

The article: Impact of concurrent training on body composition, lipid metabolism and physical function in patients with type 2 diabetes and excess adiposity: A systematic review and meta-analysis is presented

It is well structured and provides scientific knowledge of the subject. I leave some comments that may enrich it.

Line 52; what are standard treatment (ST)? please explain it.

Could you explain please if you looked for studies with participants with obesity or excess fat, how was this classified?

According this sentence line 70; The economic burden of obesity-related comorbidities is also rising at a concerning rate, posing a significant financial strain on healthcare systems worldwide. Do you have the economic expenditure in dollars? by continent ?

This sentence need a reference, Consequently, investigating cost-effective, non-pharmaceutical interventions has become a key priority for clinicians, practitioners, and public health policymakers, who aim to raise awareness of the essential role of physical exercise in improving community health.

In the objective you need to clarify the variables more deeply, you can add them in parentheses

Therefore, this systematic review and meta-analysis aimed to assess the impact of CART on a wide range of cardiometabolic health parameters in individuals with overweight/obesity and T2DM, including anthropometrics, body composition(i.e., xxx xxx xxx ), lipid metabolism (i.e., xxx xxx xxx ), and physical function.

Add information of the principal variables of studio, not only metabolic profile, add according FBG and cholesterol, etc.

### 2.3 Eligibility Criteria

You have studies with morbid obesity?? You need de improved this criteria's(i) participants were patients with T2DM and concurrent overweight (BMI 25 29.9 kg/m<sup>2</sup>) or obesity (BMI g30 kg/m<sup>2</sup>);

### 2.4 Study Selection

It is ok.

Results are ok

### **Discussion**

Please add the objective to the beginning of the discussion.

Line 275 To the best of our knowledge, our study presents the first evidence on the effectiveness of CART in improving various cardiometabolic health-related parameters. ADD the type of cardiometabolic health-related parameters... (i.e., FBG, HDL, etc).

This sentence needs to be discussed better, comparing with other studies, according to body fat (%) mainly.

#### .1 Anthropometry and Body Composition

285 This review suggests that CART improves body fat but does not significantly affect other  
286 anthropometric or body composition parameters in individuals with T2DM and  
287 overweight/obesity. These findings highlight the need for further investigation into these important  
288 variables, as the observed changes remain uncertain. Given that weight management is crucial for  
289 individuals with poor metabolic health, our results are particularly relevant for people with T2DM  
290 and concurrent excess weight.

Please add this sentence in the correct place.

These populations often experience abdominal obesity, which is associated with visceral and ectopic fat, contributing to chronic inflammation that exacerbates insulin resistance [54].

This sentence is too long please rewrite and add references.

As for muscular fitness, CART showed a substantial increase in lower body strength;  
355 however, the limited available data are not able to provide strong evidence of the effectiveness of  
356 CART on muscular strength and functionality among people with T2DM and concurrent  
357 overweight/obesity. Nevertheless, this is an important observation given that muscular strength  
358 has been documented as a prognosticator of all-cause mortality in adults with no chronic diseases  
359 [79]. Although there is no robust evidence concerning the vital role of muscular fitness in  
360 cardiometabolic health among people with excessive weight, favorable changes in muscular  
361 strength are linked to a lower cardiovascular disease risk in these populations [79].

