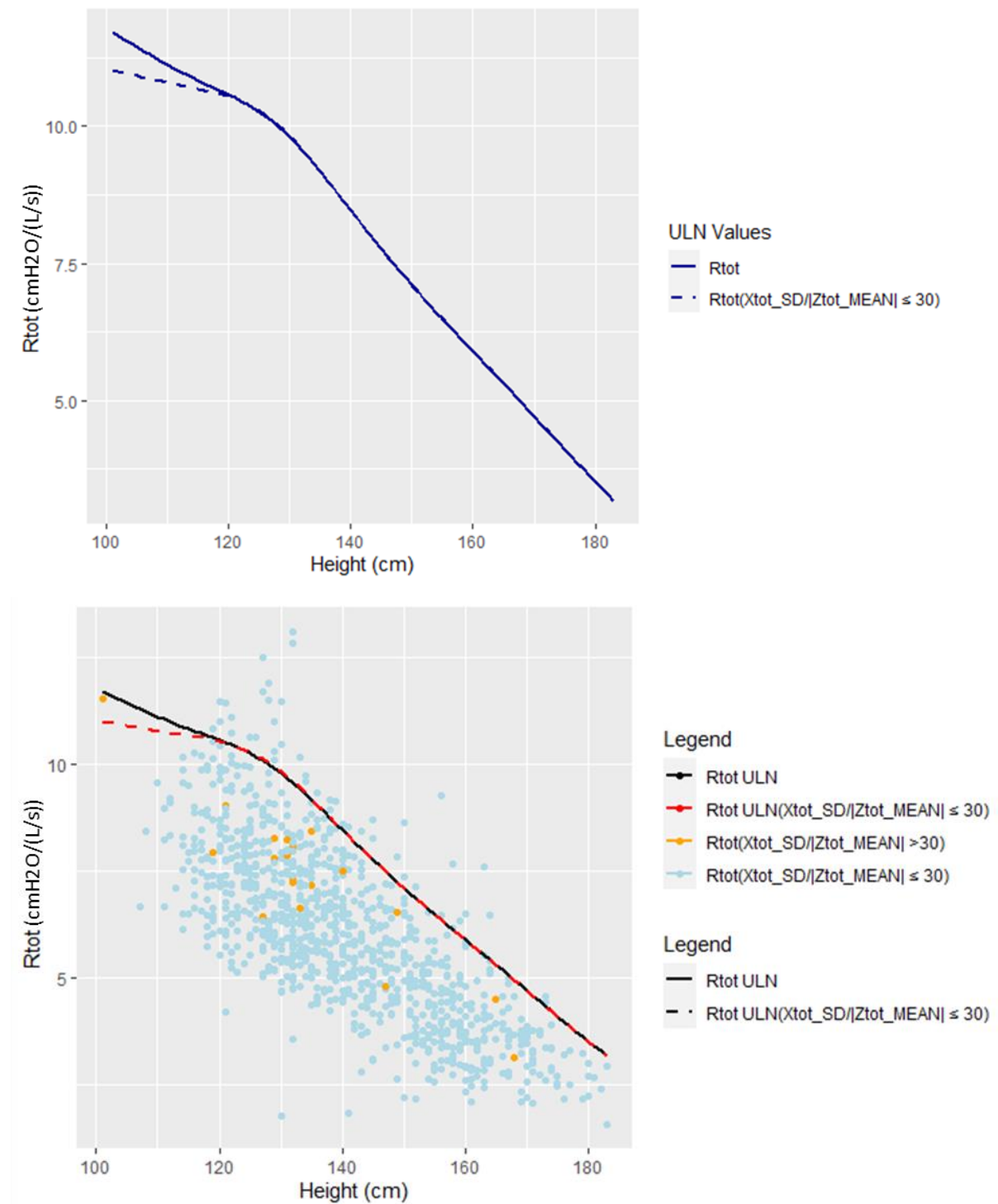
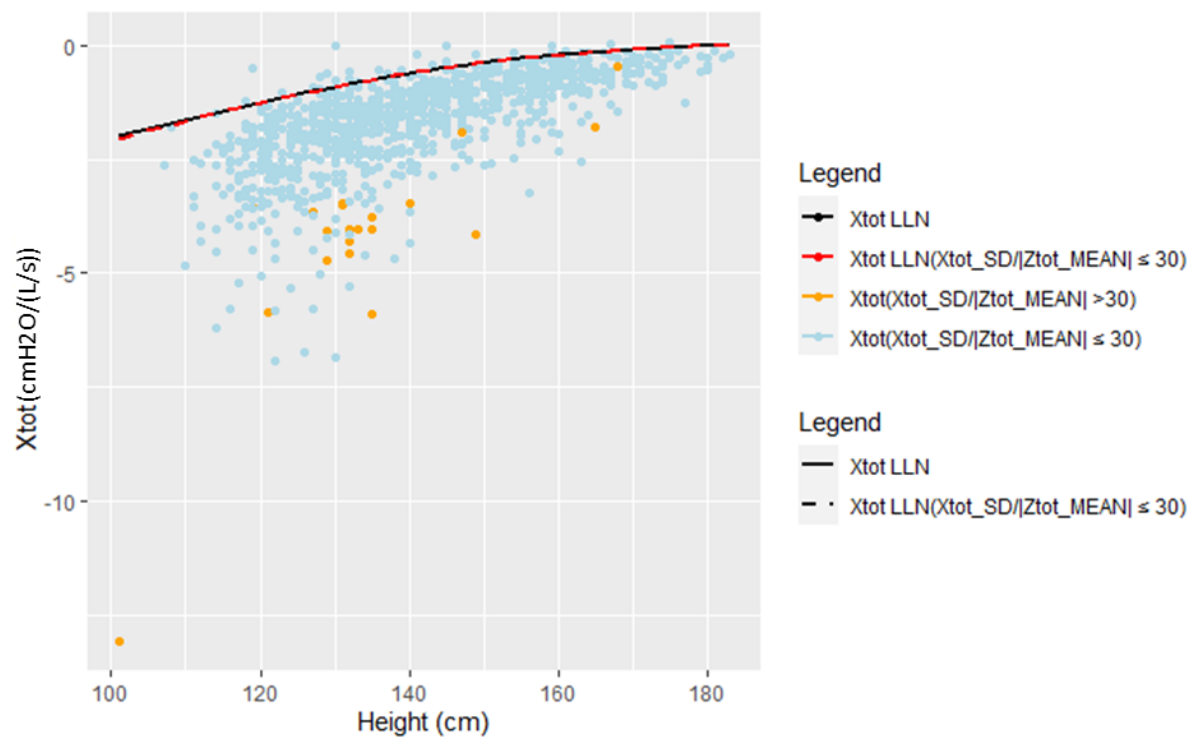
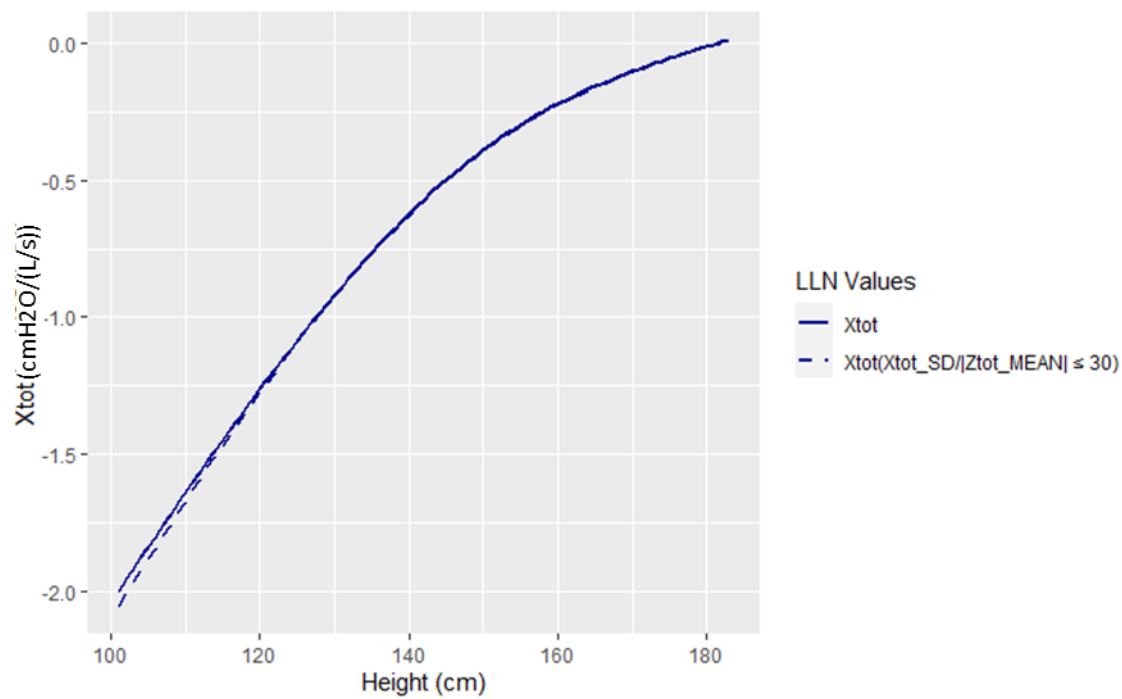


Figure S4a: sensitivity analysis considering susceptibility to artifacts not filtered by the device by applying a CoV of Xtot of 15%.

