

## Appendix A: Search Strategy

A comprehensive search of several databases from 2000 to July 28, 2023, any language was conducted. The databases included Ovid MEDLINE, Ovid EMBASE, Ovid Cochrane Central Register of Controlled Trials, Ovid Cochrane Database of Systematic Reviews, Scopus, and PubMed. The search strategy was designed and conducted by an experienced medical librarian with input from the study's principal investigator. Controlled vocabulary supplemented with keywords was used to search various outcomes from wearing medical masks or air purifying respirators.

### PubMed

#	Searches	Results
1	<p>((("Respiratory Protective Devices"[Mesh] OR "Masks"[Mesh] OR "N95 Respirators"[Mesh] OR surgical mask [tiab] OR surgical masks [tiab] OR medical masks [tiab] OR medical masks [tiab] OR air purifying respirator [tiab] OR air purifying respirators [tiab]) AND</p> <p>((("Stress, Physiological"[Mesh] OR physiological stress [tiab] OR "Heart Rate"[Mesh] OR heart rate [tiab] OR oxygen [tiab] OR oxygenation [tiab] OR "Oxygen Saturation"[Mesh] OR carbon dioxide [tiab] OR CO2 [tiab] OR "Physical Exertion"[Mesh] OR perceived exertion [tiab] OR "Pulmonary Ventilation"[Mesh] OR ventilation [tiab] OR "Tidal Volume"[Mesh] OR "Work of Breathing"[Mesh] OR breathing [tiab] OR tidal [tiab] OR "Stroke Volume"[Mesh] OR stroke volume [tiab] OR "Cardiac Output"[Mesh] OR cardiac output [tiab] OR heart output [tiab] OR "Blood Pressure"[Mesh] OR blood pressure [tiab] OR blood lactate [tiab] OR "Dyspnea"[Mesh] OR dyspnea [tiab]) OR</p> <p>("Mental Status and Dementia Tests"[Mesh] OR "Neuropsychological Tests"[Mesh] OR distraction [tiab] OR General Practitioner Assessment of Cognition [tiab] OR GPCOG [tiab] OR Montreal Cognitive Assessment [tiab] OR Mental Status Tests [tiab] OR Mental Status Test [tiab] OR Neurocognitive Tests [tiab] OR Neurocognitive Test [tiab] OR Neurobehavioral Cognitive Status Examination [tiab] OR COGNISTAT [tiab] OR Mini Mental State Examination [tiab] OR Folstein Mini-Mental State Examination [tiab] OR MMSE [tiab] OR Mini Mental Status Examination [tiab] OR Mini-Cog [tiab] OR MicroCog [tiab] OR Cognitive Assessment Screening Instrument [tiab] OR functional cognitive assessment scale [tiab] OR functional activities questionnaire [tiab] OR abbreviated mental test [tiab] OR six-item cognitive impairment test [tiab]) OR</p> <p>((("Phobic Disorders"[Mesh] OR claustrophobia [tiab] OR "Anxiety Disorders"[Mesh] OR "Anxiety"[Mesh] OR anxiety [tiab]) AND ("Pilots"[Mesh] OR flight attendants [tiab] OR pilots [tiab] OR airplane crew [tiab] OR "Health Personnel"[Mesh] OR health care personnel [tiab] OR healthcare personnel [tiab] OR health care professionals [tiab] OR healthcare professionals [tiab] OR "Emergency Responders"[Mesh] OR emergency responders [tiab] OR first responders [tiab] OR "Military Personnel"[Mesh] OR military [tiab])))</p>	5130
2	limit to 2000-2023	3770

