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**Supplemental material:** *Understanding the effectiveness of different exercise training programme designs on $\dot{V}O_{2peak}$ in COPD: a component network meta-analysis*

*Supplementary methods*

Exercise intensity was categorised into low, moderate and high intensity as detailed previously (very high intensity in our previous classification was combined into the high intensity group due to limited numbers) [1].

*Supplementary results*

Model 1 included 50 controlled trials involving 1899 participants. Of these, 19 were trials of aerobic training versus usual care or structured education in isolation, 28 were controlled trials in which both arms performed aerobic training in different forms or with different “add-ons”, and three studies had three arms (one compared aerobic training with aerobic training plus inspiratory muscle training versus usual care, one compared lower limb aerobic training with and without the addition of arm cycling versus usual care and one compared addition of either oxygen or helium hyperoxia compared to aerobic training in isolation).

Model 2 included 30 studies involving 1210 participants. Of these, 17 were trials of aerobic training versus usual care or structured education in isolation, 10 were controlled trials comparing different forms of aerobic training and three were studies with three arms comparing two different forms of aerobic training with usual care.

In model 1, lower limb aerobic training (SMD 0.56 95% CI 0.32;0.81, intervention arms = 86), non-invasive ventilation (NIV) during exercise (SMD 0.55 95% CI 0.04;1.06, intervention arms = 4) and administration of ghrelin alongside exercise training (SMD 1.13 95% CI 0.13;2.14, intervention arms = 1) were the effective components at improving $\dot{V}$O2peak (Figure 2). No other component resulted in significant improvement in $\dot{V}$O2peak.

In model 2, moderate to high intensity continuous cycling and walking training modalities and high intensity interval walking and cycling resulted in improvements in $\dot{V}O_{2peak}$ (all $p<0.05$, Figure 3). There were non-significant improvements in $\dot{V}O_{2peak}$ following water-based callisthenics (SMD 0.41 95% CI -0.26;1.09, intervention arms = 1) and land-based callisthenics (SMD 0.38 95% CI -0.03;0.78, intervention arms = 6). No improvements in $\dot{V}O_{2peak}$ were seen following moderate intensity interval cycling however this was performed by one intervention group. Stair climbing (SMD -0.79 95% CI -1.28;-0.31, intervention arms = 4) and low intensity continuous walking (SMD -0.43 95% CI -0.83;-0.03, intervention arms = 2) appeared to have a detrimental effect on improvements in $\dot{V}O_{2peak}$. Whilst high intensity training modalities resulted in the greatest increase in $\dot{V}O_{2peak}$, the differences compared to moderate intensity training were not significant.

For model 1, a sensitivity analysis removing two unconnected studies did not significantly change the results except eccentric cycling was removed from the model. Results did not change significantly after removing two unconnected studies for model 2. Node splitting and examination of net heat plots did not identify significant inconsistency between direct and indirect evidence for model 1 or 2 although the number of pairwise comparisons were low.

When limiting analysis to RCTs with low risk of bias for blinding of outcome assessors, 22 studies remained in model 1 with aerobic training the only component with a significant impact on change in $\dot{V}O_{2peak}$ (SMD 0.97 95%CI 0.12:1.82) and nine studies remained in model 2 with high intensity continuous walking and high intensity continuous cycling the only components with a significant impact on change in $\dot{V}O_{2peak}$ (SMD 0.94 95%CI 0.02:1.86 and SMD 1.10 95%CI 0.31:1.88). When limiting analysis to studies with high quality of reporting (Consensus on Exercise Reporting Template score ≥12), 19 studies remained in model 1 with aerobic training and ghrelin the only components with significant impact on change in $\dot{V}O_{2peak}$ (SMD 0.56 95%CI 0.13:0.99 and SMD 1.13 95%CI 0.04:2.22) and 11 studies remained in model 2 with high intensity continuous cycling and high intensity interval walking the only components with a significant impact on change in $\dot{V}O_{2peak}$ (SMD 0.77 95%CI 0.31:1.22 and SMD 1.11 95%CI 0.03:2.19).

