

# Physical exercise prescription as part of weight loss and weight gain prevention programs



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## Objective

- To review the physical exercise prescription recommendations as part of weight loss and weight gain prevention programs.
- To provide a simple tool that allows GPs to more accurately prescribe physical exercise to obese and overweight patients

## Methods

- Using Pubmed as our data source, we searched for guidelines, meta-analysis, reviews and systematic reviews published between January 2002 and September 2012, in English and Portuguese.
- We used MeSH terms: exercise, obesity and weight loss.
- The Strength of Recommendation Taxonomy was used to assess the quality of the studies and assign evidence levels and a strength of recommendation (SOR) score.

## Results

- Of 807 articles identified, 23 were selected.
- Obesity is defined as a Body Mass Index equal or higher than 30kg/m<sup>2</sup>, and results from a chronically positive balance between energy intake and expenditure.
- It's a chronic disease which incidence, morbidity and mortality is increasing in the World. It's estimated that there are 400 million obese and 1.6 billion overweight.
- Hypertension, type 2 diabetes, cardiovascular and musculoskeletal diseases are closely associated with obesity.
- In order to lose weight, we can only choose from three paths: caloric restriction, increased physical activity and the association of both. The manipulation of the energy balance is therefore the key to achieve and maintain ideal body weight.
- Any weight loss program should be based exclusively on Exercise prescription.
- The American College of Sports Medicine (ACSM)'s guideline of 2010 recommends a minimum of 45 minutes of moderate to vigorous exercise (defined as heart rate of 50-85% of Maximum Heart Rate), five days a week to prevent weight gain (Table 1).
- To maintain weight loss, the same guideline recommends over 60 minutes of moderate to vigorous physical exercise, five to seven days a week (Table 2).
- All the remaining articles enforce the role and benefits of physical exercise prescription for obese and overweight.
- It is, also, clearly stated that patients should choose the most adequate exercise to their likes and capacities in order to promote program adherence.

Table 1- Exercise prescription for weight gain prevention

	IOM (2002)	IASO (2003)	USDptHHS (2007)	ACSM (2010)
<b>Frequency</b>	Everyday	Everyday	Everyday	5-7days/week
<b>Intensity</b>	Moderate	Moderate	Moderate to vigorous	Moderate to vigorous
<b>Time</b>	60min	45-60min	60min	60min
<b>Type</b>	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking
<b>SOR</b>	C	C	C	A

IOM - Institute of Medicine, IASO - International Association for the study of Obesity, ACSM - American College of Sports Medicine, USDptHHS - Dietary Guidelines, US Department of health and Human Services Dietary Guidelines for America.

Table 2- Exercise prescription to maintain weight loss

	IASO (2003)	ACSM (2003)	USDptHHS (2007)	ACSM (2010)
<b>Frequency</b>	Everyday	Almost everyday	Everyday	5-7days/week
<b>Intensity</b>	Moderate	Moderate	Moderate to vigorous	Moderate to vigorous
<b>Time</b>	60-90min	200-300min/week	60-90min	60-90min
<b>Type</b>	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking	Run, Bike, Rowing, Hiking
<b>SOR</b>	C	A	C	A

IASO - International Association for the study of Obesity, ACSM - American College of Sports Medicine, USDptHHS - Dietary Guidelines, US Department of health and Human Services Dietary Guidelines for America.

## Conclusions

- One daily hour of physical exercise of moderate to vigorous intensity seems to be associated with good results and should be recommended in maintenance of weight loss and weight gain prevention programs.
- The results obtained in this paper should encourage GPs to include accurate exercise prescription as part of weight loss and weight gain prevention programs for their patients.

## References

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