

Appendix A: Full search strategy

Low and Middle Income Countries – LMIC Filters

The Cochrane Central Register of Controlled Trials (CENTRAL) (Cochrane Library Online)

- #1** (Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America"):ti,ab,kw
- #2** (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or "Burkina Faso" or "Burkina Fasso" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or "Cape Verde" or "Central African Republic" or Chad or Chile or China or Colombia or Comoros or "Comoro Islands" or Comores or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic"):ti,ab,kw
- #3** (Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Timor" or "East Timur" or "Timor Leste" or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or Georgia or Georgian or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz or Kirgizstan or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania):ti,ab,kw
- #4** (Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Mexico or Micronesia or "Middle East" or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger or Nigeria or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or "Puerto Rico"):ti,ab,kw
- #5** (Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or

- Uzbekistan or Uzbek or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia):**ti,ab,kw**
- #6** (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income or underserved or "under served" or deprived or poor*) NEXT (countr* or nation* or population* or world):**ti,ab,kw**
- #7** (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income) NEXT (economy or economies):**ti,ab,kw**
- #8** low* NEXT (gdp or gnp or "gross domestic" or "gross national"):**ti,ab,kw**
- #9** (low NEAR/3 middle NEAR/3 countr*):**ti,ab,kw**
- #10** (Imic or Imics or "third world" or "lami country" or "lami countries"):**ti,ab,kw**
- #11** ("transitional country" or "transitional countries"):**ti,ab,kw**
- #12** (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11)

EMBASE (Ovid)

- 1. Developing Country.sh.**
- 2. (Africa or Asia or Caribbean or West Indies or South America or Latin America or Central America).hw,ti,ab,cp.**
- 3. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or**

Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).**hw,ti,ab,cp.**

4. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (countr* or nation? or population? or world)).**ti,ab.**

5. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).**ti,ab.**

6. (low* adj (gdp or gnp or gross domestic or gross national)).**ti,ab.**

7. (low adj3 middle adj3 countr*).**ti,ab.**

8. (lmic or lmics or third world or lami countr*).**ti,ab.**

9. transitional countr*.**ti,ab.**

10. or/1-9

MEDLINE (Ovid)

1. Developing Countries.**sh,kf.**

2. (Africa or Asia or Caribbean or West Indies or South America or Latin America or Central America).**hw,kf,ti,ab,cp.**

3. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or

Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or TadzhiKistan or Tadjikistan or TadzhiK or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).**hw,kf,ti,ab,cp.**

4. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (countr* or nation? or population? or world)).**ti,ab.**

5. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).**ti,ab.**

6. (low* adj (gdp or gnp or gross domestic or gross national)).**ti,ab.**

7. (low adj3 middle adj3 countr*).**ti,ab.**

8. (Imic or Imics or third world or lami countr*).**ti,ab.**

9. transitional countr*.**ti,ab.**

10. or/1-9

Cochrane Database

1. [mh "pulmonary disease, chronic obstructive"]
2. Chronic obstructive pulmonary disease
3. COPD
4. [mh emphysema]
5. Emphysema
6. [mh "Bronchitis, Chronic"]
7. Chronic bronchitis
8. [mh "Tuberculosis, Pulmonary"]
9. Tuberculosis
10. [mh "Respiratory Tract Diseases"]
11. Lung diseases
12. Respiratory Tract Diseases
13. [mh "Lung Neoplasms"]
14. [mh Asthma]
15. Asthma
16. (lung adj3 (cancer or tumo* or neoplasm*))
17. (Pulmonary adj3 hypertension)
18. [mh "Hypertension, Pulmonary"]
19. Pulmonary artery pressure
20. Pulmonary arterial pressure
21. Right ventricular systolic pressure
22. mPap
23. [mh "Idiopathic Interstitial Pneumonias"]
24. Idiopathic pulmonary fibrosis
25. [mh "Lung Diseases, Interstitial"]
26. Interstitial lung disease
27. [mh "Pulmonary Fibrosis"]
28. Cryptogenic fibrosing alveolitis
29. [mh "Alveolitis, Extrinsic Allergic"]
30. Usual interstitial pneumonia
31. Idiopathic fibrosing alveolitis
32. {or #1-#31}
33. [mh "Motor Activity"]
34. [mh "Leisure Activities"]
35. ((aerobic or motor or leisure) adj3 activit*)
36. physical fitness
37. [mh sports]
38. sport*
39. [mh recreation] or recreation
40. [mh exercise]
41. exercis*
42. fitness
43. walk* or [mh walking]
44. [mh "sedentary behavior"] or sedentar*
45. sitting
46. reclining

47. lying
48. (Physical* adj3 inactivit*)
49. leisure time behavio*
50. [mh "screen time"]
51. small screen
52. [mh television]
53. (television or TV)
54. electronic media
55. [mh "video games"]
56. [mh "social media"]
57. [mh internet]
58. "social media"
59. [mh smartphone]
60. [mh "computers, handheld"]
61. [mh "cell phone"]
62. [mh computers]
63. [mh reading] or [mh writing]
64. ((reading or writing or studying) adj3 time)
65. [mh "automobile driving"]
66. (driving adj3 time)
67. passive transportation
68. (active adj3 (travel* or transport*))
69. [mh bicyling] or bicycl* or cycle or cycling
70. [mh "physical exertion"]
71. (energy expenditure) or [mh "energy metabolism"]
72. (sleep* adj3 (hour* or duration or time or length or period or span))
73. [mh sleep]
74. {or #33-#73}
75. (Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America"):ti,ab,kw
76. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or "Burkina Faso" or "Burkina Fasso" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or "Cape Verde" or "Central African Republic" or Chad or Chile or China or Colombia or Comoros or "Comoro Islands" or Comores or Mayotte or Congo or Zaire or "Costa Rica" or "Coted'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic"):ti,ab,kw
77. (Djiboutior "French Somaliland" or Dominica or "Dominican Republic" or "East Timor" or "East Timur" or "Timor Leste" or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or Georgia or Georgian or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz

- or Kirgizstan or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania):ti,ab,kw
78. (Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Mexico or Micronesia or "Middle East" or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger or Nigeria or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or "Puerto Rico"):ti,ab,kw
79. (Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoa Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbekistan or Uzbek or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia):ti,ab,kw
80. (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income or underserved or "under served" or deprived or poor*) NEXT (countr* or nation* or population* or world):ti,ab,kw
81. (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income) NEXT (economy or economies):ti,ab,kw
82. low* NEXT (gdp or gnp or "gross domestic" or "gross national"):ti,ab,kw
83. (low NEAR/3 middle NEAR/3 countr*):ti,ab,kw
84. (Imic or Imics or "third world" or "lami country" or "lami countries"):ti,ab,kw
85. ("transitional country" or "transitional countries"):ti,ab,kw
86. {or #75-#85}
87. #32 and #74 and #86
88. (adult.mp.) or [mh "middle aged"] or age*.tw.
89. #87 and #88
90. (child* or adolescent or infan*).tw.
91. #87 not #90

Embase Database

- 1 chronic obstructive lungdisease/
- 2 copd.ti,ab.
- 3 Bronchitis/
- 4 Chronic bronchitis/
- 5 (chronic adj5 (obstruct\$ or limit#\$)).ti.
- 6 (obstruct\$ adj3 (airflow\$ or airway\$ or respirat\$ or lung or pulmonary) adj2 (disease\$ or disorder\$)).ti,ab.
- 7 Lung emphysema/
- 8 'chronic bronchitis'.ti,ab.
- 9 emphysema.ti,ab.
- 10 coad.ti,ab.
- 11 lung tuberculosis/
- 12 Tuberculosis.tw.
- 13 exp respiratory tract disease/
- 14 Lung diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 15 Respiratory Tract Diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 16 exp asthma/
- 17 Asthma.tw.
- 18 exp lung tumor/
- 19 (lung adj3 (cancer or tumo* or neoplasm*)).tw.
- 20 (Pulmonary adj3 hypertension).tw.
- 21 pulmonary hypertension/
- 22 lung artery pressure/
- 23 Pulmonary artery pressure.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 24 Pulmonary arterial pressure.mp.
- 25 Right ventricular systolic pressure.mp.
- 26 mPap.mp.
- 27 interstitial pneumonia/
- 28 Idiopathic Interstitial Pneumonia.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 29 fibrosing alveolitis/
- 30 Idiopathic pulmonary fibrosis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 31 exp interstitial lung disease/
- 32 Interstitial Lung Diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 33 lung fibrosis/

- 34 Pulmonary Fibrosis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 35 Cryptogenic fibrosing alveolitis.mp.
- 36 allergic pneumonitis/
- 37 Extrinsic Allergic Alveolitis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 38 Usual interstitial pneumonia.mp.
- 39 Idiopathic fibrosing alveolitis.mp.
- 40 or/1-39
- 41 motor activity/
- 42 leisure/
- 43 (((aerobic or motor or leisure) adj3 activit*) or "physical* activ*").tw.
- 44 fitness/
- 45 physical fitness.tw.
- 46 exp sport/
- 47 sport*.tw.
- 48 recreation/
- 49 Recreation.tw.
- 50 exp exercise/
- 51 exercis*.tw.
- 52 walk*.tw. or Walking/
- 53 Sedentary Behavior.mp. or sedentary lifestyle/
- 54 sitting.tw.
- 55 reclining.tw.
- 56 "lying down".tw.
- 57 (Physical* adj3 inactivit*).tw.
- 58 leisure time behavio*.tw.
- 59 screen time/
- 60 small screen.tw.
- 61 Television/
- 62 (television or TV).tw.
- 63 electronic media.tw.
- 64 video game/
- 65 social media/
- 66 Internet/
- 67 "social media".tw.
- 68 smartphone/
- 69 personal digital assistant/
- 70 mobile phone/
- 71 Computers/
- 72 reading/
- 73 writing/
- 74 ((reading or writing or studying) adj3 time).tw.
- 75 car driving/
- 76 (driving adj3 time).tw.
- 77 passive transportation.tw.

