



## REIMBURSEMENT OF STRENGTHENING EXERCISES FOR MATURED MEN PEOPLES IN CUDDALORE DISTRICT

**Dr. K. RAJENDRAN**, Assistant Professor, Department Physical Education and Sports, Annamalai University

### ABSTRACT

*There is no age limit to the benefits of exercise. Being active is an important part of a healthy lifestyle for people of all ages. But as one get older, muscles gets weaker and tend to get more aches and pains, and older adults become more prone to falls and injuries. Strength training has incredible benefits for everyone, but especially for seniors. Experts believe that "resistance exercise may forestall declines in strength and muscle mass for decades." So getting involved oneself in any form of physical activity and strengthening program will help the older people to stay stronger. The objectives of this study were to investigate the effects of strengthening exercises on measures of strength of the muscle and over all wellbeing of older people. All persons aged 60 through 65 years (N = 30) were involved in a 6 week strengthening exercises program. The subjects were selected from cuddalore district, tamilnadu before and after the investigation period the muscle strength was assessed. The result of the experimental group was shown significant improvement in overall muscle strength. It is concluded that elderly may improve their muscle strength by regular strengthening exercises for as short a period as 6 weeks. This might prove to be of great value in improving wellbeing of an older people and thereby preventing many diseases and subsequent injuries in elderly. Strength training program should become part of the regular training regimen for the aging people for the healthy life. Involvement in regular exercise can also provide a number of psychological benefits.*

**Key Words:** physical activity, older people, strength training and muscle strength.

### INTRODUCTION

#### Physical Activity and Older Adults

As an older adult, regular physical activity is one of the most important things one can do for their health. It can prevent many of the health problems that seem to come with age. It also helps the muscles grow stronger so the older adult can keep doing their day-to-day activities without becoming dependent on others.

#### Strengthening Exercises

Many Researches has shown that strengthening exercises are both safe and effective for women and men of all ages, including those who are not in perfect health. Strength training, particularly in conjunction with regular aerobic exercise, can also have a profound impact on a person's mental and emotional health. Strength exercises build muscle, and even very small changes in muscle strength can make a real difference in an individual's ability to perform everyday activities like carrying groceries, lifting a grandchild, or getting up from a chair.

The primary objective in strength is not to learn to lift as much weight as possible but to increase strength for application to the relevant sports. This is possible only when the coaches and physical education teachers use the correct and the

most beneficial and economical means to train their sportsmen.

Strength in the form of explosive power is used more in sports games and competitions. Whenever an athlete has to accelerate himself and external object or both, his ability to generate force will speed will be a primary determinant of his success.

Strength and speed are integral components of fitness found in varying degrees in virtually athletic movements. Simply put the combination of strength and speed in power represents one component of athletic fitness that may be most indicative of success in sports, requiring extreme and rapid force of production.

Maximum strength and power are not distinct entities they have a close relationship with one another. Maximum strength is the basic quality that influences power performance. Power performance is affected by the interaction between agonist, antagonist and synerogic muscles involved in joint movemes.

Resistance training involves the application of elastic or hydraulic resistance to muscle contraction rather than gravity. Weight training provides the majority of the resistance at the beginning, initiation joint angle of the movement, when the muscle must overcome the inertia of the

weight's mass. After this point the overall resistance alters depending on the angle of the joint. In comparison, hydraulic resistance provides a fixed amount of resistance throughout the range of motion, depending on the speed of the movement. Elastic resistance provides the greatest resistance at the end of the motion, when the elastic element is stretched to the greatest extent.

This strengthens the muscle at the specific joint angle at which the isometric exercise occurs, with some lesser gains in strength also occurring at proximal joint angles. In comparison, weight training strengthens the muscle throughout the range of motion the joint is trained in, causing an increase in physical strength from the initiating through to terminating joint angle.

Although weight training is similar to bodybuilding, they have different objectives. Bodybuilders use weight training to develop their muscles for size, shape, and symmetry regardless of any increase in strength for competition in bodybuilding contests; they train to maximize their muscular size and develop extremely low levels of body fat. In contrast, many weight trainers train to improve their strength and anaerobic endurance while not giving special attention to reducing body fat far below normal.

To succeed at building strength through strength training, you also need to avoid overtraining. If you're working out too much, you won't be allowing your body to get the recovery time it needs to get stronger and bigger. If you haven't gained any strength in a while, or have even gotten a bit weaker, you need to take a look at how much time you spend in the gym during each workout and how often you're training. If you train with a lot of intensity, you may not need to do very many sets or exercises to build strength. As long as you gain strength, you are probably doing enough work. It's more about getting more out of every single set you do while you are strength training, not how many sets and exercises you do.

Another key to strength training success is to do compound movements when you weight train. Not only are exercises that involve many different muscle groups like squats, deadlifts, and bench presses great for helping you build strength throughout the entire body, but they also give you the biggest boost in your testosterone levels. This helps you even more at getting stronger and gaining size

from strength training. You should try to incorporate some great strength building exercises that are underused these days like power cleans and clean and presses into your strength training routine. 1 arm was tested for the subjects.

