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## Effect of weight training on physical fitness components of college students

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### Abstract

The aim of the current study was to determine the effect of weight training on physical fitness components of college students. The investigator has selected twenty collegiate men students at random, their age ranged from 18 to 22 years. Subjects underwent weight training programme for 6 days per weeks. The subjects were subjected to the six week training programme. Each and every one of the subjects were informed about the aim of the investigation. Hence the present work was planned to study the effect of weight training on muscular strength (dynamic) and muscular endurance of arm and shoulders, muscular strength and endurance (trunk) and explosive strength of legs. The statistical analysis and interpretation was done on the basis of data collection. The data of before and after test was compared by using paired 't' test. The level of significance was set at 0.05 level of confidence. Our study shows that weight training for 6 months improves muscular strength (dynamic) and muscular endurance of arm and shoulders, muscular strength and endurance (trunk) and explosive strength of legs. It is suggested that weight training be introduced at college level in order to improve physical fitness components, overall health and performance of each and every one.

**Keywords:** Weight training, physical fitness, college students

### Introduction

Health and wellness are a mixture of healthy living and healthy lifestyle. To be healthy and fit, it is necessary to remain healthy along with physical health of the person. We must eat healthy food regularly and do physical exercise to stay physically healthy. However, we need to think positively to be mentally healthy. Health and well-being are very important for those who want to live life with great joy and peace. Only a healthy person is able to live life with full enthusiasm. We can call a person healthy and fit if he is physically and mentally fit. Physically and mentally healthy people are less prone to diseases. We should enjoy the time of improving muscles as well as the functioning of the body in the morning, running, exercising in the gym (gym), or other physical activities. In order to stay away from digestive disorders, we should eat freshly cooked food instead of stored or packaged food.

### Materials and Methods

The investigator has selected twenty collegiate men students at random, their age ranged from 18 to 22 years. Subjects underwent weight training programme for 6 days per weeks. The subjects were subjected to the six week training programme. Each and every one of the subjects were informed about the aim of the investigation. To facilitate the study, 20 boys were randomly selected. Hence the present work was planned to study the effect of weight training on muscular strength (dynamic) and muscular endurance of arm and shoulders, muscular strength and endurance (trunk) and explosive strength of legs.

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Weight Training Program

Monday Upper Body	Set & Repetition	Thursday Upper Body	Set & Repetition
Bench Press	3X 8-10	Dips	3X 8-10
Bent Over Row	3X 8-10	Pull-Ups	3X 8-10
DB Shoulder Press	3X 8-10	DB Side Lateral	3X 8-10
Lying Tricep Extension	3X 8-10	Tricep Cable Press Down	3X 8-10
Barbell or DB Curl	3X 8-10	Cable Curl	3X 8-10
Wednesday Cardio & Core	Repetition		Set & Repetition
High Knees	30	Climber	10
Climber Taps	10	Flutter Kicks	10
High Knees	30	Scissors	10
Leg Raise	10	Raised leg circles	10
Tuesday Lower Body	Set & Repetition	Friday Lower Body	Set & Repetition
Squat	3X 8-10	Deadlift	3X 8-10
Stiff Leg Deadlift	3X 8-10	Leg Press	3X 8-10
Leg Extension	3X 8-10	Lunges	3X 8-10
Leg Curl	3X 8-10	Seated Calf Raise	3X 8-10
Standing Calf Raise	3X 8-10	DB Shrugs (Optional)	3X 8-10
Abs	3X 8-10	Abs	3X 8-10
Lying Leg Raise	3X 10-15	Incline Crunch	3X 10-15
Swiss Ball Crunch	3X 10-15	Back Extension	3X 10-15
Saturday Cardio & Core	Repetition		Set & Repetition
High Knees	30	Climber	10
Climber Taps	10	Flutter Kicks	10
High Knees	30	Scissors	10
Leg Raise	10	Raised leg circles	10

Note: Rest Periods = 1 Minute

**Statistical Analysis**

The statistical analysis and interpretation was done on the basis of data collection. The data of before and after test was

compared by using paired ‘t’ test. The level of significance was set at 0.05 level of confidence.

