

spirom
Spirometry Data

| <u>NAME</u> | <u>TYPE (LENGTH)</u> | |
|-----------------|----------------------|------------------------------------|
| NEWID | F(5.1) | Patient ID |
| Baseline Values | | |
| BLFEVA_1 | F(5.1) | f25q4: Pre-bronchodilators - FEV-1 |
| BLFVCA | F(5.1) | f25q5: Pre-bronchodilators - FVC |
| BLFEVPRD | F(5.1) | FEV-1 predicted ¹ |
| BLPERFEV | F(5.1) | FEV-1 % predicted |
| BLFVCPRD | F(5.1) | FVC predicted ¹ |
| BLPERFVC | F(5.1) | FVC % predicted |
| BLRATIO1 | F(5.1) | FEV-1/FVC (%) |
| Two-year Values | | |
| FVFEVA_1 | F(5.1) | f25q4: Pre-bronchodilators - FEV-1 |
| FVFVCA | F(5.1) | f25q5: Pre-bronchodilators - FVC |
| FVFEVPRD | F(5.1) | FEV-1 predicted ² |
| FVPERFEV | F(5.1) | FEV-1 % predicted |
| FVFVCPRD | F(5.1) | FVC predicted ¹ |
| FVPERFVC | F(5.1) | FVC % predicted |
| FVRATIO1 | F(5.1) | FEV-1/FVC (%) |