Figure S4b shows the sensitivity analysis with regard to residual artifacts not filtered by the device by applying a threshold on the intrabreath CoV of X_{tot} of 30%.





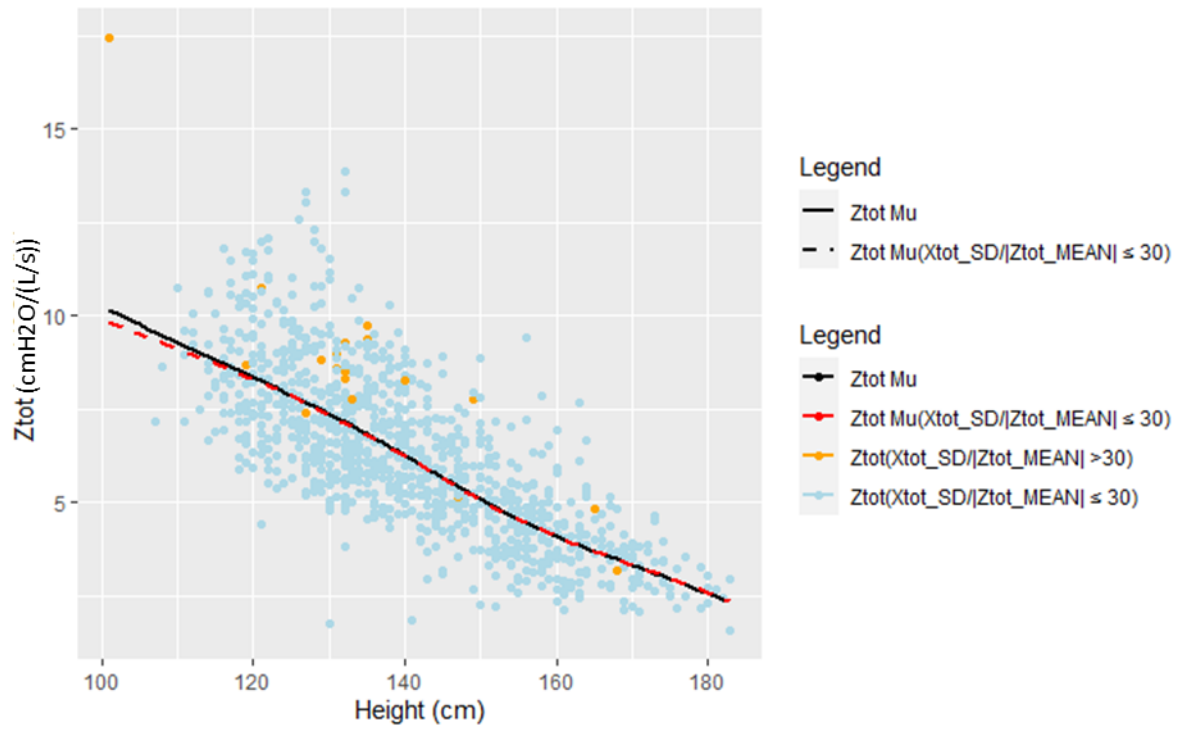


Figure S4b: sensitivity analysis considering susceptibility to artifacts not filtered by the device by applying a CoV of Xtot of 30%.