

# Exercise Regiment Modification Concurrent with Pharmaceutical Intervention in Elderly Population: A Review

**Joanna Zorawska**, GP, MD, PhD

Department of Geriatrics, Wroclaw Medical University, Poland  
joanna.zorawska@umed.wroc.pl

**Julian Jastrzab Costner**

Student of Wroclaw Medical University, Poland  
julian.costner@student.umed.wroc.pl

## Abstract

As the world's populations start to age, every country must brace for the so-called "silver tsunami," this wave of people and for physicians, patients, gradually reaching the age of retirement for a given country. This also gives way to more common syndromes associated with age to become more prevalent. Among these one which is very common is osteopenia and in severe forms osteoporosis. Often these are accompanied with sarcopenia as the patients begin to lose muscle mass as well. This is caused by a multitude of precipitating factor, as the bones and muscles are both communicating organs, as well as endocrine organs thus making them susceptible to the reduction in androgens associated with old age. These syndromes, often referred to concurrently as osteosarcopenia, may in turn precipitate further health care costs. As patients lose both BMD and muscle mass in concert with the frequent lipid infiltration of these tissues, they will often become more frequently victim to falls and fracture. This problem, being a source of a higher possible rate of mortality and reduced quality of life for senior. To this end research is being done to create a possible effective treatment plan for those with osteopenia and even sever osteoporosis. There is conflicting evidence to the use of hormone replacement therapy in men, however in women there is a positive relationship with its use and reduction of the rate of BMD loss over time. In either gender there exists a positive relationship with the use of resorptive agents. Instituting these substances concurrently with an exercise regiment, especially one including resistance training of targeting limbs, and walking for stability. There has been a positive relationship of these regimens not only slowly BMD loss but in fact a net gain of bone density. This of course should also be considered with the relative inaccuracy of DXA with the alignment of bone geography and inaccuracy related to DXA in high BMI individuals.

## Keywords:

syndromes associated with age, osteosarcopenia, resistance exercise, treatment plan

## Biography

**Julian Jastrzab Costner** is a current 6th year Medicine Student at Wroclaw Medical University.

He is interesting in Geriatrics and his research include all aspects of aging. Last year he took a part at an optional course "Can we grow old in good health" and he get very good note.

**Joanna Zorawska** is an assistant at Department of Geriatrics at Wroclaw Medical University in Poland. Her main research interests include good and healthy aging, prophylaxis and prevention of chronic diseases, promoting good habits in everyday life. She performs an optional course "Can we grow old in good health? which is very popular among students of Wroclaw Medical University. She received PhD in Internal Medicine for her work on health behaviors among adolescents. In the past Dr Zorawska about 11 years worked in GP surgeries in Dublin, Ireland. She participated in numerous training courses and all the time she is actively expanding their knowledge.