¹See Tables 4 and 5 (following this page) for calculation of predicted value

²See Tables 4 and 5 (following this page) for calculation of predicted value

TABLE 4
 PREDICTION AND LOWER LIMIT OF NORMAL EQUATIONS FOR
 SPIROMETRIC PARAMETERS FOR MALE SUBJECTS*

| Male Subjects | Intercept | Age | Age ² | Ht _{PRD} (cm) ² | Ht _{LLN} (cm) ² | R ² |
|---------------------------------|-----------|----------|------------------|-------------------------------------|-------------------------------------|----------------|
| Caucasian < 20 yr of age | | | | | | |
| FEV ₁ | -0.7453 | -0.04106 | 0.004477 | 0.00014098 | 0.00011607 | 0.8510 |
| FEV ₆ | -0.3119 | -0.18612 | 0.009717 | 0.00018188 | 0.00015323 | 0.8692 |
| FVC | -0.2584 | -0.20415 | 0.010133 | 0.00018642 | 0.00015695 | 0.8668 |
| PEF | -0.5962 | -0.12357 | 0.013135 | 0.00024962 | 0.00017635 | 0.7808 |
| FEF ₂₅₋₇₅ | -1.0863 | 0.13939 | | 0.00010345 | 0.00005294 | 0.5601 |
| Caucasian ≥ 20 yr of age | | | | | | |
| FEV ₁ | 0.5536 | -0.01303 | -0.000172 | 0.00014098 | 0.00011607 | 0.8510 |
| FEV ₆ | 0.1102 | -0.00842 | -0.000223 | 0.00018188 | 0.00015323 | 0.8692 |
| FVC | -0.1933 | 0.00064 | -0.000269 | 0.00018642 | 0.00015695 | 0.8668 |
| PEF | 1.0523 | 0.08272 | -0.001301 | 0.00024962 | 0.00017635 | 0.7808 |
| FEF ₂₅₋₇₅ | 2.7006 | -0.04995 | | 0.00010345 | 0.00005294 | 0.5601 |
| African-American < 20 yr of age | | | | | | |
| FEV ₁ | -0.7048 | -0.05711 | 0.004316 | 0.00013194 | 0.00010561 | 0.8080 |
| FEV ₆ | -0.5525 | -0.14107 | 0.007241 | 0.00016429 | 0.00013499 | 0.8297* |
| FVC | -0.4971 | -0.15497 | 0.007701 | 0.00016643 | 0.00013670 | 0.8303 |
| PEF | -0.2684 | -0.28016 | 0.018202 | 0.00027333 | 0.00018938 | 0.7299 |
| FEF ₂₅₋₇₅ | -1.1627 | 0.12314 | | 0.00010461 | 0.00004819 | 0.4724 |
| African-American ≥ 20 yr of age | | | | | | |
| FEV ₁ | 0.3411 | -0.02309 | | 0.00013194 | 0.00010561 | 0.8080 |
| FEV ₆ | -0.0547 | -0.02114 | | 0.00016429 | 0.00013499 | 0.8297 |
| FVC | -0.1517 | -0.01821 | | 0.00016643 | 0.00013670 | 0.8303 |
| PEF | 2.2257 | -0.04082 | | 0.00027333 | 0.00018938 | 0.7299 |
| FEF ₂₅₋₇₅ | 2.1477 | -0.04238 | | 0.00010461 | 0.00004819 | 0.4724 |
| Mexican-American < 20 yr of age | | | | | | |
| FEV ₁ | -0.8218 | -0.04248 | 0.004291 | 0.00015104 | 0.00012670 | 0.8536 |
| FEV ₆ | -0.6646 | -0.11270 | 0.007306 | 0.00017840 | 0.00015029 | 0.8657 |
| FVC | -0.7571 | -0.09520 | 0.006619 | 0.00017823 | 0.00014947 | 0.8641 |
| PEF | -0.9537 | -0.19602 | 0.014497 | 0.00030243 | 0.00021833 | 0.7530 |
| FEF ₂₅₋₇₅ | -1.3592 | 0.10529 | | 0.00014473 | 0.00009020 | 0.5482 |
| Mexican-American ≥ 20 yr of age | | | | | | |
| FEV ₁ | 0.6306 | -0.02928 | | 0.00015104 | 0.00012670 | 0.8536 |
| FEV ₆ | 0.5757 | -0.02860 | | 0.00017840 | 0.00015029 | 0.8657 |
| FVC | 0.2376 | -0.00891 | -0.000182 | 0.00017823 | 0.00014947 | 0.8641 |
| PEF | 0.0870 | 0.06580 | -0.001195 | 0.00030243 | 0.00021833 | 0.7530 |
| FEF ₂₅₋₇₅ | 1.7503 | -0.05018 | | 0.00014473 | 0.00009020 | 0.5482 |

* Ht_{PRD} coefficient is used for prediction equation and Ht_{LLN} is used (replaces Ht_{PRD}) for the lower limit of normal equation. Lung function parameter = $b_0 + b_1 * \text{age} + b_2 * \text{age}^2 + b_3 * \text{height}^2$.

