

A randomised-controlled trial comparing two group-based exercise programs (team-sport vs. circuit training) on men's health – study protocol.

Additional File 3 – Three example sessions from the 12-week circuit training program

Overall session structure

Within each session, exercise selection and order were purposeful. Sessions were designed to include at least:

- 2 resistance stations with movements utilising the whole body
- 2 resistance stations targeting the upper body (1 push and 1 pull movement)
- 2 resistance stations targeting the lower body (1 push and 1 pull movement)
- 2 aerobic stations with movements that were easily progressed or regressed and required minimal to no equipment
- 1 resistance station with a focus on core muscular control

The sequencing of the stations was done in a way to avoid the same body area being worked sequentially, while stations that were not expected to raise heart rate significantly were situated following higher intensity stations (e.g. core muscular control following the aerobic station).

Program progression

Table 1 depicts an overview of the session structure. As can be seen, mirroring that of the team-sport group, session intensity is initially increased through progressing the prescribed rating of perceived exertion (RPE). From week 5 onwards, participants were instructed to exercise at an intensity that they felt challenging but that they felt comfortable with (as is done in the team-sport group). Further progression is achieved in weeks 5 to 6 through reducing the rest interval, while also incorporating two more exercising stations to maintain similar total session duration. The final change in rest interval occurs from week 7 and is held throughout the remainder of the program. From week 7 an additional station is also added to combat the decreased rest interval, to maintain session duration. Exercises are progressed in difficulty throughout the program.

Example sessions

Table 2, 3 and 4 are example sessions from the program.

Table 1 – overview of 12-week circuit training program

Week	Repetitions	Rest	Intensity	Number of stations
1 – 4	30 seconds	45 seconds	Wk 1 RPE 11	9 (as outlined above)
			Wk 2 RPE 12	
			Wk 3 RPE 13	
			Wk 4 RPE 14	
5 – 6	30 seconds	35 seconds	RPE 14+	12 (above + 1 x whole body, aerobic, and core station)
7 – 12	30 seconds	30 seconds	RPE 14+	13 (above + 1 core station)

RPE; rating of perceived exertion (6-20 scale).

Table 2 – example session – week #2 (note rest interval and intensity)

Type	Exercise	Reps	Rest	Intensity	Equipment
WB	Battle ropes	30s	45s	12	Battle Rope
LB	Lunge (stationary)	30s	45s	12	Kettlebell
UB	Upright row	30s	45s	12	Sandbag or Kettlebell
AT	High knees	30s	45s	12	
Core	Deadbug	30s	45s	12	Mat
WB	Weighted slow walk	30s	45s	12	Sandbag
LB	Good Morning	30s	45s	12	Sandbag or Kettlebell
AT	Light jog	30s	45s	12	
UB	2 Hand Banded Press	30s	45s	12	Resistance Band
Repeat 3 times (3.5 min rest between sets)					

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Table 3 – example session – week 6 (note rest interval decrease, change in RPE intensity and additional stations)

Type	Exercise	Reps	Rest	Intensity	Equipment
WB	Rope pull	30s	35s	14+	Battle Rope
LB	Stationary lunge	30s	35s	14+	Sandbag or Kettlebell
UB	Split Squat banded row	30s	35s	14+	Heavy resistance band
AT	High Knees	30s	35s	14+	
Core	Banded wood chop	30s	35s	14+	Resistance band
WB	Suitcase carry	30s	35s	14+	Sandbag
LB	Deadlift	30s	35s	14+	Kettlebell
AT	10m shuttles	30s	35s	14+	
UB	Tricep dip	30s	35s	14+	Bench
WB	Push press	30s	35s	14+	Sandbag
Core	Prone plank	30s	35s	14+	Mat
AT	Star Jumps	30s	35s	14+	
Repeat 3 times (3.5 min rest between sets)					

Table 4 – example session – week 10 (note rest interval decrease, additional core control station and exercise progressions (e.g. progression from deadlift in week 6 to kettlebell swing in week 10))

Type	Exercise	Reps	Rest	Intensity	Equipment
WB	Romanian deadlift to high pull	30s	30s	14+	Sandbag
LB	Walking lunge	30s	30s	14+	Sandbag or Kettlebell
UB	Bent over row	30s	30s	14+	Sandbag or Kettlebell
AT	Seal jumps	30s	30s	14+	
Core	Prone plank	30s	30s	14+	Mat
WB	Squat press	30s	30s	14+	Sandbag
LB	Kettlebell swing	30s	30s	14+	Kettlebell
AT	10m shuttles	30s	30s	14+	
Core	Deadbug (double)	30s	30s	14+	Mat
UB	Push up	30s	30s	14+	Mat
WB	Push press	30s	30s	14+	Sandbag
Core	Banded wood chop	30s	30s	14+	Resistance band
AT	Star Jumps	30s	30s	14+	
Repeat 3 times (3.5 min rest between sets)					

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