







**Abstract**

**Impact of exercise programs on body mass index and waist circumference of individuals with Intellectual and Developmental Disabilities: a systematic review with meta-analysis**

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The global impact of physical activity and physical exercise on body mass index (BMI) and waist circumference (WC) in people with Intellectual and Developmental Disabilities (IDD), is not known, nor is the most effective type of exercise training for promoting these variables. The aim of this study was to assess the magnitude of the effect of physical exercise on BMI and WC in individuals with IDD through a systematic review with meta-analysis. Nine manuscripts met the eligibility criteria for the study. For BMI, the Z-value was  $Z=-2.176$  and  $p=0.03$ . The highest magnitude of the effect was from the intervention with combined training showed the highest magnitude of effect (difference in means: -

0.399, with a value of  $Z=-1.815$  and  $p=0.07$ ). For WC, the Z-value is  $Z=-3.306$  and  $p=0.001$ . The intervention with continuous cardiorespiratory training showed the highest magnitude of effect (difference in means:  $-0.786$ , with a value of  $Z=-2.793$  and  $p=0.005$ ). Regular physical exercise seems to prevent an increase in BMI and WC in individuals with IDD. Similarly, the prescription of aerobic exercise seems to be more effective in promoting WC and the prescription of combined exercise in promoting BMI.

**Keywords:** anthropometric measurement, body composition, body mass index, exercise, waist circumference.

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