**OID (Embase 1974 to 2023 July 27)**

#	Searches	Results
1	exp respiratory protection/ or exp mask/ or exp minimally 94 percent efficient filtering facepiece respirator/ or surgical mask.ti,ab. or surgical masks.ti,ab. or medical masks.ti,ab. or medical masks.ti,ab. or air purifying respirator.ti,ab. or air purifying respirators.ti,ab.	56330
2	exp physiological stress/ or exp heart rate/ or heart rate.ti,ab. or oxygen.ti,ab. or oxygenation.ti,ab. or exp oxygen saturation/ or exp carbon dioxide/ or carbon dioxide.ti,ab. or CO2.ti,ab. or perceived exertion.ti,ab. or exp lung ventilation/ or ventilation.ti,ab. or exp tidal volume/ or exp "work of breathing"/ or breathing.ti,ab. or tidal.ti,ab. or exp heart stroke volume/ or stroke volume.ti,ab. or exp heart output/ or cardiac output.ti,ab. or heart output.ti,ab. or exp blood pressure/ or blood pressure.ti,ab. or exp lactate blood level/ or blood lactate.ti,ab. or exp dyspnea/ or dyspnea.ti,ab.	2696032
3	exp neuropsychological assessment/ or distraction.ti,ab. or General Practitioner Assessment Cognition.ti,ab. or GPCOG.ti,ab. or Montreal Cognitive Assessment.ti,ab. or Mental Status Tests.ti,ab. or Mental Status Test.ti,ab. or Neurocognitive Tests.ti,ab. or Neurocognitive Test.ti,ab. or Neurobehavioral Cognitive Status Examination.ti,ab. or COGNISTAT.ti,ab. or Mini Mental State Examination.ti,ab. or Folstein Mini-Mental State Examination.ti,ab. or MMSE.ti,ab. or Mini Mental Status Examination.ti,ab. or Mini-Cog.ti,ab. or MicroCog.ti,ab. or Cognitive Assessment Screening Instrument.ti,ab. or functional cognitive assessment scale.ti,ab. or functional activities questionnaire.ti,ab. or abbreviated mental test.ti,ab. or six-item cognitive impairment test.ti,ab.	148613
4	exp claustrophobia/ or claustrophobia.ti,ab. or exp anxiety disorders/ or exp anxiety/ or anxiety.ti,ab.	628142
5	exp airplane pilot/ or exp flight attendant/ or exp airplane crew/ or flight attendants.ti,ab. or pilots.ti,ab. or airplane crew.ti,ab. or exp health care personnel/ or health care personnel.ti,ab. or healthcare personnel.ti,ab. or health care professionals.ti,ab. or healthcare professionals.ti,ab. or exp rescue personnel/ or emergency responders.ti,ab. or first responders.ti,ab. or exp military personnel/ or military.ti,ab.	2069720
6	4 and 5	75411
7	2 or 3 or 6	2893818
8	1 and 7	17516
9	limit 8 to yr="2000 - 2023"	16281
10	limit 9 to embase	<b>11622</b>

**OID (MEDLINE(R) ALL 1946 to July 27, 2023)**

#	Searches	Results
1	exp Respiratory Protective Devices/ or exp Masks/ or exp N95 Respirators/ or surgical mask.ti,ab. or surgical masks.ti,ab. or medical masks.ti,ab. or medical masks.ti,ab. or air purifying respirator.ti,ab. or air purifying respirators.ti,ab.	16090
2	exp Stress, Physiological/ or physiological stress.ti,ab. or exp Heart Rate/ or heart rate.ti,ab. or oxygen.ti,ab. or oxygenation.ti,ab. or exp Oxygen Saturation/ or exp Carbon Dioxide/ or carbon	1941052

