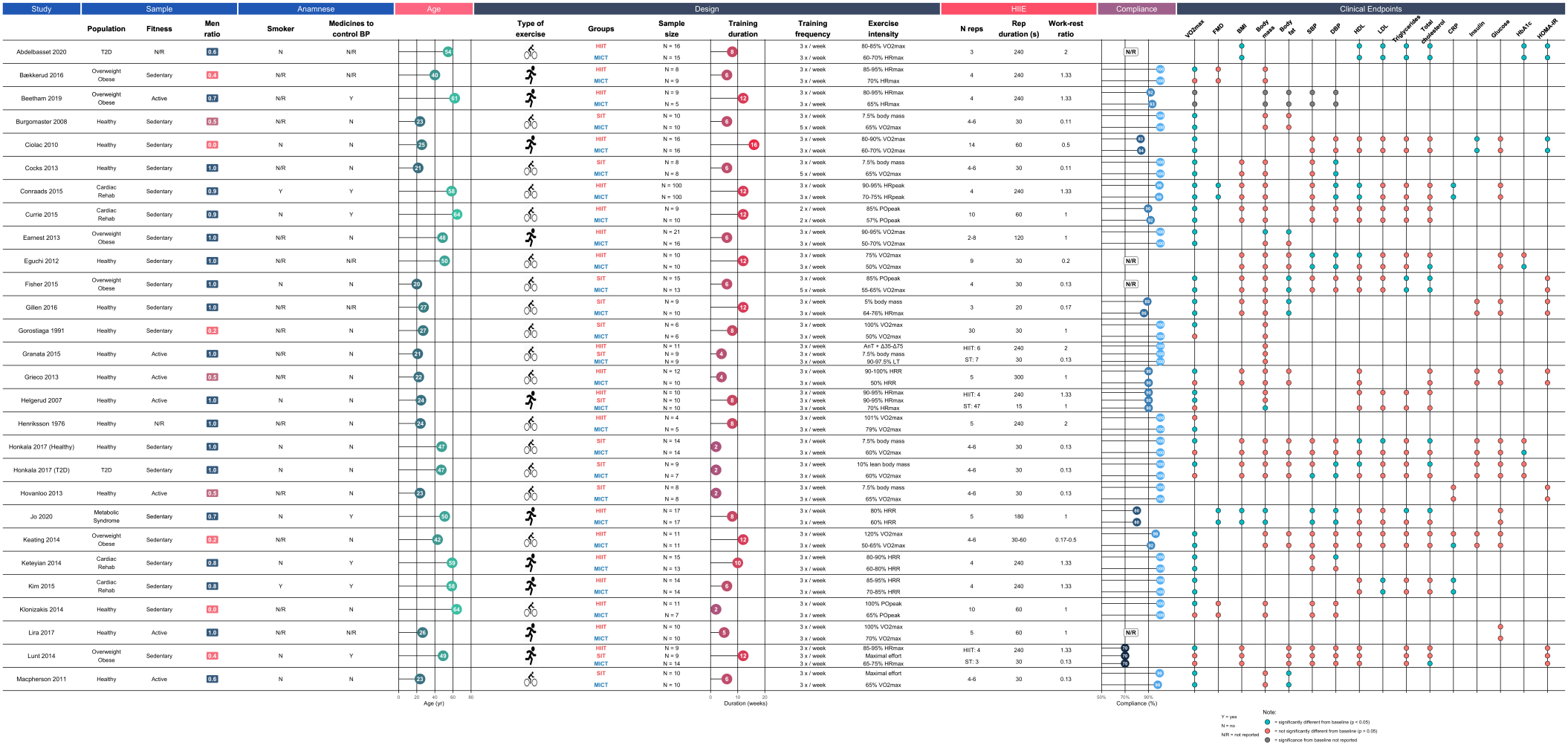
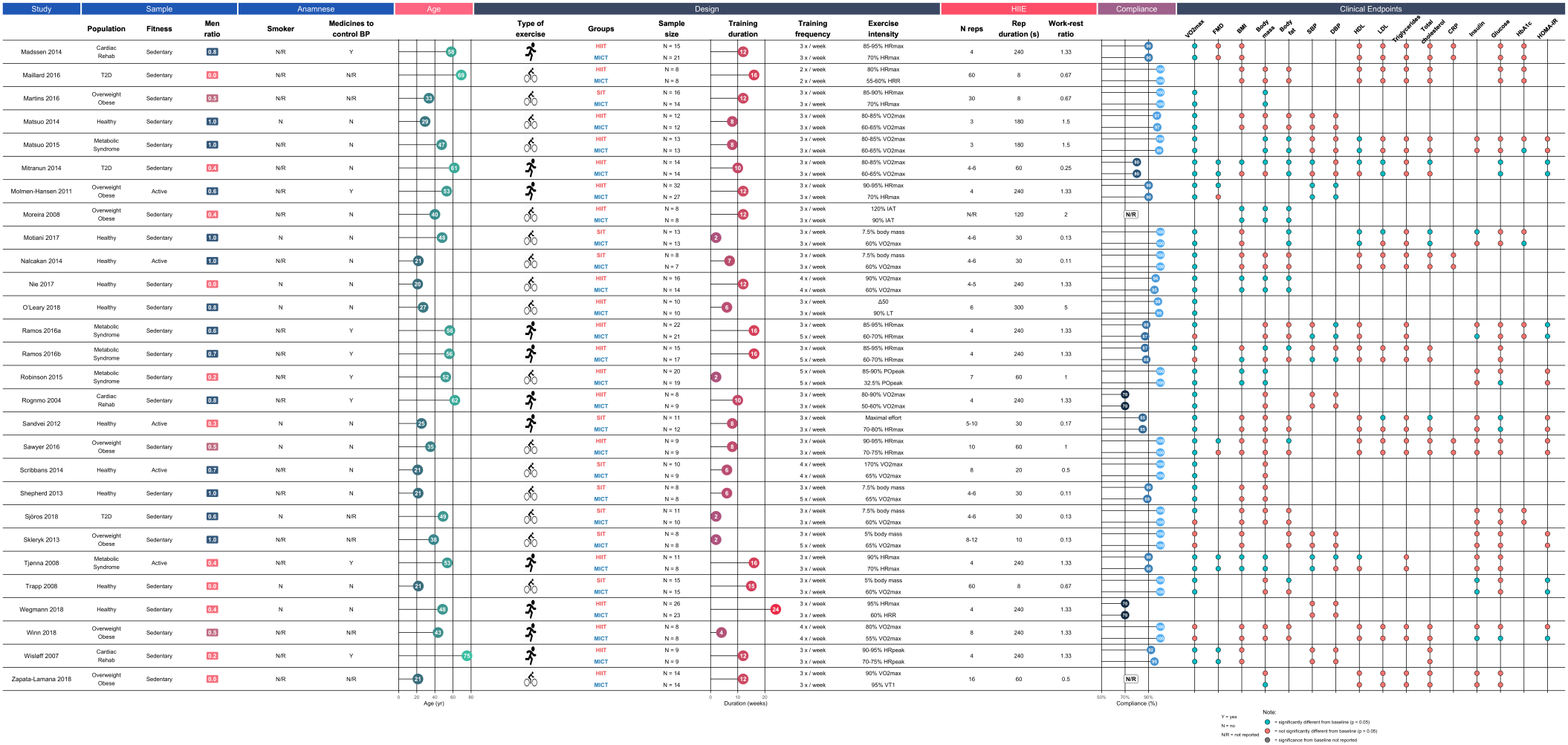
Figure 1. Graphical representation of the summary of all the included studies and their respective designs. Green and red circles under "Clinical Endpoints" represent significant ($p < 0.05$) and not-significant ($p > 0.05$) within-group difference, respectively, between pre- and post-training. Under the *Ages* column, the numbers represent the median age between the groups in the study.

Note: N = no; NR = not reported; Y = yes.