- 78 (active adj3 (travel* or transport*)).tw.
- 79 cycling/
- 80 (bicycl* or cycling).tw.
- 81 Physical Exertion.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
- 82 energy expenditure.mp. or energy expenditure/
- 83 (sleep* adj3 (hour* or duration or time or length or period or span)).tw.
- 84 exp sleep/
- 85 or/41-84
- 86 Developing Country.sh.
- 87 (Africa or Asia or Caribbean or West Indies or South America or Latin America or Central America).hw,ti,ab,cp.
- 88 (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet

- Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,ti,ab,cp.
- 89 ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (countr* or nation? or population? or world)).ti,ab.
- 90 ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).ti,ab.
- 91 (low* adj (gdp or gnp or gross domestic or gross national)).ti,ab.
- 92 (low adj3 middle adj3 countr*).ti,ab.
- 93 (lmic or lmic3 or third world or lami countr*).ti,ab.
- 94 transitional countr*.ti,ab.
- 95 or/86-94
- 96 40 and 85 and 95
- 97 adult.mp. or middle aged.sh. or age:.tw.
- 98 96 and 97
- 99 exp *adolescence/ or exp *adolescent/ or exp *child/ or exp *childhood disease/ or exp *infant disease/ or (adolescen* or babies or baby or boy? or boyfriend or boyhood or girlfriend or girlhood or child or child* or child*3 or children* or girl? or infan* or juvenil* or juvenile* or kid? or minors or minors* or neonat* or neo-nat* or newborn* or new-born* or paediatric* or peadiatric* or pediatric* or perinat* or preschool* or puber* or pubescen* or school* or teen* or toddler? or underage? or under-age? or youth*).ti,kw.
- 10098 not 99

EMCare Database

- 1 chronic obstructive lungdisease/
- 2 copd.ti,ab.
- 3 Bronchitis/
- 4 Chronic bronchitis/
- 5 (chronic adj5 (obstruct\$ or limit#\$)).ti.
- 6 (obstruct\$ adj3 (airflow\$ or airway\$ or respirat\$ or lung or pulmonary) adj2 (disease\$ or disorder\$)).ti,ab.
- 7 Lung emphysema/
- 8 'chronic bronchitis'.ti,ab.
- 9 emphysema.ti,ab.
- 10 coad.ti,ab.
- 11 lung tuberculosis/
- 12 Tuberculosis.tw.
- 13 exp respiratory tract disease/
- 14 Lung diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 15 Respiratory Tract Diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 16 exp asthma/
- 17 Asthma.tw.
- 18 exp lung tumor/
- 19 (lung adj3 (cancer or tumo* or neoplasm*)).tw.
- 20 (Pulmonary adj3 hypertension).tw.
- 21 pulmonary hypertension/
- 22 lung artery pressure/
- 23 Pulmonary artery pressure.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 24 Pulmonary arterial pressure.mp.
- 25 Right ventricular systolic pressure.mp.
- 26 mPap.mp.
- 27 interstitial pneumonia/
- 28 Idiopathic Interstitial Pneumonia.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 29 fibrosing alveolitis/
- 30 Idiopathic pulmonary fibrosis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 31 exp interstitial lung disease/
- 32 Interstitial Lung Diseases.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 33 lung fibrosis/
- 34 Pulmonary Fibrosis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 35 Cryptogenic fibrosing alveolitis.mp.
- 36 allergic pneumonitis/

- 37 Extrinsic Allergic Alveolitis.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 38 Usual interstitial pneumonia.mp.
- 39 Idiopathic fibrosingalveolitis.mp.
- 40 or/1-39
- 41 motor activity/
- 42 leisure/
- 43 (((aerobic or motor or leisure) adj3 activit*) or "physical* activ*").tw.
- 44 fitness/
- 45 physical fitness.tw.
- 46 exp sport/
- 47 sport*.tw.
- 48 recreation/
- 49 Recreation.tw.
- 50 exp exercise/
- 51 exercis*.tw.
- 52 walk*.tw. or Walking/
- 53 Sedentary Behavior.mp. or sedentary lifestyle/
- 54 sitting.tw.
- 55 reclining.tw.
- 56 "lying down".tw.
- 57 (Physical* adj3 inactivit*).tw.
- 58 leisure time behavio*.tw.
- 59 screen time/
- 60 small screen.tw.
- 61 Television/
- 62 (television or TV).tw.
- 63 electronic media.tw.
- 64 video game/
- 65 social media/
- 66 Internet/
- 67 "social media".tw.
- 68 smartphone/
- 69 personal digital assistant/
- 70 mobile phone/
- 71 Computers/
- 72 reading/
- 73 writing/
- 74 ((reading or writing or studying) adj3 time).tw.
- 75 car driving/
- 76 (driving adj3 time).tw.
- 77 passive transportation.tw.
- 78 (active adj3 (travel* or transport*)).tw.
- 79 cycling/
- 80 (bicycl* or cycling).tw.
- 81 Physical Exertion.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 82 energy expenditure.mp. or energy expenditure/

- 83 (sleep* adj3 (hour* or duration or time or length or period or span)).tw.
- 84 exp sleep/
- 85 or/41-84
- 86 Developing Country.sh.
- 87 (Africa or Asia or Caribbean or West Indies or South America or Latin America or Central America).hw,ti,ab,cp.
- 88 (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,ti,ab,cp.
- 89 ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (countr* or nation? or population? or world)).ti,ab.

- 90 ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).ti,ab.
- 91 (low* adj (gdp or gnp or gross domestic or gross national)).ti,ab.
- 92 (low adj3 middle adj3 countr*).ti,ab.
- 93 (lmic or lmic3 or third world or lami countr*).ti,ab.
- 94 transitional countr*.ti,ab.
- 95 or/86-94
- 96 40 and 85 and 95
- 97 adult.mp. or middle aged.sh. or age:.tw.
- 98 96 and 97
- 99 exp*adolescence/ or exp*adolescent/ or exp*child/ or exp*childhood disease/ or exp*infant disease/ or (adolescen* or babies or baby or boy? or boyfriend or boyhood or girlfriend or girlhood or child or child* or child*3 or children* or girl? or infan* or juvenil* or juvenile* or kid? or minors or minors* or neonat* or neo-nat* or newborn* or new-born* or paediatric* or peadiatric* or pediatric* or perinat* or preschool* or puber* or pubescen* or school* or teen* or toddler? or underage? or under-age? or youth*).ti,kw.
- 10098 not 99

Global Index Medicus search strategy

(mh:(pulmonary disease, chronic obstructive)) OR (tw:(copd)) OR (tw:(chronic obstructive pulmonary disease)) OR (mh:(Emphysema)) OR (tw:(Emphysema)) OR (mh:(Bronchitis, Chronic)) OR (tw:(Chronic bronchitis)) OR (mh:(Tuberculosis, Pulmonary)) OR (tw:(Tuberculosis)) OR (mh:(Respiratory Tract Diseases)) OR (tw:(Lung diseases)) OR (tw:(Respiratory Tract Diseases)) OR (mh:(Lung Neoplasms)) OR (mh:(Asthma)) OR (tw:(asthma)) OR (tw:(Pulmonary hypertension)) OR (mh:(Hypertension, Pulmonary)) OR (tw:(Pulmonary artery pressure)) OR (tw:(Pulmonary arterial pressure)) OR (tw:(Right ventricular systolic pressure)) OR (tw:(mPap)) OR (mh:(Idiopathic Interstitial Pneumonias)) OR (tw:(Idiopathic pulmonary fibrosis)) OR (mh:(Lung Diseases, Interstitial)) OR (mh:(Pulmonary Fibrosis)) OR (tw:(Cryptogenic fibrosing alveolitis)) OR (mh:(Alveolitis, Extrinsic Allergic)) OR (tw:(Usual interstitial pneumonia)) OR (tw:(Idiopathic fibrosing alveolitis))

AND

(mh:(Motor Activity)) OR (mh:(Leisure Activities)) OR (tw:((((aerobic or motor or leisure) adj3 activit* or "physical* activ*")))) OR (mh:(Physical Fitness)) OR (tw:(Physical Fitness)) OR (mh:(Sports)) OR (tw:(sport*)) OR (tw:(recreation)) OR (mh:(recreation)) OR (mh:(Exercise)) OR (tw:(Exercis*)) OR (tw:(fitness)) OR (tw:(walk*)) OR (mh:(Walking)) OR (mh:(Sedentary Behavior)) OR (tw:(sedentar*)) OR (tw:(sitting)) OR (tw:(reclining)) OR (tw:(("lying down"))) OR (tw:(Physical* adj3 inactivit*)) OR (tw:(leisure time behavio*)) OR (mh:(Screen Time)) OR (tw:(small screen)) OR (mh:(Television)) OR (tw:(Television or TV)) OR (tw:(electronic media)) OR (mh:(video games)) OR (mh:(Social Media)) OR (mh:(internet)) OR (tw:(("social media".)) OR (mh:(Smartphone)) OR (mh:(Computers, Handheld)) OR (mh:(Cell Phone)) OR (mh:(Computers)) OR (mh:(reading)) OR (mh:(writing)) OR (tw:((((reading or writing or studying) adj3 time)))) OR (mh:(Automobile Driving)) OR (tw:(driving adj3 time)) OR (tw:(passive transportation)) OR (tw:(active adj3 (travel* or transport*))) OR (mh:(bicycling)) OR (tw:(bicycl* or cycling)) OR (mh:(Physical Exertion)) OR (tw:(energy expenditure)) OR (mh:(Energy Metabolism)) OR (tw:(sleep* adj3 (hour* or duration or time or length or period or span)))) OR (mh:(Sleep))