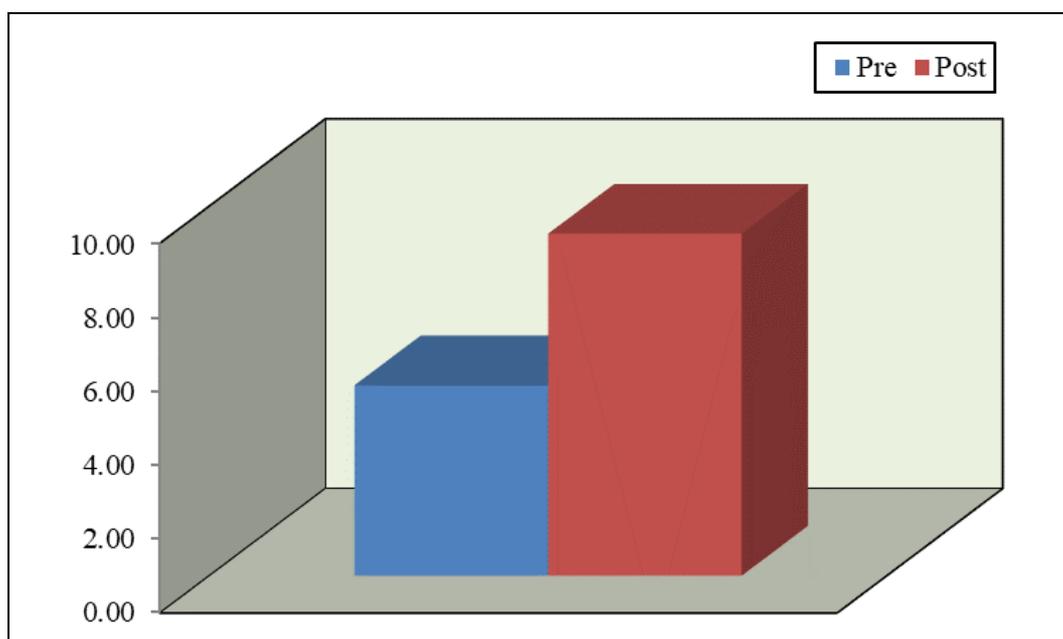
**Table 1:** Showing muscular strength (dynamic) and muscular endurance of arm and shoulders of college students between pre and post test

Test	N	Mean	SD	SE	MD	Ot	df	Tt
Pre	20	5.15	1.90	0.85	4.10	8.434*	19	2.093
Post	20	9.25	3.31					

\*Level of Significance = 0.05  
Tabulated ‘t’ 0.05 (19) = 2.093

Table -1 reveals that there is least significant difference between means of pre and post test, because mean of pre test is 5.15 is less than mean of post test is 9.25 and there mean difference is 4.10. There was significant difference between

pre and post test because value of calculated ‘t’ = 8.434 which is greater than tabulated ‘t’ = 2.093 at 0.05 level of confidence, which shows improvement was found in college students after six weeks weight training programme.



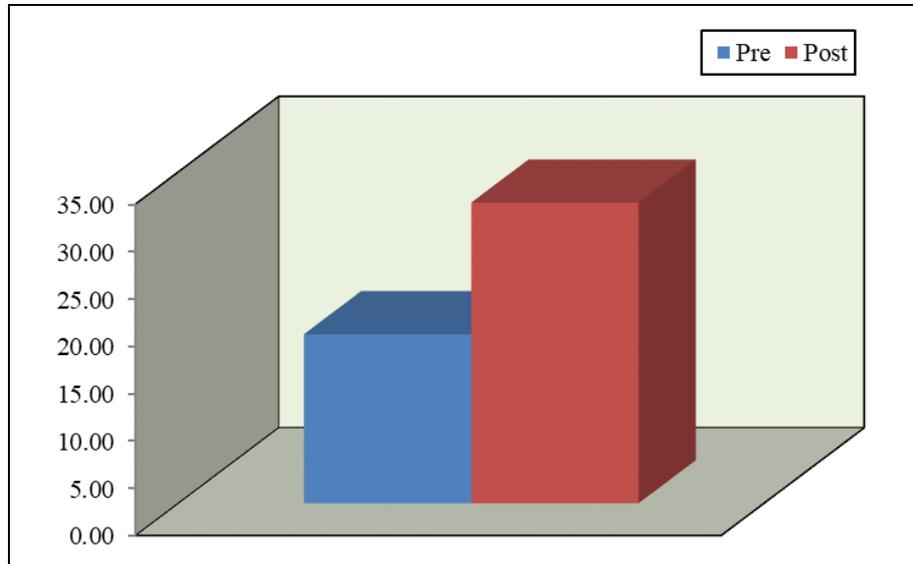
**Fig 1:** Mean value of Pre and Post of strength (dynamic) and muscular endurance of arm and shoulders