Study
Sample
Anamnese
Age
Design
HIIE
Compliance
Clinical Endpoints
Population
Fitness
Men ratio
Smoker
Medicines to control BP
Type of exercise
Groups
Sample size
Training duration
Training frequency
Exercise intensity
N reps
Rep duration (s)
Work-rest ratio
VO2max
FMD
BMI
Body mass
Body fat
SBP
DBP
HDL
LDL
Triglycerides
Total cholesterol
CRP
Insulin
Glucose
HbA1c
HOMA-IR
Abdelbasset 2020
T2D
N/R
0.6
N
N/R
HIIT
N = 16
3 x / week
80-85% VO2max
3
240
2
MICT
N = 15
3 x / week
60-70% HRmax
Bækkerud 2016
Overweight Obese
Sedentary
0.4
N/R
N/R
HIIT
N = 8
3 x / week
85-95% HRmax
4
240
1.33
MICT
N = 9
3 x / week
70% HRmax
Beetham 2019
Overweight Obese
Active
0.7
N/R
Y
HIIT
N = 9
3 x / week
80-95% HRmax
4
240
1.33
MICT
N = 5
3 x / week
65% HRmax
Burgomaster 2008
Healthy
Sedentary
0.5
N/R
N
SIT
N = 10
3 x / week
7.5% body mass
4-6
30
0.11
MICT
N = 10
5 x / week
65% VO2max
Ciolac 2010
Healthy
Sedentary
0.0
N
N
HIIT
N = 16
3 x / week
80-90% VO2max
14
60
0.5
MICT
N = 16
3 x / week
60-70% VO2max
Cocks 2013
Healthy
Sedentary
1.0
N/R
N
SIT
N = 8
3 x / week
7.5% body mass
4-6
30
0.11
MICT
N = 8
5 x / week
65% VO2max
Conraads 2015
Cardiac Rehab
Sedentary
0.9
Y
Y
HIIT
N = 100
3 x / week
90-95% HRpeak
4
240
1.33
MICT
N = 100
3 x / week
70-75% HRpeak
Currie 2015
Cardiac Rehab
Sedentary
0.9
N
Y
HIIT
N = 9
2 x / week
85% POpeak
10
60
1
MICT
N = 10
2 x / week
57% POpeak
Earnest 2013
Overweight Obese
Sedentary
1.0
N/R
N
HIIT
N = 21
3 x / week
90-95% VO2max
2-8
120
1
MICT
N = 16
3 x / week
50-70% VO2max
Eguchi 2012
Healthy
Sedentary
1.0
N/R
N/R
HIIT
N = 10
3 x / week
75% VO2max
9
30
0.2
MICT
N = 10
3 x / week
50% VO2max
Fisher 2015
Overweight Obese
Sedentary
1.0
N
N
SIT
N = 15
3 x / week
85% POpeak
4
30
0.13
MICT
N = 13
5 x / week
55-65% VO2max
Gillen 2016
Healthy
Sedentary
1.0
N/R
N/R
SIT
N = 9
3 x / week
5% body mass
3
20
0.17
MICT
N = 10
3 x / week
64-76% HRmax
Gorostiaga 1991
Healthy
Sedentary
0.2
N/R
N
SIT
N = 6
3 x / week
100% VO2max
30
30
1
MICT
N = 6
3 x / week
50% VO2max
Granata 2015
Healthy
Active
1.0
N/R
N
HIIT
N = 11
3 x / week
AnT + Δ35-Δ75
HIIT: 6
240
2
SIT
N = 9
3 x / week
7.5% body mass
ST: 7
30
0.13
MICT
N = 9
3 x / week
90-97.5% LT
Grieco 2013
Healthy
Active
0.5
N/R
N
HIIT
N = 12
3 x / week
90-100% HRR
5
300
1
MICT
N = 10
3 x / week
50% HRR
Helgerud 2007
Healthy
Active
1.0
N
N
HIIT
N = 10
3 x / week
90-95% HRmax
HIIT: 4
240
1.33
SIT
N = 10
3 x / week
90-95% HRmax
ST: 47
15
1
MICT
N = 10
3 x / week
70% HRmax
Henriksson 1976
Healthy
N/R
1.0
N/R
N
HIIT
N = 4
3 x / week
101% VO2max
5
240
2
MICT
N = 5
3 x / week
79% VO2max
Honkala 2017 (Healthy)
Healthy
Sedentary
1.0
N
N
SIT
N = 14
3 x / week
7.5% body mass
4-6
30
0.13
MICT
N = 14
3 x / week
60% VO2max
Honkala 2017 (T2D)
T2D
Sedentary
1.0
N
N
SIT
N = 9
3 x / week
10% lean body mass
4-6
30
0.13
MICT
N = 7
3 x / week