Ovid MEDLINE(R) Database

- 1 Pulmonary Disease, Chronic Obstructive/
- 2 Chronic obstructive pulmonary disease.tw.
- 3 COPD.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
- 4 Emphysema/
- 5 Emphysema.tw.
- 6 Bronchitis, Chronic/
- 7 Chronic bronchitis.tw.
- 8 exp Tuberculosis, Pulmonary/
- 9 Tuberculosis.tw.
- 10 exp Respiratory Tract Diseases/
- 11 Lung diseases.mp.
- 12 Respiratory Tract Diseases.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
- 13 exp Lung Neoplasms/
- 14 exp Asthma/
- 15 Asthma.tw.
- 16 (lung adj3 (cancer or tumo* or neoplasm*)).tw.
- 17 (Pulmonary adj3 hypertension).tw.
- 18 Hypertension, Pulmonary/
- 19 Pulmonary artery pressure.mp.
- 20 Pulmonary arterial pressure.mp.
- 21 Right ventricular systolic pressure.mp.
- 22 mPap.mp.
- 23 exp Idiopathic Interstitial Pneumonias/
- 24 Idiopathic pulmonary fibrosis.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
- 25 exp Lung Diseases, Interstitial/
- 26 Interstitial lung disease.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
- 27 exp Pulmonary Fibrosis/
- 28 Cryptogenic fibrosing alveolitis.mp.
- 29 Alveolitis, Extrinsic Allergic/
- 30 Usual interstitial pneumonia.mp.
- 31 Idiopathic fibrosing alveolitis.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

32 or/1-31
33 Motor Activity/
34 Leisure Activities/
35 (((aerobic or motor or leisure) adj3 activit*) or "physical* activ*").tw.
36 Physical Fitness/
37 physical fitness.tw.
38 exp Sports/
39 sport*.tw.
40 recreation.tw. or Recreation/
41 exp Exercise/
42 exercis*.tw.
43 exp Physical Fitness/
44 fitness.tw.
45 walk*.tw. or Walking/
46 Sedentary Behavior/ orsedentar*.mp.
47 sitting.tw.
48 reclining.tw.
49 "lying down".tw.
50 (Physical* adj3 inactivit*).tw.
51 leisure time behavio*.tw.
52 Screen Time/
53 small screen.tw.
54 Television/
55 (television or TV).tw.
56 electronic media.tw.
57 video games/
58 Social Media/
59 internet/
60 "social media".tw.
61 Smartphone/
62 Computers, Handheld/
63 Cell Phone/
64 Computers/
65 reading/ or writing/
66 ((reading or writing or studying) adj3 time).tw.
67 Automobile Driving/
68 (driving adj3 time).tw.
69 passive transportation.tw.
70 (active adj3 (travel* or transport*)).tw.
71 bicycling/ or bicycl*.tw. or cycling.tw.
72 Physical Exertion/
73 energy expenditure.mp. or Energy Metabolism/
74 (sleep* adj3 (hour* or duration or time or length or period or span)).tw.
75 exp Sleep/
76 or/33-75
77 Developing Countries.sh,kf.
78 (Africa or Asia or Caribbean or West Indies or South America or Latin America or Central
America).hw,kf,ti,ab,cp.

79 83 (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,kf,ti,ab,cp.

80 (low* adj (gdp or gnp or gross domestic or gross national)).ti,ab.

81 (low adj3 middle adj3 countr*).ti,ab.

82 (Imic or Imics or third world or lami countr*).ti,ab.

83 transitional countr*.ti,ab.

84 or/77-83

85 32 and 76 and 84

86 animals/ not humans/

87 85 not 86

88 adult.mp. or middle aged.sh. or age:.tw.

89 87 and 88

90 (child: or adolescent or infan:).mp.

91 89 not 90

CINAHL Database

1. MH Pulmonary Disease, Chronic Obstructive
2. Chronic obstructive pulmonary disease
3. COPD
4. MH Emphysema
5. Emphysema Expanders
6. MH Bronchitis, Chronic
7. Chronic bronchitis
8. MH Tuberculosis, Pulmonary
9. Tuberculosis Expanders
10. MH Respiratory Tract
11. Lung diseases
12. Respiratory Tract
13. MH Lung Neoplasms
14. MH Asthma
15. Asthma
16. lung n3 (cancer or tumor* or neoplasm*)
17. Pulmonary n3 hypertension
18. MH Hypertension, Pulmonary
19. Pulmonary artery pressure
20. Pulmonary arterial pressure
21. Right ventricular systolic pressure
22. mPap
23. MH Idiopathic Interstitial Pneumonias
24. Idiopathic pulmonary fibrosis
25. MH Lung Diseases, Interstitial
26. Interstitial lung disease
27. MH Pulmonary Fibrosis
28. Cryptogenic fibrosing alveolitis
29. MH Alveolitis, Extrinsic Allergic
30. Usual interstitial pneumonia
31. Idiopathic fibrosing alveolitis
32. S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32
33. MH Motor Activity
34. MH Leisure Activities
35. (((aerobic or motor or leisure) n3 activit*) or "physical* activ*")
36. MH Physical Fitness
37. physical fitness
38. MH Sports
39. sport*
40. recreation OR MH recreation
41. MH Exercise OR Exercis*
42. fitness
43. walk* OR MH Walking
44. MH Sedentary Behavior AND sedentar*
45. sitting OR reclining OR "lying down"

46. Physical* n3 inactivit*
47. leisure time behavio*
48. MH "Screen Time"
49. small screen
50. MH Television OR Television AND tv
51. electronic media
52. MHvideogames
53. MH Social Media
54. MH internet
55. "social media"
56. MH Smartphone
57. (MH "Computers, Hand-Held")
58. (MH "Cellular Phone")
59. (MH "Computers andComputerization")
60. (MH "Reading")
61. (MH "Writing")
62. ((reading or writing or studying) n3 time)
63. (MH "Automobile Driving")
64. driving n3 time
65. passive transportation
66. active n3 (travel* or transport*)
67. (MH "Cycling")
68. bicycl* OR cycling
69. (MH "Exertion")
70. (MH "Energy Metabolism")
71. energy expenditure
72. sleep* n3 (hour* or duration or time or length or period or span)
73. MH sleep
74. S33 OR S34 OR 35 OR 36 OR 37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45
OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58
OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71
OR S72 OR S73
75. MH Pulmonary Disease, Chronic Obstructive
76. Chronic obstructive pulmonarydisease
77. COPD
78. MH Emphysema
79. Emphysema
80. MH Bronchitis, Chronic
81. Chronic bronchitis
82. MH Tuberculosis, Pulmonary
83. Tuberculosis
84. MH Respiratory TractDiseases
85. Lung diseases
86. Respiratory Tract Diseases
87. MH Lung Neoplasms
88. MH Asthma
89. Asthma
90. lung n3 (cancer or tumo* or neoplasm*)

91. Pulmonary n3hypertension
92. MH Hypertension, Pulmonary
93. Pulmonary artery pressure
94. Pulmonary arterial pressure
95. Right ventricular systolicpressure
96. mPap
97. MH Idiopathic InterstitialPneumonias
98. Idiopathic pulmonaryfibrosis
99. MH Lung Diseases, Interstitial
100. Interstitial lung disease
101. MH Pulmonary Fibrosis
102. Cryptogenic fibrosing alveolitis
103. MHAlveolitis, ExtrinsicAllergic
104. Usual interstitialpneumonia
105. Idiopathic fibrosing alveolitis
106. S75OR S76OR S77OR S78OR S79OR S80OR S81OR S82OR S83OR S84OR S85OR S86OR S87OR S88OR S89OR S90OR S91OR S92OR S93OR S94OR S95OR S96OR S97OR S98OR S99OR S100OR S101OR S102OR S103OR S104OR S105
107. MH Motor Activity
108. MH Leisure Activities
109. (((aerobic or motor or leisure) n3 activit*) or "physical* activ*")
110. MH Physical Fitness
111. physical fitness
112. MH Sports
113. sport*
114. recreation OR MHrecreation
115. MH Exercise ORExercis*
116. fitness
117. walk* OR MHWalking
118. MH Sedentary Behavior AND sedentar*
119. sitting OR reclining OR "lying down"
120. Physical* n3 inactivit*
121. leisure time behavio*
122. MH "Screen Time"
123. small screen
124. MH Television OR Television AND tv
125. electronic media
126. MHvideo games
127. MHSocial Media
128. MH internet
129. "social media"
130. MH Smartphone
131. (MH "Computers, Hand-Held")
132. (MH "Cellular Phone")
133. (MH "Computers andComputerization")
134. (MH "Reading")
135. (MH "Writing")
136. ((reading or writing or studying) n3 time)

- 137. (MH "Automobile Driving")
- 138. driving n3 time
- 139. passive transportation
- 140. active n3 (travel* or transport*)
- 141. (MH "Cycling")
- 142. bicycl* OR cycling
- 143. (MH "Exertion")
- 144. (MH "Energy Metabolism")
- 145. energy expenditure
- 146. sleep* n3 (hour* or duration or time or length or period or span)
- 147. MH sleep
- 148. S107ORS108ORS109ORS110ORS111ORS112ORS113ORS114ORS115ORS116ORS117ORS118ORS119ORS120ORS121ORS122ORS123ORS124ORS125ORS126ORS127ORS128ORS129ORS130ORS131ORS132ORS133ORS134ORS135ORS136ORS137ORS138ORS139ORS140ORS141ORS142ORS143ORS144ORS145ORS146ORS147
- 149. (MH "Developing Countries")
- 150. Africa or Asia or Caribbean or West Indies or South America or Latin America or Central America
- 151. TX (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or

Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)

152. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) n1 (countr* or nation? or population? Or world))

153. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) n1 (economy or economies))

154. (low* n1 (gdp or gnp or gross domestic or gross national))

155. (low n3 middle n3 countr*)

156. Imic or Imics or third world or lami countr*

157. transitional countr*

158. S149 OR S150 OR S151 OR S152 OR S153 OR S154 OR S155 OR S156 OR S157

159. S106 AND S148 AND S158

160. TI (child* OR stepchild* OR step-child* OR kid OR kids OR girl OR girls OR boy OR boys OR teen* OR youth* OR youngster* OR adolescent* OR adolescence OR preschool* OR preschool* OR kindergarten* OR school* OR juvenile* OR minors OR p?ediatric* OR PICU) OR AB (child* OR stepchild* OR step-child* OR kid OR kids OR girl OR girls OR boy OR boys OR teen* OR youth* OR youngster* OR adolescent* OR adolescence OR preschool* OR preschool* OR kindergarten* OR school* OR juvenile* OR minors OR p?ediatric* OR PICU) OR MH child+

Appendix B: Full extraction of the variables used to measure physical behaviours

Reference	Variables used to describe behaviour(s)	Group-level summary data
Device-based measurement		
Amorim (2014) ⁶⁶	Step count; Distance walked; Time spent walking	Step count (6,251.0 ± 2,422.8 steps/day); Distance walked (3.9 ± 1.9 km/day); Time spent walking (68.5 ± 25.8 min/day)
Borges (2012) ⁶⁸	Total inactive time; Lying; Sitting; Total active time; Standing; Walking; Others; Steps/day	Total inactive time (69.6±16.1%); Lying (30.7±20.2%); Sitting (38.9±17.6%); Total active time (30.4±16.1%); Standing (22.7±14.0%); Walking (6.1±4.4%); Others (1.6±0.9%); Steps/day (3575±2799)
Cani (2019) ⁷⁰	Time spent standing, Sitting time, Lying time, Walking time; Movement intensity during walking; Energy Expenditure; Number of steps; Active physical activities (standing+walking); Sedentary physical activities (sitting+lying); Time in sedentary physical activities <1.5METs; Time in physical activities ≥3METs; Sedentary (>=8.5hrs sedentary); Active (>=80 min MVPA); Severe physical inactivity (<4580 steps)	Time spent standing (DOT:139±64.3; CG:149±60.9min/day), Sitting time (DOT: 418±104; CG: 390±111min/day), Lying time (DOT: 114±81.6; CG: 103±85.4min/day), Walking time (DOT: 36.1±23.7; CG: 90.7±39.6min/day); Movement intensity during walking (DOT: 1.53±0.22; CG: 1.88±1.01m/s ²); Energy Expenditure (DOT: 1098±225; CG: 1184±225kcal/day); Number of steps (DOT: 2669±1883; CG: 4599±2308 steps/day); Active physical activities (DOT: 187±77.9; CG: 258±91.4min/day); Sedentary physical activities (DOT: 533±77.8; CG: 494±83.1min/day); Time in sedentary physical activities <1.5METs (DOT:623±63.7; CG: 598±50.0min/day); Time in physical activities ≥3METs (DOT: 47.8±29.6; CG: 75.0±28.5min/day); Sedentary (DOT: 96.4%, CG: 93.3%)Active (DOT: 14.3%; CG: 33.3%); Severe physical activity (DOT: 82.8%, CG:60%)
Chanthivech (2017) ¹¹⁸	Step count	Not provided
Coelho (2018) ⁷³	Step count	7490.3±3330.2 steps/day

Coelho (2018) ⁷⁴	Daily steps	PED: 7295±3241; CON: 6998±3490 steps/day
Felcar (2018) ⁷⁷	Steps per day; Energy expenditure (kcal)	LG: 5891±3054 steps/day, 210.7±115.5kcal/day; WG: 6101±3591 steps/day, 219.2±126.2kcal/day
Fonesca (2016) ⁷⁹	Lying time; Sitting time; Standing time; Walking time; Movement intensity	Lying time (76[0-143.5]min/day); Sitting time (394.9±93.6min/day); Standing time (130.0[112.0-163.5]min/day); Walking time (68.0[57.5-87.0]min/day); Movement intensity (1.81±0.30m/s ²)
Freitas (2018) ⁸⁰	Steps per day; Light intensity PA; MVPA; Sedentary time; 10000 steps; sleep latency; sleep efficiency	Steps per day (WL+S: 7764±2176; WL+E: 7306±2304); Light intensity PA (WL+S: 369.4±63.7; WL+E: 395.7±72.5min/day); MVPA (WL+S: 26.3±16.9; WL+E: 25.3±14.5; ALL: 25.6±15.2min/day); Sedentary time (WL+S: 489.5±143.4; WL+E: 488.9±84.2min/day); 10000 steps (WL+S: 17.4%; WL+E: 16.6%); sleep latency (FIGURE 4B); sleep efficiency (FIGURE 4D)

Furlanetto (2016) ⁸¹	Physically active or inactive based on three definitions: (1) Classification of 30 minutes based on age: the minimum recommendation is to achieve 30 minutes/day of physical activity at an intensity of at least 3.2 METs in patients ≥ 65 years of age and 4 METs in patients < 65 according to the ACSM9; (2) Classification of 30 minutes regardless of age: the minimum recommendation is to achieve 30 minutes/day of physical activity at an intensity of at least 3 METs for all subjects according to the ACSM and AHA8,9; and (3) Classification of 80 minutes regardless of age: the minimum recommendation is to achieve 80 minutes/day of physical activity with an intensity of at least 3 METs. In the latter, the 10-minute blocks of physical activity without intervals (> 3 METs).	Definition (1) 35% active; Definition (2) 56% active; Definition (3) 27% active
Furlanetto (2017) ⁸²	MVPA (hours/day); Sitting time (hours/day); Lying time (hours/day); Lying+Sitting time (hours/day); Sedentary < 1.5 MET (hours/day); Sedentary < 2 MET (hours/day); Average MET	MVPA (0.48 [0.14-1.24] hr/day); Sitting time (5.28 [3.95-6.52] hr/day); Lying time (1.72 [0.56-2.97] hr/day); Lying+Sitting time (7.52 [5.63-8.65] hr/day); Sedentary < 1.5 MET (8.21 [6.39-10.49] hr/day); Sedentary < 2 MET (9.33 [7.90-10.49] hr/day); Average MET (1.45 [1.2-1.8])
Furlanetto (2017) ⁸³	Active time (> 2 METs); MVPA time (> 3 METs)	Active time (286 \pm 26 min/day); MVPA time (89 \pm 15 vs 84 \pm 15 min/day during summer and winter, respectively)
Genc (2012) ⁵⁷	Kcal/12 hours	628.4 \pm 238.9

Genc (2014) ⁵⁸	Kcal/12hours	632.4±221.0
Gulart (2019) ⁸⁴	Time sitting; Time lying; Time standing; Time walking; Steps; Time <1.5METs; Time ≥3METs; Severe inactivity (<4580 steps/day); Physical inactivity (<80min/day in activities ≥3METs)	Time sitting (383±104min/day); Time lying (105±105min/day); Time standing (140±54.9min/day); Time walking (68.5±38.2min/day); Steps (5273±2726 steps/day); Time <1.5METs (583±68.4min/day); Time ≥3METs (84.1±41.2min/day); Severe inactivity (not stated); Physical inactivity (not stated)
Hernandes (2009) ⁸⁵	Time spent walking, standing, sitting or lying; intensity of the movement during walking	Time spent walking (55±33min/day; 7% of time), standing (36% of time), sitting (294±114min/day; 41% of time) or lying (15% of time); intensity of the movement during walking (1.9±0.4m/s ²); undefined activity/posture (1% of time)
Karloh (2016) ⁸⁷	Time sitting; Time lying; Time standing; Time walking; Number of steps; Movement intensity; Walking energy expenditure; Total energy expenditure	Time sitting (381[351-412]min/day); Time lying (77.1[53.3-101]min/day); Time standing (155[140-171]min/day); Time walking (81.1[68.1-94.0]min/day); Number of steps (6557[5496-7619] steps/day); Movement intensity (1.78[1.70-1.97]m/s ²); Walking energy expenditure (386[314-459]kcal/day); Total energy expenditure (1392[1283-1501]kcal/day)
Landal (2014) ⁸⁸	Time spent walking, standing, sitting or lying; intensity of the movement during walking; total energy expenditure	Not provided
Lanza (2018) ⁸⁹	Step count: Sedentary was considered when the NS walked less than 5.000 steps/day, low level of physical activity when between 5.000 and 7.499 steps/day, moderate level of daily physical activity when between 7.500 and 9.999 steps/day, and good daily activity when the NS was higher than 10.000 per day	Step count (8754[5534-11157]steps/day); 64% sedentary or low; 36% active