	dioxide.ti,ab. or CO2.ti,ab. or exp Physical Exertion/ or perceived exertion.ti,ab. or exp Pulmonary Ventilation/ or ventilation.ti,ab. or exp Tidal Volume/ or exp "Work of Breathing"/ or breathing.ti,ab. or tidal.ti,ab. or exp Stroke Volume/ or stroke volume.ti,ab. or exp Cardiac Output/ or cardiac output.ti,ab. or heart output.ti,ab. or exp Blood Pressure/ or blood pressure.ti,ab. or blood lactate.ti,ab. or exp Dyspnea/ or dyspnea.ti,ab.	
3	exp "Mental Status and Dementia Tests"/ or exp Neuropsychological Tests/ or distraction.ti,ab. or General Practitioner Assessment Cognition.ti,ab. or GPCOG.ti,ab. or Montreal Cognitive Assessment.ti,ab. or Mental Status Tests.ti,ab. or Mental Status Test.ti,ab. or Neurocognitive Tests.ti,ab. or Neurocognitive Test.ti,ab. or Neurobehavioral Cognitive Status Examination.ti,ab. or COGNISTAT.ti,ab. or Mini Mental State Examination.ti,ab. or Folstein Mini-Mental State Examination.ti,ab. or MMSE.ti,ab. or Mini Mental Status Examination.ti,ab. or Mini-Cog.ti,ab. or MicroCog.ti,ab. or Cognitive Assessment Screening Instrument.ti,ab. or functional cognitive assessment scale.ti,ab. or functional activities questionnaire.ti,ab. or abbreviated mental test.ti,ab. or six-item cognitive impairment test.ti,ab.	229006
4	exp Phobic Disorders/ or claustrophobia.ti,ab. or exp Anxiety Disorders/ or exp Anxiety/ or anxiety.ti,ab.	332772
5	exp Pilots/ or flight attendants.ti,ab. or pilots.ti,ab. or airplane crew.ti,ab. or exp Health Personnel/ or health care personnel.ti,ab. or healthcare personnel.ti,ab. or health care professionals.ti,ab. or healthcare professionals.ti,ab. or exp Emergency Responders/ or emergency responders.ti,ab. or first responders.ti,ab. or exp Military Personnel/ or military.ti,ab.	754620
6	4 and 5	15855
7	2 or 3 or 6	2177473
8	1 and 7	5117
9	limit 8 to yr="2000 - 2023"	<b>3743</b>

### OID (EBM Reviews - Cochrane Central Register of Controlled Trials June 2023)

#	Searches	Results
1	exp Respiratory Protective Devices/ or exp Masks/ or exp N95 Respirators/ or surgical mask.ti,ab. or surgical masks.ti,ab. or medical masks.ti,ab. or medical masks.ti,ab. or air purifying respirator.ti,ab. or air purifying respirators.ti,ab.	2097
2	exp Stress, Physiological/ or physiological stress.ti,ab. or exp Heart Rate/ or heart rate.ti,ab. or oxygen.ti,ab. or oxygenation.ti,ab. or exp Oxygen Saturation/ or exp Carbon Dioxide/ or carbon dioxide.ti,ab. or CO2.ti,ab. or exp Physical Exertion/ or perceived exertion.ti,ab. or exp Pulmonary Ventilation/ or ventilation.ti,ab. or exp Tidal Volume/ or exp "Work of Breathing"/ or breathing.ti,ab. or tidal.ti,ab. or exp Stroke Volume/ or stroke volume.ti,ab. or exp Cardiac Output/ or cardiac output.ti,ab. or heart output.ti,ab. or exp Blood Pressure/ or blood pressure.ti,ab. or blood lactate.ti,ab. or exp Dyspnea/ or dyspnea.ti,ab.	223095
3	exp "Mental Status and Dementia Tests"/ or exp Neuropsychological Tests/ or distraction.ti,ab. or General Practitioner Assessment Cognition.ti,ab. or GPCOG.ti,ab. or Montreal Cognitive Assessment.ti,ab. or Mental Status Tests.ti,ab. or Mental Status Test.ti,ab. or Neurocognitive	30554