TABLE 5
 PREDICTION AND LOWER LIMIT OF NORMAL EQUATIONS FOR
 SPIROMETRIC PARAMETERS FOR FEMALE SUBJECTS*

| Female Subjects | Intercept | Age | Age ² | Ht _{PRD} (cm) ² | Ht _{LLN} (cm) ² | R ² |
|---------------------------------|-----------|----------|------------------|-------------------------------------|-------------------------------------|----------------|
| Caucasian < 18 yr of age | | | | | | |
| FEV ₁ | -0.8710 | 0.06537 | | 0.00011496 | 0.00009283 | 0.7494 |
| FEV ₆ | -1.1925 | 0.06544 | | 0.00014395 | 0.00011827 | 0.7457 |
| FVC | -1.2082 | 0.05916 | | 0.00014815 | 0.00012198 | 0.7344 |
| PEF | -3.6181 | 0.60644 | -0.016846 | 0.00018623 | 0.00012148 | 0.5559 |
| FEF ₂₅₋₇₅ | -2.5284 | 0.52490 | -0.015309 | 0.00006982 | 0.00002302 | 0.5005 |
| Caucasian ≥ 18 yr of age | | | | | | |
| FEV ₁ | 0.4333 | -0.00361 | -0.000194 | 0.00011496 | 0.00009283 | 0.7494 |
| FEV ₆ | -0.1373 | 0.01317 | -0.000352 | 0.00014395 | 0.00011827 | 0.7457 |
| FVC | -0.3560 | 0.01870 | -0.000382 | 0.00014815 | 0.00012198 | 0.7344 |
| PEF | 0.9267 | 0.06929 | -0.001031 | 0.00018623 | 0.00012148 | 0.5559 |
| FEF ₂₅₋₇₅ | 2.3670 | -0.01904 | -0.000200 | 0.00006982 | 0.00002302 | 0.5005 |
| African-American < 18 yr of age | | | | | | |
| FEV ₁ | -0.9630 | 0.05799 | | 0.00010846 | 0.00008546 | 0.6687 |
| FEV ₆ | -0.6370 | -0.04243 | 0.003508 | 0.00013497 | 0.00010848 | 0.6615 |
| FVC | -0.6166 | -0.04687 | 0.003602 | 0.00013606 | 0.00010916 | 0.6536 |
| PEF | -1.2398 | 0.16375 | -0.001031 | 0.00019746 | 0.00012160 | 0.4736 |
| FEF ₂₅₋₇₅ | -2.5379 | 0.43755 | -0.012154 | 0.00008572 | 0.00003380 | 0.3787 |
| African-American ≥ 18 yr of age | | | | | | |
| FEV ₁ | 0.3433 | -0.01283 | -0.000097 | 0.00010846 | 0.00008546 | 0.6687 |
| FEV ₆ | -0.1981 | 0.00047 | -0.000230 | 0.00013497 | 0.00010848 | 0.6615 |
| FVC | -0.3039 | 0.00536 | -0.000265 | 0.00013606 | 0.00010916 | 0.6536 |
| PEF | 1.3597 | 0.03458 | -0.000847 | 0.00019746 | 0.00012160 | 0.4736 |
| FEF ₂₅₋₇₅ | 2.0828 | -0.03793 | | 0.00008572 | 0.00003380 | 0.3787 |
| Mexican-American < 18 yr of age | | | | | | |
| FEV ₁ | -0.9641 | 0.06490 | | 0.00012154 | 0.00009890 | 0.7268 |
| FEV ₆ | -1.2410 | 0.07625 | | 0.00014106 | 0.00011480 | 0.7208 |
| FVC | -1.2507 | 0.07501 | | 0.00014246 | 0.00011570 | 0.7103 |
| PEF | -3.2549 | 0.47495 | -0.013193 | 0.00022203 | 0.00014611 | 0.4669 |
| FEF ₂₅₋₇₅ | -2.1825 | 0.42451 | -0.012415 | 0.00009610 | 0.00004594 | 0.4305 |
| Mexican-American ≥ 18 yr of age | | | | | | |
| FEV ₁ | 0.4529 | -0.01178 | -0.000113 | 0.00012154 | 0.00009890 | 0.7268 |
| FEV ₆ | 0.2033 | 0.00020 | -0.000232 | 0.00014106 | 0.00011480 | 0.7208 |
| FVC | 0.1210 | 0.00307 | -0.000237 | 0.00014246 | 0.00011570 | 0.7103 |
| PEF | 0.2401 | 0.06174 | -0.001023 | 0.00022203 | 0.00014611 | 0.4669 |
| FEF ₂₅₋₇₅ | 1.7456 | -0.01195 | -0.000291 | 0.00009610 | 0.00004594 | 0.4305 |

* Ht_{PRD} coefficient is used for prediction equation and Ht_{LLN} is used (replaces Ht_{PRD}) for the lower limit of normal equation. Lung function parameter = b₀ + b₁ * age + b₂ * age² + b₃ * height².

Reference for Tables 4 and 5

Hankinson JL, Odencrantz JR and Fedan KB. Spirometric Reference Values from a Sample of the General U.S. Population. Am.J.Resp.Crit.Care.Med. 1999; 159:179-187.