For model 1, when using a conservative estimate of the correlation coefficient, the effect of the addition of vitamin supplementation to lower limb aerobic training became significant (SMD 0.65 95%CI 0.04:1.27) but the results were otherwise unchanged. Using a conservative estimate of the correlation coefficient did not affect the results of model 2.

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**eTable 1 -** Description of included controlled trials

| Study | Group 1 components | Group 2 components | Group 3 components | n | Age | Gender (M:F) | FEV$_1$ (%pred) | n | Age | Gender (M:F) | FEV$_1$ (%pred) | n | Age | Gender (M:F) | FEV$_1$ (%pred) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baumann, 2012 [2] | HIIW + Callisthenics + stair climbing + ULRT + Education + Breathing retraining | Usual care | | 37 | 63 (11) | 23: 14 | 47 (13) | 44 | 65 (8) | 24:20 | 45 (13) | | | | |
| Borghi-Silva, 2009 [3] | HICW | Usual care | | 20 | 67 (10) | 13: 7 | 33 (9) | 14 | 67 (10) | 12:8 | 35 (11) | | | | |
| Borghi-Silva, 2015 [4] | HICW | Usual care | | 10 | 67 (7) | 7:3 | 32 (11) | 10 | 66 (10) | 5:5 | 35 (12) | | | | |
| Duruturk, 2016 [5] | HICC + Education | Usual care | Callisthenics + Education | 15 | 61 (5) | 11: 4 | 58 (14) | 13 | 64 (6) | 11:2 | 64 (11) | 14 | 61 (5) | 13:1 | 57(10) |
| Emery, 1998 [6] | MICC + MICW + Education + arm cycling | Usual care | | 25 | 65 (6) | 15: 15 | 43(18) | 25 | 67 (7) | 12:13 | 39 (16) | | | | |
| Gohl, 2006 [7] | MICC + MICW + ULRT+ LLRT + Education | Usual care | | 19 | 63 (7) | 6:4 | 53 (11) | 9 | 63 (9) | 7:2 | 54 (6) | | | | |
| Lake, 1990 [8] | MICW | Usual care | MICW + arm cycling | 6 | 72 (3) | 6:0 | | 7 | 66 (4) | 6:1 | | 7 | 66 (7) | 4:3 | |
| Larson, 1999 [9] | MICC | Usual care | MICC + IMT | 14 | 66 (6) | | 46 (17) | 12 | 62 (7) | | 55 (18) | 14 | 68 (6) | | 46 (17) |
| Reardon, 1994 [10] | MICC + MICW + stair climbing + ULRT + Education + IMT + Breathing retraining | Usual care | | 10 | 66 (8) | 5: 5 | 35 (10) | 10 | 66 (7) | 5:5 | 33 (15) | | | | |
| Ries, 1995 [11] | MICW + ULRT + Education + Breathing retraining + arm cycling | Education | | 53 | 61.5 (8) | 42: 15 | | 57 | 64 (6) | 45:17 | | | | | |
| Troosters, 2000 [12] | HICC + HICW + stair climbing + ULRT + LLRT + arm cycling | Usual care | | 34 | 60 (9) | 31: 6 | 41 (16) | 28 | 63 (7) | 30:3 | 43 (12) | | | | |
| Wijkstra, 1996 [13] | HICC + ULRT + Education + IMT + Breathing retraining | Usual care | | 28 | 64 (5) | 23: 5 | 44 (11) | 15 | 62 (5) | 14:1 | 45 (9) | | | | |
| Zambom-Ferraresi, 2015 [14] | MICC + ULRT + LLRT | Usual care | | 14 | 68 (7) | 14: 0 | 44 (12) | 8 | 69 (5) | 8:0 | 40 (5) | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Covey, 2014 [15] | HIIC | HIIC + LLRT | | 27 | 68 (7) | 25:2 | 39 (9) | 28 | 68 (8) | 24:4 | 41 (10) | | | | |
| Gigliotti, 2003 [16] (crossover study) | HICC + ULRT + Education | Usual care | | 20 | 64 (8) | 18:2 | 42 (12) | | | | | | | | |
| Leite, 2015 [17] | HIIW | Usual care | | 10 | 62 (IQR 60-69) | | 55 (IQR 39-70) | 6 | 62.5 (IQR 57-71) | | 45 (IQR 38-74) | | | | |