Lopes (2019) ⁹⁰	Steps per day	4104±2439 steps/day
Mantoani (2011) ⁹¹	Walking time; Standing time; Movement intensity; TEE; EE>3METs; Active time >3METs; Time spent in sedentary activities (<3METs); Time spent in moderate activities (3-6METs); Time spent in vigorous activities (6-9METs)	Walking time (51[34-73]min/day); Standing time (237[161-345]min/day); Movement intensity (1.9[1.6-2.1]m/s ²); TEE (1091[914-1389]kcal/day); EE>3METs (135[51-381]kcal/day); Active time >3METs (29[10-86]min/day); Time spent in sedentary activities (686[627-710]min/day); Time spent in moderate activities (31[12-77]min/day); Time spent in vigorous activities (0[0-9]min/day)
Monteiro (2012) ⁹²	time spent walking/day (TW, min/day), time spent per day in activities of at least moderate intensity (TPA, min/day), active (performed more than 30 min/day of TPA[moderate) and inactive (did not achieve this recommendation)	Active (22/74), Inactive (52/74); TW (UW: 73 (31), NW: 69 (34), OW: 53 (30), OB: 46 (26); TPA (UW: 42 (43), NW: 31 (33); OW: 23 (36), OB: 11 (12)
Morita (2018) ⁹³	Time spent walking; Time spent standing; Time spent in lying; Time spent sitting; Time spent in combined sedentary postures	Time spent walking (55[37-81]min/day); Time spent standing (209[147-276]min/day); Time spent in lying (107[25-183]min/day); Time spent sitting (317[248-386]min/day); Time spent in combined sedentary postures (443[341-514]min/day)
Munari (2018) ⁹⁴	Time spent standing, sitting, lying, and walking; movement intensity during walking; energy expenditure in PADL; and number of steps; Active time (standing+walking); Sedentary time (sitting+lying); Sedentary (<1.5METs); MVPA (>=3METs); Inactivity (>=8.5hrs sedentary); Active (>=80 min MVPA); Inactive (<80 min MVPA); Severe physical inactivity (<4580 steps)	Time spent standing(149±62.4min/day), Sitting time (378±105min/day), Lying time (101±87.2min/day), Walking time (67.4±31.5min/day); Movement intensity during walking (1.72±0.27m/s ²); Energy expenditure in PADL (1264±298kcal/day); Number of steps (5292±3200); Active time (Figure 1); Sedentary time (Figure 1); Inactive (51.9%); Active (48.1%); Sedentary (21.8%); Not sedentary (78.2%); Severe physical inactivity (46.4%); Not severe physical inactivity (53.6%)

Pitta (2009) ⁹⁸	Walking time; Movement intensity; Standing time; Sitting time; Lying time	Walking time (56±32min/day); Movement intensity (1.9±0.4m/s ²); Standing time (246±122min/day); Sitting time (296±109min/day); Lying time (119±110min/day)
Probst (2011) ⁹⁹	Time spent walking, standing, sitting, lying; total energy expenditure; energy expenditure in >3METS; time in >3METS; steps per day	Calisthenics and Breathing Exercises Group (CBEG): Time spent walking (54±28min/day), Standing time (270±139min/day), Sitting time (283±121min/day), Lying time (108±100min/day); Total energy expenditure (1331±596kcal/day); Energy expenditure in >3METS (428±620kcal/day); Time in >3METS (4533±5968min/day); Steps per day (5002±4195steps/day). Endurance and Strength TrainingGroup (ESTG): Time spent walking (57±32min/day), Standing time (248±95min/day), Sitting time (296±91min/day), Lying time (113±101min/day); Total energy expenditure (1295±635kcal/day); Energy expenditure in >3METS (408±620kcal/day); Time in >3METS (4539±5314min/day); Steps per day (4568±3381steps/day).
Rocha (2017) ¹⁰¹	Active time; number of steps; movement intensity; sedentary time	Active time (228.12±105.80min/day); Number of steps (6388.12±3671.66 steps/day); Movement intensity (0.18±0.03m/s); Sedentary time (500.12 ± 128.76 min/day)
Saglam (2013) ⁶¹	Kcal/day	NW: Median 275.9kcal/day; OW/OB: Median 319.3kcal/day

Schneider (2018) ¹⁰³	Total energy expenditure (TEE), energy expenditure during activity, number of steps, mean of metabolic equivalents, and the time spent in sedentary, moderate, vigorous and very vigorous	TEE (1261[1052-1514kcal]); Steps/day (6248[3756-8829]); Time lying down (37.2[12.9-62.0]min/day); Mean METs (1.7[1.3-1.9]); EEA>AGE (111[34.4-200.4kcal]); PAD>AGE (22[9-47min]); Sedentary Time AGE (698[673-711min]); Moderate time AGE (22[8.3-46.7min]); Vigorous time AGE (0.2[0-4.4min]); Very vigorous time AGE (0[0-0min]); EEA>3 (200[112.5-432kcal]); PAD>3 (49.3[25.9-101.4min]); INACT<3 (670.7[618.6-694.2min]); Moderate time >3 (49.3[25.7-100min]); Vigorous time >6 (0[0-1min]); Very vigorous time >9 (0[0-0min]); PAD>2 (13740[8057-17880kcal]); Sedentary time <2 (491[422-585.7min]); PAD>1.5 (296[211.9-358.3min]); Sedentary time <1.5 (424[361.7-507.3min])
Vitorasso (2012) ¹⁰⁷	Time spent walking; time spent in at least moderate PA; time spent standing; time spent sitting; ratio between time spent in moderate & time spent walking. Moderate defined as >4 METs for subjects aged from 40 to 64 years old; above 3.2 METs from 65 to 79 years and above 2 METs for subjects aged >80 years.	Time spent walking (53[36-80]); Time spent in at least moderate PA (12[3-33]); Time spent standing (196[137-289]); Time spent sitting (307[228-376]); 71% did not meet 30 minutes; Moderate/walking ratio (0.22[0.07-0.49])
Widyastuti (2017) ¹¹⁷	Daily steps	Not provided
Xavier (2016) ¹⁰⁸	Step count	Not provided
Yilmaz (2016) ⁶³	Steps per day; Walking duration (min/day)	Steps per day: NW (2151[1338-2641]); OW (2487[1831-3065]); OB (2151[1931-2984]); Walking duration: NW (30[25-35]min/day); OW (30[25-35]min/day); OB (30[25-32]min/day)
Questionnaire-based measurement		

Adetiloye (2018) ⁴³	Subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, daytime dysfunction; and global PSQI score	Subjective sleep quality (1.52±0.85), sleep latency (1.85±0.86), sleep duration (2.07±0.82), sleep efficiency (1.93±1.06), sleep disturbances (1.23±0.43), use of sleep medication (0.48±0.83), daytime dysfunction (0.83±0.74); and global PSQI score (9.93±4.19). Poor sleep quality (81.7%) and Good sleep quality (18.3%)
Adewole (2017) ⁴⁴	Sleep quality	62.2% good sleep quality; 37.8% poor sleep quality
Akinci (2013) ⁵⁶	Subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, daytime dysfunction; and global PSQI score	Subjective sleep quality (1.3±0.6), sleep latency (1.1±0.9), sleep duration (0.8±1.0), sleep efficiency (0.7±1.0), sleep disturbances (1.6±0.6), use of sleep medication (0.4±0.9), daytime dysfunction (1.2±0.8); and global PSQI score (7.1±3.9)
Ali Zohal (2013) ⁴⁶	Poor sleep quality; PSQI score; Subjective sleep quality; Delay in initiation of sleep; Sleep duration; Sleep satisfaction; Sleep disturbance; Use of hypnotic drugs; Disturbance in daytime activities	Poor sleep quality (67.9%); PSQI score (8.03±3.66); Subjective sleep quality (1.9±0.8); Delay in initiation of sleep (1.3±0.5); Sleep duration (1.5±0.6); Sleep satisfaction (1.4±0.9); Sleep disturbance (2.1±1.1); Use of hypnotic drugs (2.2±0.7); Disturbance in daytime activities (1.9±0.9)
Athayde (2014) ⁶⁷	Regular physical activity	29.2% Active, 70.8% Sedentary
Borji (2018) ⁴⁷	Sleep quality	Not provided
Campos (2017) ⁶⁹	PSQI score; Poor sleep quality (absent/present)	PSQI score (9.9±4.6); Poor sleep quality (19.6% absent, 80.4% present)

Cavalcante (2012) ⁷¹	Poor sleep quality	59.6% poor sleep quality
Cetlin (2012) ⁷²	Active; Inactive	Active (97/200); Inactive (103/200)
Chegeni (2018) ⁴⁸	Subjective sleep quality; Sleep latency; Sleep duration; Habitual sleep efficiency; Sleep disturbances; Use of sleep medication; Daytime dysfunction; Global PSQI score	Subjective sleep quality (TG: 1.20±0.72, CG: 1.30±0.62); Sleep latency (TG: 1.60±1.26, CG: 1.80±1.08); Sleep duration (TG: 0.87±0.82, CG: 0.97±0.97); Habitual sleep efficiency (TG: 0.33±0.67, CG: 0.18±0.44); Sleep disturbances (TG: 1.51±0.50, CG: 1.32±0.47); Use of sleep medication (TG: 0.33±0.90, CG: 0.28±0.86); Daytime dysfunction (TG: 0.57±0.58, CG: 0.54±0.62); Global PSQI score (TG: 6.33±3.41, CG: 6.41±3.12)
Chunrong (2014) ¹¹⁹	PA score	5.05±1.89
da Costa (2012) ⁷⁵	IPAQ score	IPAQ Score (3.14±1.21), Active (N=4), Sedentary (N=1), Insufficiently active A (N=1), Insufficiently active B (N=1)
Cukier (2020) ⁷⁶	Low, Moderate, High physical activity	Low (39.3%), Moderate (22.1%), High (38.6%)
De (2012) ¹¹¹	Poor sleep quality; PSQI global score; Time to fall asleep; Hours of sleep; Wake up at night or early morning (three or more times a week); Breathing difficulty or cough during night (three or more times a week); Sleep medicine use; Sleep quality	100% poor sleep quality; PSQI global score (median 11); Time to fall asleep (median 20 mins); Hours of sleep (median 5); 67.5% had to wake up at night or early morning and 47.5% had either breathing difficulty or cough during night. Sleep medicine were never used by 90% and 77.5% rated their sleep quality during past month as very good or fairly good.
Desalu (2019) ⁴⁵	Has asthma limited your... sleep quality?	44.2% experienced poor sleep