**Table 2:** Showing muscular strength and endurance (trunk) of college students between pre and post test

Test	N	Mean	SD	SE	MD	Ot	df	Tt
Pre	20	17.85	3.03	1.07	13.90	37.648*	19	2.093
Post	20	31.75	3.68					

\*Level of Significance = 0.05  
 Tabulated 't' 0.05 (19) = 2.093

Table -2 reveals that there is least significant difference between means of pre and post test, because mean of pre test is 17.85 is less than mean of post test is 31.75 and there mean difference is 13.90. There was significant difference between pre and post test because value of calculated 't' = 37.648 which is greater than tabulated 't' = 2.093 at 0.05 level of confidence, which shows improvement was found in college students after six weeks weight training programme.



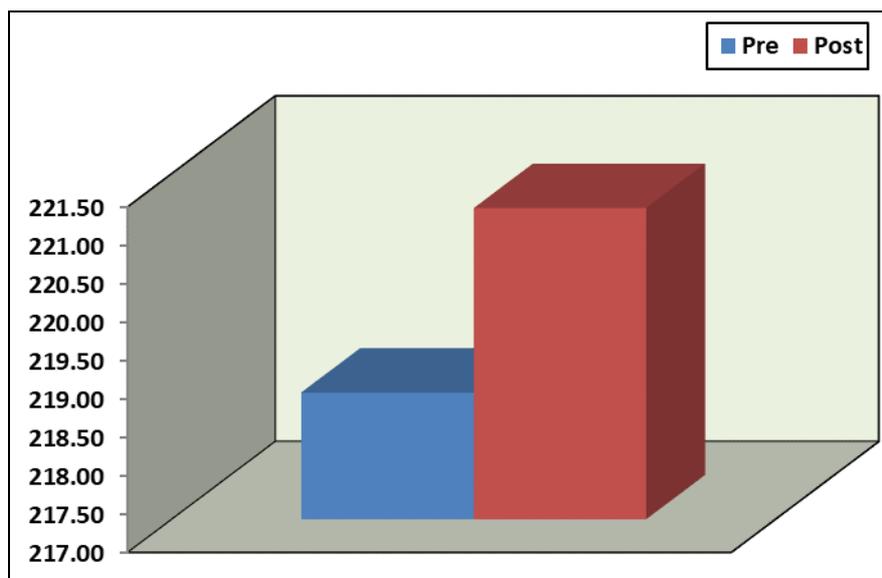
**Fig 2:** Mean value of Pre and Post of muscular strength and endurance (trunk)

**Table 3:** Showing explosive strength of legs of college students between pre and post test

Test	N	Mean	SD	SE	MD	Ot	df	Tt
Pre	20	218.65	24.17	7.51	2.40	2.802*	19	2.093
Post	20	221.05	23.32					

\*Level of Significance = 0.05  
 Tabulated 't' 0.05 (19) = 2.093

Table -3 reveals that there is least significant difference between means of pre and post test, because mean of pre test is 218.65 is less than mean of post test is 221.05 and there mean difference is 2.40. There was significant difference between pre and post test because value of calculated 't' = 2.802 which is greater than tabulated 't' = 2.093 at 0.05 level of confidence, which shows improvement was found in college students after six weeks weight training programme.



**Fig 3:** Mean value of Pre and Post of explosive strength of legs

**Conclusion**

Our study shows that weight training for six months improves muscular strength (dynamic) and muscular endurance of arm and shoulders, muscular strength and endurance (trunk) and

explosive strength of legs. It is suggested that weight training be introduced at college level in order to improve physical fitness components, overall health and performance of each and every one.

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