| O'Donnell, 1995 [18] | HICC + HICW + stair climbing +Breathing retraining + arm cycling | Usual care | | 30 | 66 (6) | 20:10 | 38 | 30 | 69 (6) | 23:7 | 38 | | | | |
| Serres, 1997 [19] | HIIC + MICW | Usual care | | 8 | 60 (2) | | 49 (12) | 6 | 70 (3) | | 68 (23) | | | | |
| Vogiatzis, 1999 [20] | MICC + MICW + Education | Usual care | | 60 | 64 (1) | 38:22 | 55 (3) | 15 | 56 (3) | 32:28 | 55 (5) | | | | |
| Wen, 2008 [21] | MICW | Usual care | HICC | 15 | 67 (7) | 14:1 | 46 (10) | 9 | 66 (10) | 9:0 | 52 (14) | 17 | 68 (7) | 17:0 | 50 (14) |
| Wadell, 2004 [22] | Callisthenics | Usual care | Water based Callisthenics | 14 | 65 (7) | 5:10 | 53 (12) | 12 | 63 (7) | 7:6 | 49 (12) | 15 | 65 (4) | 4:11 | 56 (11) |
| Bernard, 1999 [23] | HICC + Breathing retraining | HICC + ULRT +LLRT | | 15 | 67 (9) | 11:4 | 39 (12) | 21 | 64 (7) | 17:4 | 45 (15) | | | | |
| Bianchi, 2002 [24] | MICC + ULRT + LLRT + Education | MICC + ULRT + LLRT + Education + NIV | | 10 | 65 (61-69) | 10:0 | 40 (12) | 9 | 64 (61-67) | 9:0 | 48 (19) | | | | |
| Blanco, 2013 [25] | HIIC + ULRT | HIIC + ULRT + sildenafil | | 31 | 65 (8) | 26:5 | 31 (10) | 29 | 66 (8) | 28:1 | 33 (12) | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Borghi-Silva, 2010 [26] | HICW + NIV | HICW + oxygen | 14 | 68 (9) | 9:5 | 34 (10) | 14 | 67 (7) | 9:5 | 33 (7) |
| Broekhuizen, 2005 [27] | MICC + MICW + swimming | MICC + MICW + swimming + PUFA | 32 | 62 (8) | 35:16 | 36 (15) | 31 | 64 (10) | 36:15 | 38 (15) |
| Bronstad, 2013 [28] | HICW | MICW | 10 | 65 (8) | 7:3 | 55 (9) | 7 | 65 (5) | 5:2 | 50 (15) |
| Burdet, 1997 [29] | Moderate intensity exercise, modality unclear | Moderate intensity exercise, modality unclear + growth hormone | 8 | 65 (8) | 7:1 | 42 (12) | 8 | 7:1 | 67 (10) | 37 (15) |
| Carrieri-Kohlman, 1996 [30] | MICW | MICW + coaching | 27 | 66 (9) | 15:12 | 36 (10) | 24 | 68 (7) | 14:10 | 40 (11) |
| Costes, 2003 [31] | MICC | MICC + NIV | 7 | 67 (6) | 6:1 | 32 (7) | 7 | 5:2 | 60 (7) | 31 (12) |
| Creutzberg, 2003 [32] | MICC + MICW + swimming | MICC + MICW + swimming + anabolic steroids | 28 | 67 (7) | 28:0 | 33 (10) | 28 | 28:0 | 66 (8) | 38 (17) |
| Coppoolse, 1999 [33] | HICC + Callisthenics + Education | HIIC + Callisthenics + Education | 10 | 67 (3) | 10:0 | 37 (18) | 9 | 63 (8) | 9:0 | 36 (10) |
| Dekhuijzen, 1991[34] | MICC + MICW + Callisthenics + Education + Breathing retraining | MICC + MICW + Callisthenics + Education + Breathing retraining + IMT | 20 | 60 (7) | 16:4 | 52 (17) | 20 | 14:6 | 58 (8) | 47 (14) |
| Delussu, 2014a [35] | Moderate intensity exercise, modality unclear | Moderate intensity exercise, modality unclear + resistance training, unspecified | 35 | 71 (9) | 14:21 | 61 (14) | 30 | 18:12 | 74 (6) | 59 (18) |
| Emtner, 2003 [36] | HICC + Education | HICC + Education + oxygen | 15 | 67 (10) | 10:5 | 38 (8) | 14 | 8:6 | 66 (7) | 35 (10) |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Eves, 2009 [37] | MICC + LIW + resistance training, unspecified + Education | MICC + LIW + resistance training, unspecified + Education + Helium-hyperoxia | 19 | 66 (7) | 12:7 | | 19 | 12:7 | 65 (9) | |