60% VO2max
Hovanloo 2013
Healthy
Active
0.5
N/R
N
SIT
N = 8
3 x / week
7.5% body mass
4-6
30
0.13
MICT
N = 8
3 x / week
65% VO2max
Jo 2020
Metabolic Syndrome
Sedentary
0.7
N
Y
HIIT
N = 17
3 x / week
80% HRR
5
180
1
MICT
N = 17
3 x / week
60% HRR
Keating 2014
Overweight Obese
Sedentary
0.2
N/R
N
HIIT
N = 11
3 x / week
120% VO2max
4-6
30-60
0.17-0.5
MICT
N = 11
3 x / week
50-65% VO2max
Keteyian 2014
Cardiac Rehab
Sedentary
0.8
N
Y
HIIT
N = 15
3 x / week
80-90% HRR
4
240
1.33
MICT
N = 13
3 x / week
60-80% HRR
Kim 2015
Cardiac Rehab
Sedentary
0.8
Y
Y
HIIT
N = 14
3 x / week
85-95% HRR
4
240
1.33
MICT
N = 14
3 x / week
70-85% HRR
Klonizakis 2014
Healthy
Sedentary
0.0
N/R
N
HIIT
N = 11
3 x / week
100% POpeak
10
60
1
MICT
N = 7
3 x / week
65% POpeak
Lira 2017
Healthy
Active
1.0
N/R
N/R
HIIT
N = 10
3 x / week
100% VO2max
5
60
1
MICT
N = 10
3 x / week
70% VO2max
Lunt 2014
Overweight Obese
Sedentary
0.4
N
Y
HIIT
N = 9
3 x / week
85-95% HRmax
HIIT: 4
240
1.33
SIT
N = 9
3 x / week
Maximal effort
ST: 3
30
0.13
MICT
N = 14
3 x / week
65-75% HRmax
Macpherson 2011
Healthy
Active
0.6
N
N
SIT
N = 10
3 x / week
Maximal effort
4-6
30
0.13
MICT
N = 10
3 x / week
65% VO2max
0
20
40
60
80
Age (yr)
0
10
20
Duration (weeks)
50%
70%
90%
Compliance (%)
Y = yes
N = no
N/R = not reported
Note:
= significantly different from baseline (p < 0.05)
= not significantly different from baseline (p > 0.05)
= significance from baseline not reported


Study
Sample
Anamnese
Age
Design
HIIE
Compliance
Clinical Endpoints
Population
Fitness
Men ratio
Smoker
Medicines to control BP
Type of exercise
Groups
Sample size
Training duration
Training frequency
Exercise intensity
N reps
Rep duration (s)
Work-rest ratio
VO2max
FMD
BMI
Body mass
Body fat
SBP
DBP
HDL
LDL
Triglycerides
Total cholesterol
CRP
Insulin
Glucose
HbA1c
HOMA-IR
Madssen 2014
Cardiac Rehab
Sedentary
0.8
N/R
Y
HIIT
MICT
N = 15
N = 21
12
3 x / week
3 x / week
85-95% HRmax
70% HRmax
4
240
1.33
Maillard 2016
T2D
Sedentary
0.0
N/R
N/R
HIIT
MICT
N = 8
N = 8
16
2 x / week
2 x / week
80% HRmax
55-60% HRR
60
8
0.67
Martins 2016
Overweight Obese
Sedentary
0.5
N/R
N/R
SIT
MICT
N = 16
N = 14
12
3 x / week
3 x / week
85-90% HRmax
70% HRmax
30
8
0.67
Matsuo 2014
Healthy
Sedentary
1.0
N
N
HIIT
MICT
N = 12
N = 12
8
3 x / week
3 x / week
80-85% VO2max
60-65% VO2max
3
180
1.5
Matsuo 2015
Metabolic Syndrome
Sedentary
1.0
N/R
N
HIIT
MICT
N = 13
N = 13
8
3 x / week
3 x / week
80-85% VO2max
60-65% VO2max
3
180
1.5
Mitranun 2014
T2D
Sedentary
0.4
N/R
N
HIIT
MICT
N = 14
N = 14
10
3 x / week
3 x / week
80-85% VO2max
60-65% VO2max
4-6
60
0.25
Molmen-Hansen 2011
Overweight Obese
Active
0.6
N/R
Y
HIIT
MICT
N = 32
N = 27
12
3 x / week
3 x / week
90-95% HRmax
70% HRmax
4
240
1.33
Moreira 2008
Overweight Obese
Sedentary
0.4
N/R
N
HIIT
MICT
N = 8
N = 8
12
3 x / week
3 x / week