### STATEMENT OF THE PROBLEM

The purpose of the study was to find out the effects of strengthening exercises on older people.

### OBJECTIVE

This study will help to identify the appropriate strengthening exercises to improve the muscle strength and also the overall well-being of older people.

### DELIMITATION

1. The study was delimited to 30 older people.
2. The age of the subjects selected for this study ranged between 65-75 years.
3. The study was confined to the following parameters.

### METHODOLOGY

#### Selection of Subjects

The purpose of the study was to find out whether there would be any significant influence on balance as a result of balancing exercises. To achieve the purpose of the study 30 older people were selected and administered the selected tests. They were selected randomly. The experimental group were under went balancing exercises program. The subjects were selected from cuddalore district, tamilnadu before and after the investigation period the muscle strength was assessed. The investigator reviewed a number of research journals, magazines and books balance and proprioception training and selected the few exercises which are suitable for the older people.

### CRITERION MEASURES

The following criteria were chosen for the testing of hypothesis

To measure the variables namely muscle strength, dynamic balance, flexibility and balance test were conducted and data was taken for pre test value and post test after the training period. Scores will be taken in.

S.NO	VARIABLES	TEST	MEASURED IN
1.	Dynamic Balance	Walking on the straight line	Seconds
2	Leg strength endurance	Chair stand test (30 s)	Seconds
3	Upper body strength	Arm curl test (30 s)	Seconds
4	Flexibility	Chair sit and reach test	Centimeters

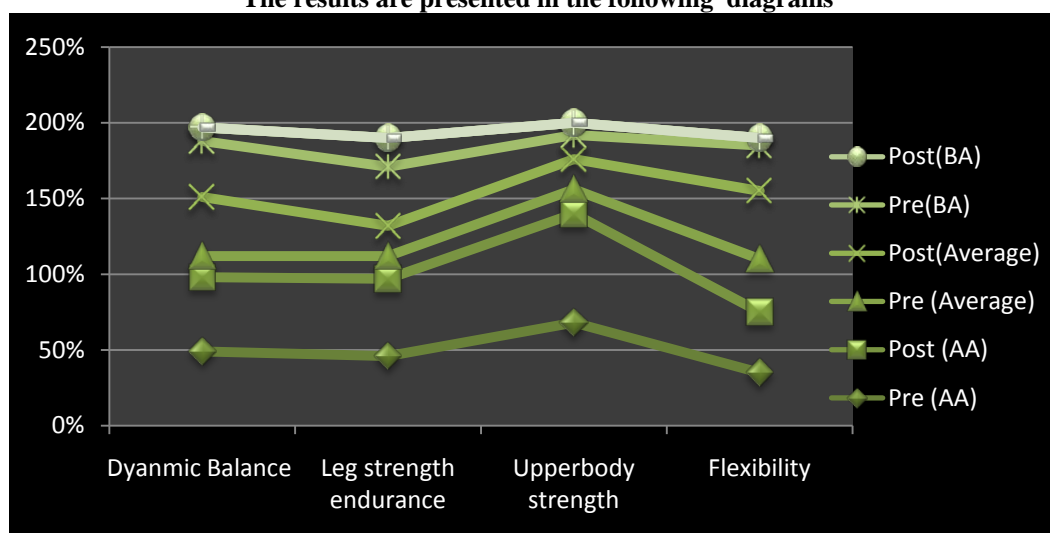
The obtained data through conduct of functional ability tests on the subjects were subjected to statistical treatment apart from classifying them into average and below average levels of their muscle

strength and other functional abilities. Data were further converted using percentage. The following table shows the results of the tests conducted before and after the strengthening exercise program

**Table -1**  
**Older adults muscle strength tests results shown in percentage**

Name of the test	Pre/Post	Above average	Average	Below average
Dynamic Balance	Pre	49 %	14%	37%
	Post	52%	39%	9%
Leg strength endurance	Pre	46%	15%	39%
	Post	51%	20%	19%
Upper body strength	Pre	68%	16%	16%
	Post	72%	20%	8%
Flexibility	Pre	35%	35%	30%
	Post	40%	45%	5%

The results are presented in the following diagrams



AA- Above average

BA - Below average

### CONCLUSION

Within the limitations of the study, the following conclusions were drawn.

- There was a significant change on upper body strength due to strengthening exercises.
- There was a significant change on leg strength endurance due to strengthening exercises.
- There was a significant change on dynamic balance and flexibility due to strengthening exercises

Overall six weeks of strengthening exercises was more effective on the significant changes on muscular strength and overall well-being among

older people. This might prove to be of great value in improving muscle strength and thereby preventing accidental falls and many other diseases in elderly.

### RECOMMENDATIONS

The findings of this study proved that there was significant improvement due to strengthening exercises on selected parameters among older people. It is advised to adopt a new kind of strength training for older population and also for the veteran sports persons. It is recommended that if we incorporate strengthening exercises in day today life of the older people, it helps for the improvement of muscle strength and also it will help them to lead a happy safe life with good health.

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