| Ferreira, 1998 [38] | HICC | HICC + anabolic steroids | 7 | 66 (7) | 7:0 | 49 (16) | 10 | 10:0 | 70 (5) | 41 (14) |
| Fichter, 1999 [39] | HICC | HICC + oxygen | 5 | 59 (7) | 5:0 | 46 (27) | 5 | 5:0 | 58 (11) | 41 (8) |
| Fuld, 2005 [40] | MICC + Callisthenics + Education | MICC + Callisthenics + Education + creatine | 11 | 64 (10) | 13:7 | 45 (16) | 14 | 10:8 | 62 (8) | 45 (14) |
| Hornikx, 2012 [41] | HICC + HICW + ULRT + LLRT + arm cycling + stair climbing | HICC + HICW + ULRT + LLRT + arm cycling + stair climbing + vitamin D | 25 | 69 (6) | 19:6 | 40 (10) | 24 | 67 (8) | 19:6 | 47 (18) |
| Mador, 2005 [42] | MICC +MICW + Education + Callisthenics | MICC +MICW + Education + Callisthenics + IMT | 14 | 71 (8) | | 44 (13) | 15 | 70 (8) | | 45 (21) |
| Mador, 2009 [43] | HIIC + HIIW + Education | MICC + HICW + Education | 21 | 72 (7) | | 45 (14) | 20 | 72 (8) | | 42 (13) |
| Miki, 2013 [44] | HIIC + Education | HIIC + Education + Ghrelin | 10 | 73 (6) | 9:1 | 33 (11) | 10 | 71 (6) | 10:0 | 32 (9) |
| Normandin, 2002 [45] | HICC + HICW + Education | Callisthenics + ULRT + Education | 20 | 69 (7) | 11:9 | 43 (16) | 20 | 67 (9) | 10:10 | 56 (20) |
| Reuveny, 2005 [46] | MICW | MICW + NIV | 10 | 63 (9) | 9:1 | 33 (9) | 9 | 64 (9) | 9:0 | 32 (4) |
| Rodriguez, 2016 [47] | HIIC | HICC | 14 | 67 (9) | 13:1 | 43 (15) | 15 | 66 (7) | 14:1 | 41 (10) |
| Rooyackers, 2003 [48] | HIIC + resistance training, unspecified + Education | HIIC + resistance training, unspecified + Education + Eccentric cycling | 12 | 59 (13) | 10:2 | 38 (11) | 12 | 59 (10) | 10:2 | 45 (13) |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scorsone, 2010 [49] | HICC | HICC + oxygen | HICC + Helium hyperoxia | 10 | 68 (7) | 7:3 | 50 (12) | 10 | 67 (9) | 7:3 | 47 (10) | 10 | 67 (9) | 9:1 | 49 (12) |
| Sivori, 1998 [50] | HICC | HICC + ULRT | | 14 | 63 (9) | 12:2 | 35 (17) | 14 | 66 (9) | 11:3 | 37 (11) | | | | |
| Spielmanns, 2015 [51] | HICC | HICC + oxygen | | 17 | 64 (8) | | 43 (12) | 19 | 64 (8) | | 44 (10) | | | | |
| Sykes, 2005 [52] | HICC + ULRT + Education | HICC + ULRT + Education + IMT | | 17 | 73 (7) | 14:3 | 44 (12) | 20 | 73 (7) | 17:3 | 40 (13) | | | | |
| Vallet, 1997 [53] | HIIC + Education | MIIC + Education | | 12 | 55 (3) | 8:4 | 54 | 12 | 59 (3) | 10:2 | 63 | | | | |
| Varga, 2007 [54] | HICC | HIIC | | 22 | 61 (12) | 19:3 | 51 (16) | 17 | 67 (10) | 11:6 | 64 (29) | | | | |
| Vogiatzis, 2002 [55] | HIIC + Education | MICC + Education | | 18 | 67 (2) | 14:4 | 45 (4) | 18 | 69 (2) | 16:2 | 44 (4) | | | | |
| Vogiatzis, 2005 [56] | HIIC + Education | HICC + Education | | 10 | 64 (9) | 8:2 | 44 (19) | 9 | 67 (6) | 8:1 | 39 (18) | | | | |
| Vonbank, 2012 [57] | HICC + Education | HICC + ULRT + LLRT + Education | | 12 | 62 (5) | 8:4 | 58 (19) | 12 | 59 (8) | 9:3 | 51 (20) | | | | |
| Wang, 2017 [58] | HICC | LIW | HICC + IMT | 27 | 70 (6) | | 51 (18) | 26 | 70 (6) | | 58 (19) | 28 | 71 (5) | | 50 (16) |
| Wanke, 1994 [59] | HICC | HICC + IMT | | 21 | 57 (6) | 10:11 | 48 (17) | 21 | 55 (5) | 12:9 | 44 (19) | | | | |