120% IAT
90% IAT
N/R
120
2
Motiani 2017
Healthy
Sedentary
1.0
N
N
SIT
MICT
N = 13
N = 13
2
3 x / week
3 x / week
7.5% body mass
60% VO2max
4-6
30
0.13
Nalcakan 2014
Healthy
Active
1.0
N/R
N
SIT
MICT
N = 8
N = 7
7
3 x / week
3 x / week
7.5% body mass
60% VO2max
4-6
30
0.11
Nie 2017
Healthy
Sedentary
0.0
N
N
HIIT
MICT
N = 16
N = 14
12
4 x / week
4 x / week
90% VO2max
60% VO2max
4-5
240
1.33
O'Leary 2018
Healthy
Sedentary
0.8
N
N
HIIT
MICT
N = 10
N = 10
6
3 x / week
3 x / week
Δ50
90% LT
6
300
5
Ramos 2016a
Metabolic Syndrome
Sedentary
0.6
N/R
Y
HIIT
MICT
N = 22
N = 21
16
3 x / week
5 x / week
85-95% HRmax
60-70% HRmax
4
240
1.33
Ramos 2016b
Metabolic Syndrome
Sedentary
0.7
N/R
Y
HIIT
MICT
N = 15
N = 17
16
3 x / week
5 x / week
85-95% HRmax
60-70% HRmax
4
240
1.33
Robinson 2015
Metabolic Syndrome
Sedentary
0.2
N/R
Y
HIIT
MICT
N = 20
N = 19
2
5 x / week
5 x / week
85-90% POpeak
32.5% POpeak
7
60
1
Rognmo 2004
Cardiac Rehab
Sedentary
0.8
N/R
Y
HIIT
MICT
N = 8
N = 9
10
3 x / week
3 x / week
80-90% VO2max
50-60% VO2max
4
240
1.33
Sandvei 2012
Healthy
Active
0.3
N
N
SIT
MICT
N = 11
N = 12
8
3 x / week
3 x / week
Maximal effort
70-80% HRmax
5-10
30
0.17
Sawyer 2016
Overweight Obese
Sedentary
0.5
N
N
HIIT
MICT
N = 9
N = 9
8
3 x / week
3 x / week
90-95% HRmax
70-75% HRmax
10
60
1
Scribbans 2014
Healthy
Active
0.7
N/R
N
SIT
MICT
N = 10
N = 9
6
4 x / week
4 x / week
170% VO2max
65% VO2max
8
20
0.5
Shepherd 2013
Healthy
Sedentary
1.0
N/R
N
SIT
MICT
N = 8
N = 8
6
3 x / week
5 x / week
7.5% body mass
65% VO2max
4-6
30
0.11
Sjöros 2018
T2D
Sedentary
0.6
N
N/R
SIT
MICT
N = 11
N = 10
2
3 x / week
3 x / week
7.5% body mass
60% VO2max
4-6
30
0.13
Skleryk 2013
Overweight Obese
Sedentary
1.0
N/R
N/R
SIT
MICT
N = 8
N = 8
2
3 x / week
5 x / week
5% body mass
65% VO2max
8-12
10
0.13
Tjønna 2008
Metabolic Syndrome
Active
0.4
N/R
Y
HIIT
MICT
N = 11
N = 8
16
3 x / week
3 x / week
90% HRmax
70% HRmax
4
240
1.33
Trapp 2008
Healthy
Sedentary
0.0
N
N
SIT
MICT
N = 15
N = 15
15
3 x / week
3 x / week
5% body mass
60% VO2max
60
8
0.67
Wegmann 2018
Healthy
Sedentary
0.4
N
N
HIIT
MICT
N = 26
N = 23
24
3 x / week
3 x / week
95% HRmax
60% HRR
4
240
1.33
Winn 2018
Overweight Obese
Sedentary
0.5
N/R
N/R
HIIT
MICT
N = 8
N = 8
4
4 x / week
4 x / week
80% VO2max
55% VO2max
8
240
1.33
Wisløff 2007
Cardiac Rehab
Sedentary
0.2
N/R
Y
HIIT
MICT
N = 9
N = 9
12
3 x / week
3 x / week
90-95% HRpeak
70-75% HRpeak
4
240
1.33
Zapata-Lamana 2018
Overweight Obese
Sedentary
0.0
N/R
N/R
HIIT
MICT
N = 14
N = 14
12
3 x / week
3 x / week
90% VO2max
95% VT1
16
60
0.5
N/R
0
20
40
60
80
Age (yr)
0
10
20
Duration (weeks)
50%
70%
90%
Compliance (%)
Y = yes
N = no
N/R = not reported
Note:
= significantly different from baseline (p < 0.05)
= not significantly different from baseline (p > 0.05)
= significance from baseline not reported