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| Variability in Peak Expiratory Flow Rates of Healthy Adults |
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| **Introduction/Aim:** Measurements of peak expiratory flow (PEF) are used in the clinical management of asthma. Variability in PEF of ≥20% is accepted as being consistent with asthma. However, there are no data on ‘normal’ PEF variability in healthy adults. We aimed to measure day-to-day variability of PEF rates in healthy adults and examine the relationships with sex, age, and height.**Methods:** Healthy, non-smoking adults performed spirometry, and were provided with a Vitalograph peak flow meter to measure their PEF upon waking, for 21 consecutive days. Within session, and day-to day PEF variability were expressed as amplitude percent mean (A%M), calculated as (highest PEF – lowest PEF)/(mean of highest + lowest PEF)\*100%, averaged over 21 days. The upper limit of normal (ULN) was defined as the (95th percentile). Univariate analysis was used to examine PEF relationships.**Results:** A total of 25 subjects (13 males; mean ±SD age, 38 ± 13 years) were enrolled. Absolute mean PEF was 515 ±141 L/min. Within session varability A%M was (5.68 ± 2.69%), and day-to-day variability was (0.32 ± 1.49%). The ULN of within session varability, and day-today at the 95th percentile was 12.10%, and 5.27%, respectively. PEF variability was not related to sex, age or height. **Conclusion:** The upper limits for day-to-day PEF variability are helpful for the interpretation of PEF recordings in disease. Analysis will be extended to compare different ways in which variability can be expressed. Data are still required in older, healthy subjects. **Grant Support:**   |