Ding (2017) ¹²⁰	JSEQ score; Trouble falling asleep; Wake up several times per night; Trouble staying asleep; Tired after sleep	JSEQ score (6.3±4.6); Trouble falling asleep (0:16.6%, 1:30.7%, 2:24.9%, 3:12.4%, 4:7.5%, 5:7.9%); Wake up several times per night (0:20.6%, 1:29.9%, 2:21.9%, 3:13.2%, 4:7.0%, 5:7.4%); Trouble staying asleep (0:27.1%, 1:24.4%, 2:24.6%, 3:10.7%, 4:6.8%, 5:6.4%); Tired after sleep (0:47.7%, 1:25.3%, 2:14.4%, 3:6.1%, 4:4.2%, 5:2.4%)
Eslaminejad (2017) ⁴⁹	Sleep quality, sleep latency, sleep duration, appropriate sleep, sleep disturbances, sleep medication, and impaired daily functioning	5.92% of women and 5.32% of men suffered from severe sleep problem; PSQI score not provided
Filippin (2011) ⁷⁸	Physically active, physically inactive	Physically active (58%); physically inactive (41%)
Gupta (2018) ¹¹²	Fixed sleep schedule; subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications, and daytime dysfunction, Poor sleep quality (overall PSQI score); Exercise score	Poor sleep quality (33.3%); Others not provided
Koyanagi (2017) ¹²⁷	Meeting ≥150 minutes of MVPA/week (yes/no)	Not provided
Lopez Jove (2013) ⁶⁴	Physically active	Not provided
Mahmood (2019) ⁵⁰	Inactive; Moderately inactive; Moderately active; Active	Inactive (33.9%); Moderately inactive (30.4%); Moderately active (21.4%); Active (14.3%)

Mihaltan (2019) ⁵³	Clinical Judgement Active (performing ≥ 150 min/week of moderate to vigorous exercise, such as briskwalking); Insufficiently active (performing 1–149 min/week of moderate to vigorous exercise); Completely inactive (0 min/week of moderate to vigorous exercise); EVS Active, Insufficiently active, Completely inactive; YPAS Hours/week physical activity, Total mean energy expenditure, Mean summary index value, Vigorous index, Leisurely walking index, Moving index, Standing index, Sitting index, YPAS summary index	Not provided
Mihaltan (2019) ⁵⁴	Self-reported and clinically judged Active and Inactive; YPAS time in light activities; YPAS summary index	Self-reported vs. clinically judged active patients: BG 33.8% vs 44.3%, SB 31.2% vs 38.4%. Completely inactive patients as self-reported vs. clinically judged: BG 27.1% vs 12.4%, SB 30.8% vs 9.6%, respectively. YPAS light activities: BG 2.8, SB 3.4hrs/day. YPAS summary index: BG 41.0 and SB 43.9
Molinas (2007) ⁶⁵	Physically active defined as >30 continuous minutes at least once per week	71.4% physically active
Moussa (2014) ⁵¹	Household, sporting, and leisure activities; total physical activity score	Household (0.88 \pm 0.31), sporting (0.33 \pm 0.54), and leisure activities (1.64 \pm 0.58); total physical activity score (2.86 \pm 0.78)
Moussa (2016) ⁵²	Household, sporting, and leisure activities; total physical activity score	Household (0.88 \pm 0.31), sporting (0.33 \pm 0.54), and leisure activities (1.64 \pm 0.58); total physical activity score (2.86 \pm 0.78)

Nobeschi (2020) ⁹⁵	Sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep alterations, use of medications to sleep, and daytime sleep dysfunction; PSQI score; Poor sleep quality	Sleep quality (1[1-1]), sleep latency (1[0-2]), sleep duration (1[0-3]), habitual sleep efficiency (1[1-2]), sleep alterations (1[1-2]), use of medications to sleep (0[0-1]), and daytime sleep dysfunction (0[0-1]); PSQI score (6.5[4.75-8.75]); Poor sleep quality (73%)
Nunes (2008) ⁹⁶	Global PSQI score and in-out of bed time	Melatonin: PSQI 7.75±4.0; in-bed time 22.65±0.94 hours; out-of-bed time 5.25±0.82 and Placebo: PSQI 6.38±3.0; in-bed time 22.20±1.05 hours; out-of-bed time 5.43±1.37; and 9/25 Good Sleepers
Panigrahi (2018) ¹¹³	PSQI score	PSQI score (4 [3-7]); 48.5% poor sleep quality
Pehlivan (2019) ⁵⁹	Vigorous PA (kcal/day); Moderate PA (kcal/day); Walking (kcal/day); Total PA (kcal/day)	Vigorous PA (25.26 [0-480]); Moderate PA (132 [0-840]); Walking (146 [0-693]); Total PA (304 [0-1533])
Poongadan (2016) ¹¹⁴	Sports activity (hours/day); TV watching/video games (hours/day); Duration of Sleep (hours/day)	Not presented for adults
Reboredo (2017) ¹⁰⁰	Inactive or insufficiently active	123/166 Inactive or insufficiently active
Rodrigues (2014) ¹⁰²	Sedentary, insufficiently active, active and very active	Not provided
Sahin (2015) ⁶⁰	Sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction; global PSQI score	Sleep quality (2.04±0.52), sleep latency (2.89±1.78), sleep duration (2.47±1.54), sleep efficiency (1.78±0.48), sleep disturbances (1.89±0.86), use of sleep medication (0.00), and daytime dysfunction (2.45±1.35); global PSQI score (9.52±0.22)
Sharma (2019) ¹¹⁵	Physical exercise in leisure (mBQ PEL); leisure and locomotion activities (mBQ LLA); and total score (mBQ TOT)	Physical exercise in leisure (NoDep: 2.28±0.38; Dep: 1.86±0.3); leisure and locomotion activities (NoDep: 2.8±0.36; Dep: 2.07±0.36); and total score (NoDep: 5.09±0.42; Dep: 3.92±0.54)

Silva (2011) ¹⁰⁴	Total activity (metabolic equivalent intensity min/week)	Total activity (857 [0-3493])
Simon (2009) ¹⁰⁵	Physically active (Yes/No)	Physically active (N=15), Physically inactive (N=23)
Tavares (2017) ¹⁰⁶	Physical activity (Yes/No)	Yes (33.3%), No (66.7%)
Turan (2016) ⁶²	IPAQ score	IPAQ score (ED: 3880.8413±1845.28343; NoED: 8516.0333±3324.99668 METmin/week)
Ulfathinah (2019) ¹¹⁶	Global PSQI score; Subjective sleep quality; Sleep latency; Sleep duration; Habitual sleep efficiency; Sleep disturbances; Use of sleeping medication; Daytime dysfunction; Sleep quality	Global PSQI score (median 6); Subjective sleep quality (median 1); Sleep latency (median 1); Sleep duration (median 2); Habitual sleep efficiency (median 0); Sleep disturbances (median 1); Use of sleeping medication (median 0); Daytime dysfunction (median 1); Sleep quality (66% poor, 34% good)
Vancampfort (2017) ¹²⁶	≥150 min were classified as meeting the recommended guidelines and those scoring <150 min (low physical activity) were classified as not meeting the recommended guidelines	Country level data not presented
Vancampfort (2017) ¹³⁰	≥150 min were classified as meeting the recommended guidelines and those scoring <150 min (low physical activity) were classified as not meeting the recommended guidelines	Not provided
Vancampfort (2017) ¹²⁸	Time in sedentary behaviour (<8 hours/>=8 hours)	Not provided

Vancampfort (2018) ¹³¹	Time spent sitting or reclining (SB) in total including at work, at home, getting to and from places, or with friends (sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television); ≥ 8 hours/day SB (highly sedentary)	Not provided
Vancampfort (2018) ¹²⁹	Meeting ≥ 150 minutes of MVPA/week (yes/no)	Not provided
Vukoja (2018) ⁵⁵	PSQI score; Sleep quality	Asthma 4.9 ± 3.9 , 40.4% poor sleep quality; COPD 5.8 ± 4.3 , 38% poor sleep quality
Wang (2016) ¹²²	Physical activity per day: never; less than 30 minutes; and more than 30 minutes	48.0% Never; 9.1% < 30 mins; 42.9% ≥ 30 mins
Wang (2016) ¹²³	Physical activity per day: never; less than 30 minutes; and more than 30 minutes	39% Never, 6% < 30 min, 55% ≥ 30 min
Wang (2017) ¹²⁴	Total sleep time; Short sleep: < 7 h/day; Medium sleep: 7–8 h/day; Long sleep: > 8 h/day	Total sleep time (not stated); Short sleepers (N=164/334); Medium sleepers (N=111/334); Long sleepers (N=59/334)
Yunus (2018) ¹⁰⁹	Total sleep time (< 7 hours, 7–9 hours, and > 9 hours according to National Sleep Foundation (2015) guidelines)	< 7 hours (N=32/116), 7–9 hours (N=74/116), and > 9 hours (N=10/116)
Zheng (2019) ¹²⁵	PSQI score	Intervention group: 9.50 ± 2.87 ; Control group: 9.31 ± 2.98