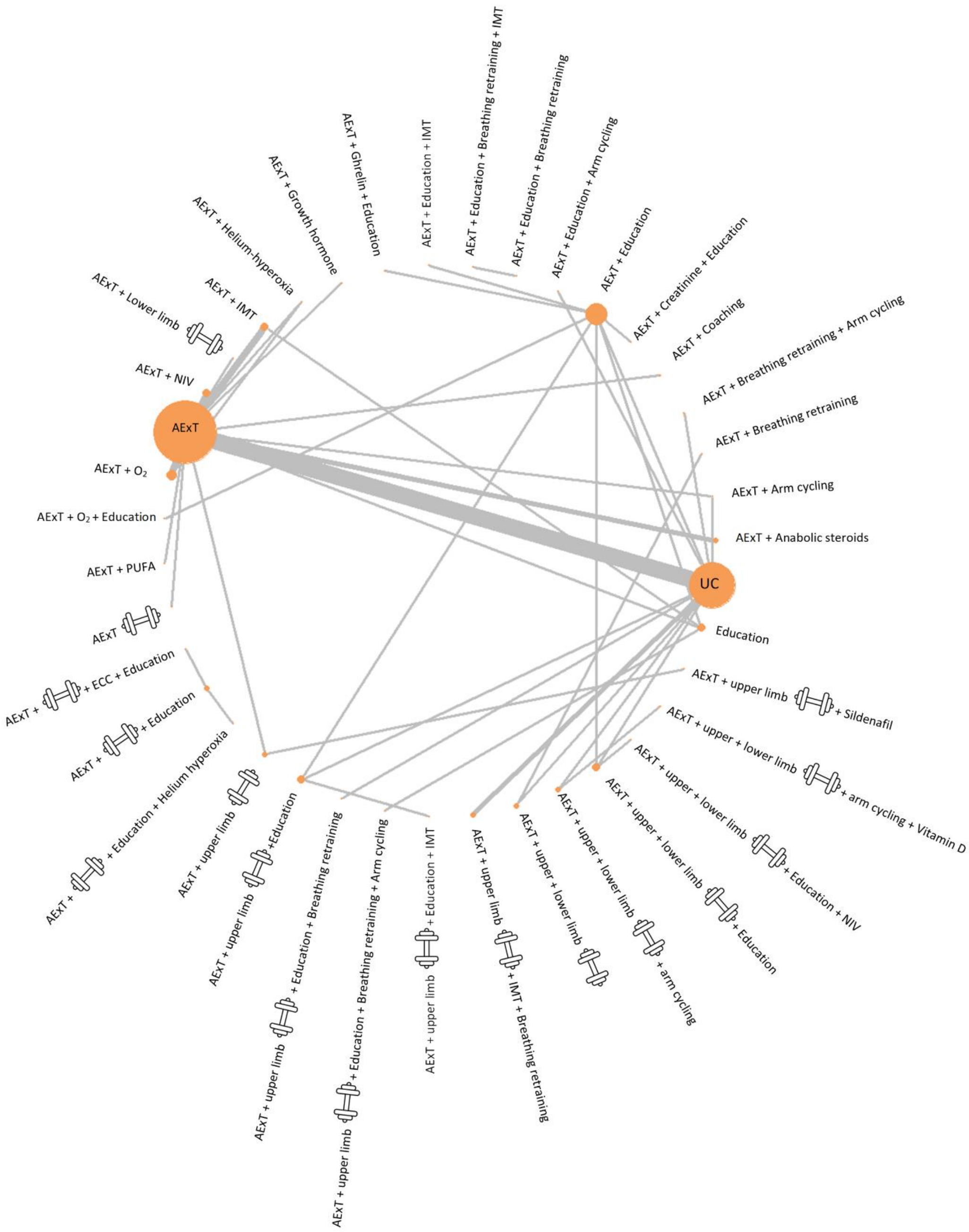
HIIC: High intensity interval cycling, HIIW: High intensity interval walking, HICC: High intensity continuous cycling, HICW: High intensity continuous walking, MIIC: Moderate intensity interval cycling, MICC: Moderate intensity continuous cycling, MICW: Moderate intensity continuous walking, LIW: Low intensity walking, PUFA: polyunsaturated fatty acids, IMT: inspiratory muscle training, ULRT: upper limb resistance training, LLRT: lower limb resistance training

