**Evidence Table 2b. Description of intervention groups: hyperventilation reduction breathing techniques versus nonhyperventilation reduction breathing techniques**

| **Study** | **Intervention group** | **Description** | **Intervention session** | **Homework** | **Additional components** |
| --- | --- | --- | --- | --- | --- |
| Bowler 199850,73,88 | IG1 (BBT) | BBT training consisted of the teaching of a series of exercises in which subjects reduced the depth and frequency of respiration. Instructor (a representative of Buteyko Australia) provided F/U calls as necessary (mean 7, range 0 to 20). Pts experiencing difficulty w/ BBT given additional classes (7 subjects). | Seven or more 60 to 90-min session over 7 days, F/U calls as needed (range 0-20), duration NR.(7 to 10.5 or more hours face-to-face) | Encouraged to practice several times a day. | NR |
| IG2 (abdominal breathing) | Given general asthma education and relaxation techniques; taught abdominal breathing exercises that did not involve hypoventilation. Instructor provided one F/U call to each pt. | Seven 60-90-min session over 7 days, one F/U call per person, duration NR. (7 to 10.5 hours face-to-face). | NR | NR |
| Cooper 200352 | IG1 (BBT) | Eucapnic BBT as taught by a certified Buteyko practitioner. Pts taught to reduce fx and depth of breathing, use the technique bid to relieve asthma sx (used 420 times over 6m) and use bronchodilator if BBT failed, nocturnal mouth-taping with Micropore hypoallergenic tape. F/U call provided 2w after training and open communication with trainer available. Avoid certain foods (e.g., highly processed food and additives), avoid stress, avoid oversleeping. | Five 2-hour sessions, over weekends or successive evenings.(10 hours total). | Home exercises with an audiotape or CD with technique reminders. | Also included dietary restrictions, stress management and instruction to avoid oversleeping. |
| IG2 (yoga breathing device) | Pink City Lung exerciser (yoga breathing device) imposed a 1:2 ratio on the duration of inspiration compared with expiration. Device set at largest aperture, pts asked to breathe at rate which they felt no resistance and could feel no check movement. Over time decrease aperture size to gradually reduce respiratory rate. Use beta2-agonist only for sx relief. PCLE used bid (420 times over 6m). | One session, 6m practice.(Hours NR) | Use PCLE bid. | NR |
| Cowie 200853 | IG1 (BBT) | Received BBT instruction by an accredited Buteyko practitioner in the early evening for 5 consecutive days. Pts instructed in techniques designed to reduce (normalize) their ventilation including holding their breathing at FRC and avoid breathing through the mouth (e.g., mouth-taping at night). | Five sessions over 5 days.(Hours NR) | Encouraged to practice training repeatedly throughout the day. | NR |
| IG2 (physiotherapy) | Received breathing instruction in early evening on 5 consecutive days from a registered physiotherapist. Pts instructed to developed slow, controlled exhalation, down into FRC toward their residual volume, pace breathing. | Five sessions over 5 days.(Hours NR) | NR | NR |
| Slader 200658 | IG1 (BBT) | BBT components: hypoventilation, breathing hold at functional residual capacity; accompanied by footage of scenery. Pts provided an instruction and daily exercises videos required to watch at least once daily while practicing breathing exercises bid. Unblinded researcher contacted pts biweekly to review essentials, answer questions and clarify concerns; offered in-person tuition. Practice shorter version as needed for relief, use reliever if sx persist. | 420 13-min sessions, six F/U calls with study staff over 30w.(90 hours practice with video if fully compliant) | NR | NR |
| IG2 (controlled breathing) | Components: shoulder rotations, forward curls, arm raises w/ controlled inspiratory-expiratory cycles; "control of breathing" through good posture and relaxation; route of breathing not specified w/ both mouth and nasal breathing demonstrated. Pts provided an instruction and daily exercises videos required to watch at least once daily while practicing breathing exercises bid. Unblinded researcher contacted pts biweekly to review essentials, answer questions and clarify concerns; offered in-person tuition. Practice "control of breathing" exercises (physical maneuvers optional) as needed for relief, use reliever if sx persist. | 420 13-min sessions, six F/U calls with study staff over 30w.(90 hours practice with video if fully compliant) | NR | NR |

Abbreviations: BBT: Buteyko breathing technique; bid: twice daily; CD: compact disc; FRC: functional residual capacity; F/U: followup; fx: frequency; min: minute(s); m: month(s); NR: not reported; PCLE: Pink City Lung exerciser; pt(s): patient(s); sx: symptoms; w/: with; w: weeks.