

Appendix E3. Characteristics of studies included in the evidence inventory

Abd Elmawla Elsaid 2023 [BU-001-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 60	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: diaphragmatic breathing technique	Outcome domains: Global symptoms,Lung function Eligible outcomes (measures): Lung function: FVC, PEFR, VC, FEV1, FEV1/FVC ratio; Symptoms: ACT Ineligible outcome domains: Domain Outcomes
Abdurrasyid n.d. [BU-047-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 14	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: pursed lip breathing	Outcome domains: Lung function Eligible outcomes (measures): Lung function: PEFR Ineligible outcome domains: Domain Outcomes
Afshan 2020 [BU-004-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Surgery ICD code: Cardiac surgery No. randomised (all arms): 48	Intervention group(s): Butyeko	Inactive comparators: Active/Ineligible comparators: incentive spirometer	Outcome domains: Breathing/ventilation Eligible outcomes (measures): Breathing/ventilation: breath holding time (control pause) Ineligible outcome domains: Domain Outcomes
Azab 2017 [BU-008-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma, mild to moderate (children) No. randomised (all arms): 40	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: yoga (3 x breathing techniques)	Outcome domains: Function (activity limitations),Lung function Eligible outcomes (measures): Function (activity limitations): 6-min walk test; Lung function: FEV1, FVC, FEV1/FVC, RV Ineligible outcome domains: Domain Outcomes
Bowler 1998 [BU-009-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (children >12 years, adults)	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: asthma education + relaxation + breathing techniques (no hypoventilation)	Outcome domains: Global symptoms,HR-QoL,Breathing/ventilation,Lung function,Healthcare resource use Eligible outcomes (measures): Symptoms: diary card; HR-QoL: 4 domains (per Marks 1992 asthma)

	No. randomised (all arms): 42			QoL measure); Lung function:PEF, FEV1, MV; Breathing/ventilation: end-tidal CO2; Medication use: b2-agonist Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>
Chavda 2016 [BU-010-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.21 Exercise-induced bronchospasm (children) No. randomised (all arms): 50	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: pursed lip breathing technique	Outcome domains: Global symptoms,Breathing/ventilation Eligible outcomes (measures): Symptoms: daytime symptoms, night time awakening (Paediatric Asthma Diary); Lung function: PEFR Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>
Cooper 2003 [BU-011-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 90	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: Pink City Lung Exerciser (PCLE); Pink City Lung Exerciser (PCLE) placebo	Outcome domains: Global symptoms,HR-QoL,Function (activity limitations),Lung function,Healthcare resource use,Other (ineligible) domains Eligible outcomes (measures): Symptoms: day and night symptom severity (diary card); HR-QoL (SF-36, AQL); Function (activity limitations): study-specific measure; Medication use: inhaled corticosteroids Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i> Physiological function, signs methacholine PD
Cowie 2008 [BU-012-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 129	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: physiotherapy breathing exercises	Outcome domains: Global symptoms,HR-QoL,Lung function,Healthcare resource use Eligible outcomes (measures): Symptoms: asthma control (study-specific definition based on other outcomes); HR-QoL (Juniper Mini Asthma QoL Questionnaire); Lung function: FEV1; Healthcare resource use: inhaled corticosteroids, ED visits Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>
David 2022 [BU-013-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma, mild to moderate (adults)	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: stacked breathing	Outcome domains: Function (activity limitations),Lung function Eligible outcomes (measures): Physical function (activity limitations): modified BORG scale; Lung function: peak flow meter

	No. randomised (all arms): 60		Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>	
Elnaggar 2016 [BU-014-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (children) No. randomised (all arms): 54	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: active cycle of breathing technique (ACBT); thoracic lymphatic pump technique (TLPT)	Outcome domains: Global symptoms,Lung function,Other (ineligible) domains Eligible outcomes (measures): Symptoms: asthma control (C-ACT); Lung function: FVC, FEV1, PEF, FEF (25%-75%), FEV1/FVC Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i> Physiological function, signs IgE
El-Nahas 2019 [BU-015-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 30	Intervention group(s): Butyeko	Inactive comparators: Active/Ineligible comparators: diaphragmatic breathing exercise & relaxation positions	Outcome domains: Global symptoms,Breathing/ventilation Eligible outcomes (measures): Symptoms: asthma control (ACQ); Breathing/ventilation: breath holding time (control pause test), arterial blood gases (PaO2, PaCO2, HCO3, pH level) Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>
Endiyono 2022 [BU-016-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Chronic respiratory conditions ICD code: COVID-19 No. randomised (all arms): 32	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: deep breathing relaxation	Outcome domains: Breathing/ventilation Eligible outcomes (measures): Breathing/ventilation: SaO2 Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>
McHugh 2003 [BU-026-S] Reasons for exclusion from synthesis: C: active or ineligible comparator	Population: Asthma ICD code: CA23.32 Bronchial asthma (adults) No. randomised (all arms): 38	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: general asthma education + relaxation techniques	Outcome domains: Global symptoms,Lung function,Healthcare resource use Eligible outcomes (measures): Symptoms: diary card; Lung function: % predicted FEV; Medication use: inhaled corticosteroids Ineligible outcome domains: <i>Domain</i> <i>Outcomes</i>