**eTable 2** – Bias assessment for randomised controlled trials

| Study | Random sequence generation (selection bias) | Allocation concealment (selection bias) | Blinding of participants and personnel (performance bias) | Blinding of outcome assessment (detection bias) | Incomplete outcome data (attrition bias) | Selective outcome reporting (reporting bias) | Other bias |
|---|---|---|---|---|---|---|---|
| Baumann (2012) [2] | Low | Unclear | High | Low | Low | Low | Low |
| Borghi-Silva (2009) [3] | Unclear | Unclear | High | Unclear | High | Low | Low |
| Borghi-Silva (2015) [4] | Low | Low | High | Low | Low | Low | Low |
| Duruturk (2016) [5] | Low | Low | High | Low | Low | Low | Low |
| Emery (1998) [6] | Low | Low | High | Low | Low | Low | Low |
| Gohl (2006) [7] | Low | Unclear | High | Unclear | High | Low | Low |
| Lake (1990) [8] | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Larson (1999) [9] | Unclear | Unclear | High | Low | Unclear | Low | Low |
| Reardon (1994) [10] | Low | Unclear | High | Low | Unclear | Low | Low |
| Ries (1995) [11] | Low | Low | High | Unclear | Low | Low | Low |
| Troosters (2000) [12] | Low | Low | High | Unclear | Low | Low | Low |
| Wijkstra (1996) [13] | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Zambom-Ferraresi (2015) [14] | Unclear | Low | High | Low | Low | Low | Low |
| Bernard (1999) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Bianchi (2002) | Unclear | Unclear | High | High | High | Low | Low |
| Blanco (2013) | Unclear | Low | Low | Low | Low | Low | Low |
| Borghi-Silva (2010) | Low | Low | High | Unclear | Low | Low | Low |
| Broekhuizen (2005) | Unclear | Unclear | Low | Low | Low | Low | Low |
| Bronstad (2013) | Low | Unclear | High | Unclear | High | Low | Low |
| Burdet (1997) | Unclear | Unclear | Low | Low | Unclear | Low | Low |
| Carrieri-Kohlman (1996) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Coppoolse (1999) | Low | Unclear | High | Unclear | Low | Low | Low |
| Costes (2003) | High | High | High | Unclear | Low | Low | Low |
| Covey (2014) | Low | Low | Low | Low | Low | Low | Low |
| Creutzberg (2003) | Unclear | Low | Low | Low | Low | Low | Low |
| Dekhuijzen (1991) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Delussu (2014) | Unclear | Unclear | High | Unclear | Unclear | Low | Low |
| Emtner (2003) | Unclear | Unclear | Low | Low | Low | Low | Low |
| Eves (2009) | Low | Low | Low | Low | High | Low | Low |
| Ferreira (1998) | Unclear | Unclear | Low | Low | High | Low | Low |
| Fichter (1999) | Unclear | Unclear | Low | Unclear | Low | Low | Low |
| Fuld (2005) | Unclear | Unclear | Low | Low | High | Low | Low |
| Hornikx (2012) | Low | Low | Low | Low | Low | Low | Low |
| Larson (1999) | Unclear | Unclear | High | Low | High | Low | Low |
| Mador (2005) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Mador (2009) | Unclear | Low | High | Unclear | Low | Low | Low |
| Miki (2013) | Low | Low | Low | Low | Low | Low | Low |
| Normandin (2002) | Unclear | Unclear | High | High | Low | Low | Low |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Reuveny (2005) | Low | Low | High | Low | Low | Low | Low |
| Rooyackers (2003) | Unclear | Unclear | High | Unclear | Unclear | Low | Low |
| Santos (2015) | Low | Low | High | High | Low | Low | Low |
| Scorsone (2010) | Unclear | Unclear | Low | Low | Low | Low | Low |
| Sivori (1998) | Low | Unclear | High | Unclear | High | Low | Low |
| Spielmanns (2015) | Low | Unclear | Low | High | High | Low | Low |
| Sykes (2005) | Unclear | Low | High | Low | Low | Low | Low |
| Vallet (1997) | Unclear | Unclear | Low | Low | Low | Low | Low |
| Vogiatzis (2002) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Vogiatzis (2005) | Unclear | Unclear | High | Unclear | Unclear | Low | Low |
| Vonbank (2012) | Unclear | Unclear | High | Unclear | Low | Low | Low |
| Wanke (1994) | Unclear | Unclear | High | Unclear | High | Low | Low |
| Wen (2008) | Low | Unclear | High | Unclear | High | Low | Low |
| Wang (2017) | Low | Low | High | Low | Low | Low | Low |
| Proportion: Low | 40% | 35% | 29% | 46% | 65% | 100% | 100% |
| High | 2% | 2% | 71% | 8% | 23% | 0% | 0% |
| Unclear | 58% | 63% | 0% | 46% | 12% | 0% | 0% |