	Tests.ti,ab. or Neurocognitive Test.ti,ab. or Neurobehavioral Cognitive Status Examination.ti,ab. or COGNISTAT.ti,ab. or Mini Mental State Examination.ti,ab. or Folstein Mini-Mental State Examination.ti,ab. or MMSE.ti,ab. or Mini Mental Status Examination.ti,ab. or Mini-Cog.ti,ab. or MicroCog.ti,ab. or Cognitive Assessment Screening Instrument.ti,ab. or functional cognitive assessment scale.ti,ab. or functional activities questionnaire.ti,ab. or abbreviated mental test.ti,ab. or six-item cognitive impairment test.ti,ab.	
4	exp Phobic Disorders/ or claustrophobia.ti,ab. or exp Anxiety Disorders/ or exp Anxiety/ or anxiety.ti,ab	66801
5	exp Pilots/ or flight attendants.ti,ab. or pilots.ti,ab. or airplane crew.ti,ab. or exp Health Personnel/ or health care personnel.ti,ab. or healthcare personnel.ti,ab. or health care professionals.ti,ab. or healthcare professionals.ti,ab. or exp Emergency Responders/ or emergency responders.ti,ab. or first responders.ti,ab. or exp Military Personnel/ or military.ti,ab.	21432
6	4 and 5	1588
7	2 or 3 or 6	252392
8	1 and 7	1308
9	limit 8 to yr="2000 - 2023"	<b>1046</b>

#### OID (EBM Reviews - Cochrane Database of Systematic Reviews 2005 to July 25, 2023)

#	Searches	Results
1	(surgical mask or surgical masks or medical masks or medical masks or air purifying respirator or air purifying respirators).ti,ab.	3
2	(physiological stress or heart rate or oxygen or oxygenation or carbon dioxide or CO2 or perceived exertion or ventilation or breathing or tidal or stroke volume or cardiac output or heart output or blood pressure or blood lactate or dyspnea).ti,ab.	968
3	(distraction or General Practitioner Assessment Cognition or GPCOG or Montreal Cognitive Assessment or Mental Status Tests or Mental Status Test or Neurocognitive Tests or Neurocognitive Test or Neurobehavioral Cognitive Status Examination or COGNISTAT or Mini Mental State Examination or Folstein Mini-Mental State Examination or MMSE or Mini Mental Status Examination or Mini-Cog or MicroCog or Cognitive Assessment Screening Instrument or functional cognitive assessment scale or functional activities questionnaire or abbreviated mental test or six-item cognitive impairment test).ti,ab.	54
4	(claustrophobia or anxiety).ti,ab.	425
5	(flight attendants or pilots or airplane crew or health care personnel or healthcare personnel or health care professionals or healthcare professionals or emergency responders or first responders or military).ti,ab.	156
6	4 and 5	24
7	2 or 3 or 6	1038

8	1 and 7	0
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**Scopus (Elsevier)**

1	TITLE-ABS ( ( {surgical mask} OR {surgical masks} OR {medical masks} OR {medical masks} OR {air purifying respirator} OR {air purifying respirators} ) AND ( ( {physiological stress} OR {heart rate} OR oxygen OR oxygenation OR {carbon dioxide} OR co2 OR {perceived exertion} OR ventilation OR breathing OR tidal OR {stroke volume} OR {cardiac output} OR {heart output} OR {blood pressure} OR {blood lactate} OR dyspnea ) OR ( distraction OR {General Practitioner Assessment of Cognition} OR gpcog OR {Montreal Cognitive Assessment} OR {Mental Status Tests} OR {Mental Status Test} OR {Neurocognitive Tests} OR {Neurocognitive Test} OR {Neurobehavioral Cognitive Status Examination} OR cognistat OR {Mini Mental State Examination} OR {Folstein Mini-Mental State Examination} OR mmse OR {Mini Mental Status Examination} OR {Mini-Cog} OR microcog OR {Cognitive Assessment Screening Instrument} OR {functional cognitive assessment scale} OR {functional activities questionnaire} OR {abbreviated mental test} OR {six-item cognitive impairment test} ) OR ( ( claustrophobia OR anxiety ) AND ( {flight attendants} OR pilots OR {airplane crew} OR {health care personnel} OR {healthcare personnel} OR {health care professionals} OR {healthcare professionals} OR {emergency responders} OR {first responders} OR military ) ) ) )	406
2	( EXCLUDE ( DOCTYPE , "cp" ) OR EXCLUDE ( DOCTYPE , "cr" ) )	391
3	2000-2023	<b>374</b>