

Adherence to hypocaloric diets and resistance training among persons in the retirement age

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Rational and aim

Adherence to lifestyle interventions is crucial for the treatment of obesity. However, there is not much research about adherence to lifestyle interventions in persons around retirement age.

Aim: Identify factors associated to the adherence to resistance training (RT) and hypocaloric diet (HCD), taking early weight loss (EWL) into consideration

Methods

- Design: **Secondary data analysis of three RCTs:** MPS¹, PROBE² and WelPrex³
- Inclusion criteria:
 - Adults near retirement age (55-75 years)
 - BMI ≥ 25 kg/m²
 - Undergoing weight loss intervention with resistance training & hypocaloric diet
- Studied factors: age, sex, early weight loss, BMI, smoking, ethnicity, high protein recommendation
- Statistics: Linear mixed models analysis

Definitions

- Adherence to hypocaloric diet: consuming >600 kcal below individual caloric requirement
- Adherence to resistance training: $\geq 80\%$ attendance of training sessions
- Early weight loss: loss of ≥ 1 kg of body weight after 5-7 weeks (mid-term)

Results

General characteristics

- 232 participants (47% Female)
- Mean age: 64 years (± 5.5)
- Baseline BMI: 32.9 kg/m² (± 4.2)
- Adherence to RT: 52.5%
- Adherence to HCD: 51.3%

Factors associated to adherence (Table 1)

- RT adherence (Model 1): Age and sex
- RT adherence (Model 2): Sex, ethnicity, high protein recommendation and early weight loss
- HCD adherence: Sex and BMI at baseline

Table 1. Influencing factors to adherence in weight-loss interventions

	Resistance Training*		Hypocaloric Diet
	Model 1 (n=202)	Model 2 (n=80)	n=187
Age	0.52 (0.07-0.98)	0.46 (-0.16-1.1)	-
Sex (Men)	5.7 (0.60-11.0)	8.4 (2.0-15)	68 (45-91)
Ethnicity (Caucasian)	5.4 (-1.45-12.0)	15 (6.0-24)	-
BMI at baseline	-0.26 (-0.82-0.30)	0.40 (-0.44-1.2)	6.8 (4.1-9.5)
Smoking	-	-	-
High protein recommendation	-	-11 (-17- -4.7)	-
Early weight loss	-	7.9 (1.6-14)	-

*Two multivariable linear mixed models for resistance training adherence were analysed. Model 1 excluded the variable "early weight loss" and Model 2 included the variable "early weight loss".

Conclusions

- Several factors, like sex, ethnicity, having an early weight loss and BMI at baseline need to be considered in future intervention studies.
- If adherence to lifestyle interventions can be improved, people with overweight and obesity may have more health benefits.



References

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