**eFigure 1** – Network graph of programme components (model 1). ⟛: Resistance training, AExT: Traditional lower limb aerobic training, ECC: Eccentric cycling, IMT: Inspiratory muscle training, PUFA: polyunsaturated fatty acids, UC: Usual care. The size of the nodes is proportional to the number of included studies and the thickness of the lines is proportional to the number of comparisons.



**eFigure 2** – Net heat plot of model 1 once unconnected studies removed.

In this plot, the area of a grey square displays the contribution of the direct estimate of one design in the column to a network estimate in a row. The colours show the change in inconsistency when relaxing the assumption of consistency for the effects of single designs. The colours on the diagonal represent the inconsistency contribution of the corresponding design. The colours on the off-diagonal are associated with the change in inconsistency between direct and indirect evidence in a network estimate in the row after relaxing the consistency assumption for the effect of one design in the column. Cool colours (blue) indicate an increase and warm colours (yellow to orange to red) a decrease, colours in between (yellow) indicate no change: the stronger the intensity of the colour, the greater the difference between the inconsistency before and after the detachment.

**eFigure 3** – Net heat plot of model 2 once unconnected studies removed.

In this plot, the area of a grey square displays the contribution of the direct estimate of one design in the column to a network estimate in a row. The colours show the change in inconsistency when relaxing the assumption of consistency for the effects of single designs. The colours on the diagonal represent the inconsistency contribution of the corresponding design. The colours on the off-diagonal are associated with the change in inconsistency between direct and indirect evidence in a network estimate in the row after relaxing the consistency assumption for the effect of one design in the column. Cool colours (blue) indicate an increase and warm colours (yellow to orange to red) a decrease: the stronger the intensity of the colour, the greater the difference between the inconsistency before and after the detachment (yellow represents a low intensity of red i.e. mild inconsistency).