

# Battling Insulin Resistance In Elderly Obese People With Type 2 Diabetes: Bring On The Heavy Weights

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## BACKGROUND:

Exercise improves insulin resistance and has beneficial effects in preventing and treating type 2 diabetes. However, aerobic exercise is precluded in many with type 2 diabetes due to advancing age, obesity and other co-morbid conditions. In this article the authors provide a review of research associated with progressive resistance strength training and its impact on battling insulin resistance in elderly, obese people.

## CONCLUSIONS:

Weight-lifting or progressive resistance training (PRT) offers a safe and effective exercise alternative for these people. PRT promotes favorable energy balance and reduced visceral fat deposition through; 1) enhanced basal metabolism, 2) enhanced activity level, and 3) counteracting age and disease-related muscle wasting. PRT improves insulin sensitivity and glycemic control, increases muscle mass, strength and endurance, and has positive effects on bone density, osteoarthritic symptoms, mobility impairment, self-efficacy, hypertension and lipid profiles. PRT also alleviates symptoms of anxiety, depression and insomnia in clinical depression and improves exercise tolerance in cardiac ischemic disease and congestive heart failure, all of which are relevant to the care of diabetic elders. Moreover, PRT is safe and well-accepted in many complex patient populations including very frail elderly individuals and those with cardiovascular disease. PRT is a more feasible intervention than aerobic exercise in elderly, obese individuals with type 2 diabetes due to concomitant cardiovascular, arthritic and other diseases. The evidence strongly supports further investigation into the global benefits of PRT in the management of diabetes.

## SUMMARY:

This article provides a thorough comparison of the use of aerobic exercise verses progressive resistance training in the management of type 2 diabetes in obese elderly patients. It highlights the benefits as well as limitations of both forms of exercise intervention. It is an excellent resource for anyone creating a program for diabetes management with older populations, and/or seeking to add strength training to program offerings for seniors.