1. Aims
Reviews of workplace physical activity interventions indicate limited effects of these programs on employee health (1) and fitness (2). Supervised exercise supervision has shown greater health and fitness benefits compared to unsupervised and home-based exercise in clinical populations. This randomised controlled trial compared the effectiveness of personal, non-personal and no-exercise supervision in the workplace to improve cardiorespiratory fitness (CRF), muscular strength and body composition.

2. Methods
Eighty-five Australian university employees (62 female; mean±SD 43.2±9.8 years) were randomised to either personal (1:1; SUP, N=28) supervision, non-personal (typical gym-based approx. 1:10; NPS, N=28) supervision or unsupervised control (CON, N=29) exercise groups. Participants received an individually tailored, moderate-to-high intensity aerobic and resistance exercise program to complete for 16 weeks at an onsite gymnasium (SUP and NPS) or without access to a specific exercise facility (CON). Changes to CRF (VO2 peak), muscular strength and body composition were assessed by indirect calorimetry. Participants were assigned to either personal (1:1; SUP, N=28) supervision, non-personal (typical gym-based approx. 1:10; NPS, N=28) supervision or unsupervised control (CON, N=29) exercise groups. Participants received an individually tailored, moderate-to-high intensity aerobic and resistance exercise program to complete for 16 weeks at an onsite gymnasium (SUP and NPS) or without access to a specific exercise facility (CON). Changes to CRF (VO2 peak), muscular strength and body composition were assessed by indirect calorimetry. Participants were assigned to either personal (1:1; SUP, N=28) supervision, non-personal (typical gym-based approx. 1:10; NPS, N=28) supervision or unsupervised control (CON, N=29) exercise groups.

3. Results
Cardiorespiratory Fitness (CRF): VO2 peak (ml·kg·min⁻¹) was assessed by incremental cycle test until voluntary exhaustion using indirect calorimetry. Muscular Strength: Maximum upper body (bench press) and lower body (leg press) strength (kg) was assessed using incremental 1RM tests. Anthropometry: Body fat (%) and lean mass (kg) was assessed using dual-energy x-ray absorptiometry (DXA).

4. Conclusions
• Providing a moderate-vigorous aerobic and resistance exercise training program at an onsite exercise facility with either personal or non-personal supervision enables increased CRF over a 16-week intervention.
• Personal exercise supervision, in addition to an onsite exercise facility, produced greater improvements to muscular strength and body composition than simply providing access to an onsite exercise facility and/or an individually tailored exercise program to be completed elsewhere.
• To improve cardiometabolic health in a university workplace, employers should consider providing at least 16-weeks of supervised exercise training at an onsite facility.

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6. References

Figure 1: Changes to exercise capacity for personally supervised (1:1, SUP), non-personally supervised (standard gym, NPS) and unsupervised (CON) after the 16-week exercise intervention.

Figure 2: Changes to body composition for personally supervised (1:1, SUP), non-personally supervised (standard gym, NPS) and unsupervised (CON) after the 16-week exercise intervention.