Narwal 2012 [BU-030-S]	Population: Asthma	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: Pursed Lip Breathing Exercise (PLBE) + Diaphragmatic Exercise (DE)	Outcome domains: Global symptoms,Lung function Eligible outcomes (measures): Symptoms: dsypnoea (spirometer, ATS Scale of Dyspnea); Lung function: FEV1, PEFR Ineligible outcome domains: Domain Outcomes
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA23.32 Bronchial asthma (adults)			
	No. randomised (all arms): 30			
Prasanna 2015 [BU-032-S]	Population: Asthma	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: inhaled corticosteroids	Outcome domains: Global symptoms,Lung function Eligible outcomes (measures): Symptoms: asthma control (study-specific questionnaire); Lung function: FEV1, PEFR Ineligible outcome domains: Domain Outcomes
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA23.32 Bronchial asthma (adults, newly diagnosed)			
	No. randomised (all arms): 100			
Sharma 2019 [BU-037-S]	Population: COPD	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: pursed lip breathing	Outcome domains: Global symptoms,Breathing/ventilation,Lung function Eligible outcomes (measures): Symptoms: dyspnoea (BORG scale); Lung function: FEV1, FVC, FEV1/FVC Ineligible outcome domains: Domain Outcomes
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA22 Chronic obstructive pulmonary disease			
	No. randomised (all arms): 50			
Slader 2006 [BU-038-S]	Population: Asthma	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: non-specific upper body mobility exercises	Outcome domains: Global symptoms,HR-QoL,Breathing/ventilation,Lung function Eligible outcomes (measures): Ineligible outcome domains: Domain Outcomes
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA23.32 Bronchial asthma (adolescents >15 years, adults)			
	No. randomised (all arms): 57			
Swathi 2021 [BU-040-S]	Population: Asthma	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: pranayama	Outcome domains: Lung function Eligible outcomes (measures): Lung function: FEV1, FVC, FEV1/FVC Ineligible outcome domains:
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA23.32 Bronchial asthma (adults)			

	No. randomised (all arms):			Domain	Outcomes
	66				
Zaher 2020 [BU-044-S]	Population: Other chronic conditions	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: diaphragmatic and localized breathing exercise program	Outcome domains: Function (mobility),Breathing/ventilation	
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: GB61 Chronic kidney disease			Eligible outcomes (measures): Physical function (mobility): mobility (Borg scale, 6 minute walking test); Breathing/ventilation: arterial blood gases	
	No. randomised (all arms): 60			Ineligible outcome domains: Domain	Outcomes
Zaryyab 2021 [BU-045-S]	Population: Asthma	Intervention group(s): Buteyko	Inactive comparators: Active/Ineligible comparators: Papworth breathing technique	Outcome domains: HR-QoL,Function (mobility),Breathing/ventilation	
Reasons for exclusion from synthesis: C: active or ineligible comparator	ICD code: CA23.32 Bronchial asthma (adolescents >15 years, adults)			Eligible outcomes (measures): HR-QoL: mini AQLQ; Breathing/ventilation: rhythmic respiration, inspiration by upper thorax, nasal inspiration, bodily movement; Lung function: FVC/FEV1	
	No. randomised (all arms): 20			Ineligible outcome domains: Domain	Outcomes
Mohamed 2016 [BU-027-S]	Population: Cardiovascular conditions	Intervention group(s): Buteyko	Inactive comparators: usual care: traditional chest physical therapy modalities Active/Ineligible comparators: incentive spirometry	Outcome domains: Ineligible outcome domain	
Reasons for exclusion from synthesis: O: does not report any outcome domain from framework	ICD code: XA3B03 Coronary arteries disease (coronary artery bypass graft surgery)			Eligible outcomes (measures): Ineligible outcome domains: Domain	Outcomes
	No. randomised (all arms): 45			Process measure	Breath hold time (control pause)