Device and questionnaire-based measurements		
Jardim (2011) ⁸⁶	Daily steps	8064±4343; IPAQ data not provided
Nyssen (2013) ⁹⁷	Steps per day; Severe physical inactivity (<4580 steps/day); Household domain; Sports domain; Leisure domain; Total activity; MET-min/wk of Walking; MET-min/wk of MPA; MET-min/wk of VPA; MET-min/wk of TPA	Steps per day (4227±2075); Severe physical inactivity (50%); Household domain (1.1[0.6-1.7]); Sports domain (1.4[0.0-4.1]); Leisure domain (1.2[1.0-2.9]); Total (5.3[2.5-7.2]); MET-min/wk of Walking (231.0[0.0-358.8]); MET-min/wk of MPA (160[0-510]); MET-min/wk of VPA (0[0-0]); MET-min/wk of TPA (338.2[153.0-979.5])
Tao (2016) ¹²¹	IPAQ score (MET-min); Walking steps per week; Energy expenditure (kcal/weight); PASE-C score	IPAQ score (23.30[10.00-36.57]); Walking steps (23788[13545-34872]); Energy expenditure (980.6[464.8-1522.0]); PASE-C (73.25±49.47)
Not provided		
Bhuker (2012) ¹¹⁰	Not provided	Not provided

Appendix C: Reference list of included studies

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Appendix D: Summary of studies including a control group

Reference	Patient summary data	Control group definition	Control group sample size	Control group average age	Control group gender mix	Control group summary data
Ali Zohal (2013) ⁴⁶	Poor sleep quality (67.9%); PSQI score (8.03±3.66); Subjective sleep quality (1.9±0.8); Delay in initiation of sleep (1.3±0.5); Sleep duration (1.5±0.6); Sleep satisfaction (1.4±0.9); Sleep disturbance (2.1±1.1); Use of hypnotic drugs (2.2±0.7); Disturbance in daytime activities (1.9±0.9)	Individuals with comparable age and gender	120	57.3 (6.4)	54.1% male	Poor sleep quality (27.5%); PSQI (4.2±2.8); Subjective sleep quality (1.4±0.7); Delay in initiation of sleep (0.9±0.7); Sleep duration (1.3±0.8); Sleep satisfaction (0.9±0.4); Sleep disturbance (1.9±0.6); Use of hypnotic drugs (1.2±0.5); Disturbance in daytime activities (1.1±0.3)
Amorim (2014) ⁶⁶	Step count (6,251.0 ± 2,422.8); distance walked (3.9 ± 1.9 km/day); time spent walking (68.5 ± 25.8 min/day)	healthy elderly individuals, which comprised spouses of the patients with COPD and individuals treated at the geriatric outpatient clinic of our hospital	40	66.7 (9.9)	52.5% female	Step count (9,854.1 ± 4,736.6); distance walked (6.4 ± 3.2 km/day); time spent walking (105.2 ± 49.4 min/day)
Bhuker (2012) ¹¹⁰	Not provided	No description (free from asthma)	50	Not provided	Not provided	Not provided
Cetlin (2012) ⁷²	Active (97/200); Inactive (103/200)	No asthma (interpreted by MO, not by the paper)	1922	Not provided	980/1922 female	Active (1016/1922); Inactive (706/1922)
Chunrong (2014) ¹¹⁹	PA score 5.05±1.89	Age-matched healthy controls	60	64.01 (5.41)	65% female	PA score 7.97±1.21
Coelho (2018) ⁷³	7490.3±3330.2 steps/day	Gender-matched healthy controls	30	44.3 (11.6)	100% female	6876.4±3242.1 steps/day
Genc (2014) ⁵⁸	632.4±221.0 kcal/12hours	BMI- and gender-matched healthy nonsmoker controls	30	53.0 (5.9)	100% male	637.7±313.5 kcal/12hours
Hernandes (2009) ⁸⁵	Time spent walking (55 ± 33 min/day; 7% of time), standing (36% of time), sitting (294 ± 114 min/day; 41% of time) or lying (15% of time); intensity of the movement during walking (1.9 ± 0.4 m/s); undefined activity/posture (1% of time)	Healthy and sedentary individuals matched to the COPD patients regarding age, gender and anthropometric characteristics.	30	64 (7)	16/30 female	Time spent walking (80 ± 28 min/day; 10% of time), standing (39% of time), sitting (246 ± 122 min/day; 34% of time) or lying (15% of time); intensity of the movement during walking (2.3 ± 0.6 m/s); undefined activity/posture (2% of time)
Mahmood (2019) ⁵⁰	Inactive (33.9%); Moderately inactive (30.4%); Moderately active (21.4%); Active (14.3%)	Age and gender matched nonrelatives to the patients who attended the hospital	45	40-49 (42.2%); 50-59 (31.1%); 60+ (26.7%)	73.3% female	Inactive (33.3%); Moderately inactive (35.6%); Moderately active (26.7%); Active (4.4%)

Moussa (2014) ⁵¹	Household (0.88±0.31), sporting (0.33±0.54), and leisure activities (1.64±0.58); total physical activity score (2.86±0.78)	Smokers free from COPD	29	47.93 (5.66)	100% male	Household (1.36±0.53), sporting (4.42±4.84), and leisure activities (2.53±1.63); total physical activity score (8.31±4.86)
Moussa (2016) ⁵²	Household (0.88±0.31), sporting (0.33±0.54), and leisure activities (1.64±0.58); total physical activity score (2.86±0.78)	Smokers free from COPD	16	46.54 (4.14)	100% male	Household (1.37±0.52), sporting (3.30±1.90), and leisure activities (2.48±1.41); total physical activity score (7.14±1.50)
Poongadan (2016) ¹¹⁴	Not presented for adults	Age- and sex-matched healthy controls	125	Not provided	70/125 male	Not presented for adults
Vukoja (2018) ⁵⁵	Asthma 4.9±3.9, 40.4% poor sleep quality; COPD 5.8±4.3, 38% poor sleep quality	healthynonsmoking subjects, nonshift medical workers with nocomorbidities, and no respiratory symptoms, who did notcomplain of snoring and had no witnessed nocturnal apneas	102	43 (14)	58.8% male	PSQI score 4±2; 22.5% poor sleep quality
Wang (2017) ¹²⁴	Total sleep time (not stated); Short sleepers (N=164/334); Medium sleepers (N=111/334); Long sleepers (N=59/334)	Zero morbidities (interpreted by MO, not by the paper)	401	Not provided	Not provided	Total sleep time (not stated); Short sleepers (N=167/401); Medium sleepers (N=183/401); Long sleepers (N=51/401)
Yunus (2018) ¹⁰⁹	<7 hours (N=32/116), 7-9 hours (N=74/116), and >9 hours (N=10/116)	No chronic disease (interpreted by MO, not by the paper)	10,147	<40 (24.2%); 40-44 (12.5%); 45-49 (11.3%); 50+ (52.0%)	5077/10,147 female	<7 hours (N=1178/10130), 7-9 hours (N=7717/10130), and >9 hours (N=1235/10130)

Appendix E: Quality of reporting of studies using device-based measurement of physical behaviours

Author (Year)	Model of device	Body location worn	Feedback provided to participants	Period of wear	Valid wear time requirement	Fixed or minimum wear time?	Number of valid days/nights required	Fixed or minimum valid days	Non-wear detection/description of identifying missing data or device taken off	Average wear time	Can waking wear time be calculated from behaviour data?
Accelerometer											
Lopes (2019) ⁹⁰	ActiGraph GT3X+	Worn around the waist at the lower back	No feedback	6 days	8 hours	Minimum	4 days	Minimum	Not stated	Not stated	No
Xavier (2016) ¹⁰⁸	ActiGraph GT3X+	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	No
Freitas (2018) ⁸⁰	ActiGraph GT3X+ and ActiSleep monitor	AG: Hip on non-dominant side; AS: Non-dominant wrist	Not stated	7 consecutive nights	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Yes
Saglam (2013) ⁶¹	Caltrac	Not stated	Not stated	2 days	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	No
Borges (2012) ⁶⁸	Dynaport	Lower back in the region of the second lumbar vertebra	Not stated	2 consecutive weekdays	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Yes
Cani (2019) ⁷⁰	Dynaport	Not stated	Not stated	2 consecutive days	12 hours	Fixed	Not stated	Not stated	Not stated	Not stated	Yes
Fonesca (2016) ⁷⁹	Dynaport	Not stated	Not stated	2 consecutive weekdays	12 hours	Fixed	2 days	Fixed	Diary to record monitoring times	Not stated	Yes

Gulart (2019) ⁸⁴	Dynaport	Not stated	Not stated	2 consecutive days	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes
Hernandes (2009) ⁸⁵	Dynaport	Small box positioned at the waist and a sensor of lower limb activity strapped to the body	Not stated	2 consecutive weekdays	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes
Landal (2014) ⁸⁸	Dynaport	Not stated	Not stated	2 consecutive days	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	
Munari (2018) ⁹⁴	Dynaport	Not stated	Not stated	2 consecutive weekdays	12 hours	Fixed	2 days	Fixed	Participants asked to record exact time of putting on and taking off	Not stated	Yes
Pitta (2009) ⁹⁸	Dynaport	Box enclosed in a belt worn around the waist and a leg sensor	Not stated	2 consecutive weekdays	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes
Rocha (2017) ¹⁰¹	Dynaport	Waist	Not stated	2 consecutive days	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes
Karloh (2016) ⁸⁷	Dynaport MiniMod	Not stated	Not stated	2 consecutive weekdays	12 hours	Fixed	Not stated	Not stated	Not stated	Not stated	Yes
Morita (2018) ⁹³	Dynaport Move Monitor	Lower back	Not stated	2 days	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes

Genc (2012) ⁵⁷	RT3	Right hip	Not stated	3 days	12 hours (0800-2000)	Fixed	3 days	Fixed	Not stated	Not stated	No
Genc (2014) ⁵⁸	RT3	Right hip	Not stated	3 days	12 hours (0800-2200)	Fixed	3 days	Fixed	Not stated	Not stated	No
Furlanetto (2016) ⁸¹	SenseWear Armband	Upper arm	Not stated	2 days	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	No
Schneider (2018) ¹⁰³	SenseWear Armband	Right upper arm area (brachial triceps muscle area)	Not stated	7 consecutive days	8 hours, 12 hours	Fixed	Not stated	Not stated	Not stated	Median [IQR] 889.6 [849.2 – 923.1]	Yes
Furlanetto (2017) ⁸²	SenseWear Armband; Dynaport	SWA: Upper arm; D: Lower back	Not stated	2 weekday [Tuesday and Wednesday]	12 hours	Fixed	2 days	Fixed	Not stated	Not stated	Yes
Mantoani (2011) ⁹¹	SenseWear Armband; Dynaport	SWA: Superior and posterior area of the right arm (in the brachial triceps area); D: Small box positioned in the waist and an activity sensor attached to the lower limb	Not stated	2 days	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Yes

Lanza (2018) ⁸⁹	Not stated	Right pocket on the anterior surface of their clothes	Not stated	5 consecutive weekdays	Not stated	Not stated	First and last day excluded; 3 consecutive weekdays	Fixed	Not stated	Not stated	No
Widyastuti (2017) ¹¹⁷	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	No
Yilmaz (2016) ⁶³	Omron HJ-321-E	Waistband	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	No
Tao (2016) ¹²¹	SP600; Shenzhenshi Sibowei Technology Co., Ltd, Shenzhen, People's Republic of China	Not stated	Not stated	7 days	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	No
Nyssen (2013) ⁹⁷	Yamax Digi-Walker SW-700	Waistline, at the level of the right anterosuperior iliac crest, being clipped to their belt or clothes.	Patients were instructed to keep a diary to report the activities performed every one hour.	3 consecutive days	Not stated	Not stated	3 days	Fixed	Not stated	Not stated	No
Felcar (2018) ⁷⁷	Yamax PowerWalker-PW610	Not stated	Not stated	6 days	12 hours	Fixed	6 days	Fixed	Not stated	Not stated	No

Coelho (2018) ⁷³	YAMAX SW-200	Waistline	Yes, asked to record steps in diary	6 consecutive days	Not stated	Not stated	5 days including 1 day at the weekend	Minimum	Not stated	Not stated	No
Coelho (2018) ⁷⁴	YAMAX SW-200	Not stated	Recorded steps in a diary each day	6 consecutive days	Not stated	Not stated	5 days including 1 day at the weekend	Minimum	Not stated	Not stated	No

Appendix F: Quality of reporting of studies using questionnaire-based measurement of physical behaviours

Author (Year)	Questionnaire/question	Recall period	Handling missing data
Simon (2009) ¹⁰⁵	American College of Sports Medicine (ACSM)	Not stated	Not stated
Chunrong (2014) ¹¹⁹	Baeke	3 years	Not stated
Mihaltan (2019) ⁵³	Clinical judgement, Patients self-reported their level of physical activity by answering two questions during clinical interview. These questions were derived from the exercise vital sign (EVS) program ^[30] and refer to the number of days per week that patients engage in moderate to strenuous exercise and the number of minutes spent doing such exercise; Yale Physical Activity Survey (YPAS)	YPAS: 1 month	Not stated
Molinas (2007) ⁶⁵	Days per week they do at least 30 minutes of exercise	Not stated	Not stated
Gupta (2018) ¹¹²	Does your time to bed and wake time remain almost the same on at least 5 nights a week?; PSQI; Godin leisure-time exercise questionnaire	Godin 1 week; others not stated	Not stated
Mahmood (2019) ⁵⁰	General Practice Physical Activity Questionnaire (GPPAQ).	Not stated	Not stated
Koyanagi (2017) ¹²⁷	GPAQ	Not stated	Not stated

Vancampfort (2017) ¹³⁰	GPAQ	1 week	Not stated
Vancampfort (2018) ¹³¹	GPAQ	Not stated	Not stated
Vancampfort (2018) ¹²⁹	GPAQ	1 week	Not stated
Da Costa (2012) ⁷⁵	IPAQ	3 months	Not stated
Cukier (2020) ⁷⁶	IPAQ	Not stated	Not stated
Jardim (2011) ⁸⁶	IPAQ	Not stated	Not stated
Reboredo (2017) ¹⁰⁰	IPAQ	Not stated	Not stated
Turan (2016) ⁶²	IPAQ	7 days	Not stated
Vancampfort (2017) ¹²⁶	IPAQ	1 week	Not stated
Silva (2011) ¹⁰⁴	IPAQ Long Version	7 days	Not stated

Pehlivan (2019) ⁵⁹	IPAQ-SF	Not stated	Not stated
Rodrigues (2014) ¹⁰²	IPAQ-SF	1 week	Not stated
Ding (2017) ¹²⁰	JSEQ; How often in the past 4 weeks did you: have trouble falling asleep?; How often in the past 4 weeks did you: wake up several times per night?; How often in the past 4 weeks did you: have trouble staying asleep (including waking up earlier than normal)?; How often in the past 4 weeks did you: have trouble staying asleep (including waking up earlier than normal)?; How often in the past 4 weeks did you: wake up after your usual amount of sleep feeling tired and worn out? (0: Not at all, 1: 1-3 days; 2: 4-7 days, 3: 8-14 days; 4: 15-21 days; 5: 22-28 days)	4 weeks	Not stated
Sharma (2019) ¹¹⁵	Modified Baecke's Questionnaire	Not stated	Not stated
Nyssen (2013) ⁹⁷	Modified Baeke; IPAQ-SF	Not stated	Not stated
Lopez Jove (2013) ⁶⁴	More than 150 minutes at least 3 times/week	Not stated	Not stated
Borji (2018) ⁴⁷	Not provided	Not stated	Not stated

Filippin (2011) ⁷⁸	Not provided	Not stated	Not stated
Poongadan (2016) ¹¹⁴	Not provided	Not stated	Not stated
Tavares (2017) ¹⁰⁶	Not provided	Not stated	Not stated
Tao (2016) ¹²¹	PASE-C; IPAQ-Short	7 days	Not stated
Adetiloye (2018) ⁴³	PSQI	1 month	Not stated
Adewolea (2017) ⁴⁴	PSQI	Not stated	Not stated
Akinci (2013) ⁵⁶	PSQI	1 month	Not stated
Ali Zohal (2013) ⁴⁶	PSQI	4 weeks	Not stated
Campos (2017) ⁶⁹	PSQI	Not stated	Not stated
Cavalcante (2012) ⁷¹	PSQI	Not stated	Not stated

Chegeni (2018) ⁴⁸	PSQI	1 month	Not stated
De (2012) ¹¹¹	PSQI	1 month	Not stated
Eslaminejad (2017) ⁴⁹	PSQI	1 month	Not stated
Nobeschi (2020) ⁹⁵	PSQI	1 month	Not stated
Nunes (2008) ⁹⁶	PSQI	Not stated	Component number 6 always scored zero because individuals on sleep medications were not included in this study
Panigrahi (2018) ¹¹³	PSQI	Not stated	Not stated
Sahin (2015) ⁶⁰	PSQI	1 month	Not stated

Ulfathinah (2019) ¹¹⁶	PSQI	Not stated	Not stated
Vukoja (2018) ⁵⁵	PSQI	Not stated	Not stated
Zheng (2019) ¹²⁵	PSQI	Not stated	Not stated
Athayde (2014) ⁶⁷	Regular physical activity was considered moderate intensity exercise (three to six METs) for at least 30 minutes on most days of the week	Not stated	Not stated
Moussa (2014) ⁵¹	Voorrips	Not stated	Not stated
Moussa (2016) ⁵²	Voorrips	Not stated	Not stated
Mihaltan (2019) ⁵⁴	Yale Physical Activity Survey; Clinical interviews (EVS [Exercise as Vital Sign])	Not stated	Not stated
Wang (2017) ¹²⁴	How many hours do you sleep each day (24 h) on average in the past month?	1 month	Not stated
Desalu (2019) ⁴⁵	Has asthma affected your physical health in any way in the last 12 months? If respondent answer yes, then in what ways has it physically affects in the night and daytime. Has asthma limited your ability to do daily activities or household work, sport/exercise and your sleep quality?	12 months	Not stated

Wang (2016) ¹²³	How many hours per day they were physically active (eg, sports activities, walking, exercise, housecleaning) for at least 30 minutes.	Not stated	Not stated
Wang (2016) ¹²²	How much physical activity do you have per day?	Not stated	Not stated
Yunus (2018) ¹⁰⁹	The difference between the time at which the participant switches off the light and the time at which they wake up, discounting the time needed to fall asleep plus the time to wake up”	1 day	Not stated
Vancampfort (2017) ¹²⁸	Participants were asked to state the total time they usually spent (expressed in minutes per day) sitting or reclining including at work, at home, getting to and from places, or with friends (e.g. sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television)	Not stated	Not stated
Cetlin (2012) ⁷²	Physical activity status was defined as active if the subject regularly practiced physical activity, including activity at work and inactive when the reply was negative.	Not stated	Not stated