

## EFFECT OF CROSS FIT EXERCISES ON WEIGHT LOSS OF MALES IN LAHORE

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### Abstract

*The purpose of this research was to explore the effect of Cross Fit, a latest fitness techniques being used all over the world to get a good physique and health, in reducing weight of male persons ranging from 18 to 25 years. A sample of 8 male students ranging age from 18 to 25 years to measure the change in variables like Body weight, %age Fat ratio, %age of Total Body Water contents, %age of Lean Muscle Mass after applying Cross Fit training program in pre and post analysis. After designing and applying a 28 days Cross Fit plan and diet plans for each individual according to their Basal Metabolic Rate (BMR) and Total Daily Energy Expenditure (TDEE), it was found that there is a positive significant change in these variables mentioned above which showed that Cross Fit training program develops fitness in males ranging age from 18 to 25 years.*

**Keyword:** Cross Fit, Weight Training, Sports, Fitness

### Introduction Literature Review

Cross Fit is an open source, worldwide business devoted to the change of human wellbeing and athletic execution. Cross Fit's establishment is an exact meaning of wellness that can be measured, watched, and rehashed. Cross Fit is a certifiable, utilitarian work out regime that has an interesting ability to humble the world's best competitors while in the meantime remaining generally adaptable to encourage advancement at all capacity levels (Glassman, 2012). The Cross Fit technique is to set up

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a chain of importance of exertion and worry that works as Diet establishes the atomic frameworks for wellness and wellbeing (Sibley *et al.*, 2012), Metabolic Conditioning constructs limit in each of three metabolic pathways, starting with high-impact, then lactic corrosive, and after that phosphocreatine pathways (Sibley *et al.*, 2012), Gymnastics sets up practical limit with respect to body control and scope of movement (Sibley *et al.*, 2012). Cross Fit program typically organized such that members are tested to do a specific number of reiterations in an exercise in a particular time period; the more propelled Cross Fit members will contend with each other to perceive how quick they can finish the everyday exercise and post their outcomes on the Cross Fit site (Sibley *et al.*, 2012). Cross Fit is not a specific workout schedule, but rather a consider endeavor to upgrade physical ability in each of 10 perceived wellness spaces, and these areas are cardiovascular and respiratory continuance, stamina, quality, adaptability, control, speed, coordination, dexterity, adjust, and precision (Shugart 2008).

## **Components of Cross Fit Training**

### **Plyometric**

Plyometric ("plyo," for short) used to be called "hop preparing." It's a method that you can use from various perspectives. For example, you can do plyometric to help prepare for b-ball, volleyball, tennis, or whatever other action that utilizations hazardous developments. You'll do a progression of hops and bounces, similar to hop squats or one-leg jumps. You may hop up and onto a container or seat, or hop over cones (Pire, 2006). It's a fun other option to an ordinary quality preparing exercise that lifts your muscle control, quality, adjust, and nimbleness. You can either do an exercise based around plyometric, or add some plyo moves to your standard routine without giving it a whole session. This exercise utilizes greatest energy to fortify your muscles. The moves are brisk and touchy, so get ready to utilize significantly more vitality than you do in a regular quality instructional meeting (Chu, 1998).

### **Weightlifting/ Olympic Style Weightlifting**

Weightlifting, moreover called Olympic-style

weightlifting, or Olympic weightlifting, is an athletic teach in the current Olympic program in which the competitor endeavors a greatest weight single lift of a barbell stacked with weight plates. The two rivalry lifts all together are the grab and the quick lift. Every weightlifter gets three endeavors in each, and the joined aggregate of the most astounding two effective lifts decides the general outcome inside a Bodyweight class, however bodyweight classifications are diverse for ladies and men (Tricoli, *et al.*, 2005). While there are generally couple of focused Olympic weightlifters, the lifts performed in the game of weightlifting, and their segment lifts (e.g. squats, deadlifts, cleans), are usually utilized by world class competitors in different games to prepare for both unstable and practical quality. The easiest way to help you see the difference between traditional weight lifting and functional weight lifting is through exercise comparison and the results one might achieve from each strategy (Caspersen, *et al.*, 1985).

During testing, According to Youdas, *et al.* (2010) muscle recruitment for the Chin Up was as follows (represented as a percentage of overall contraction):

- (Lats) Latissimus dorsi: 117-130%
- Biceps brachii: 78-96%
- Infraspinatus (helps stabilize the shoulder joint): 71-79%
- (Traps) Lower trapezius: 45-56%
- (Pecs/Chest) Pectoralis major: 44-57%
- Erector spinae (muscles that extend the vertebral column): 39-41%
- External oblique: 31-35%

The Chin Up also recruits the abdominal muscles to stabilize the core if the technique is done properly. You can see how many muscle groups are targeted in a functional movement like the Chin Up, versus an isolated movement like the Bicep Curl. The same holds true for fitness in general (Monfort-Pañego, *et al.*, 2009).

### **Cross Fit and Strength**

Before choosing a training program, make sure your goals are in line with what that plan can deliver. Starting Strength will get a new lifter stronger in the basic lifts while he learns excellent technique (Brisebois,

2014). However, exercise selection is very limited and there's little to no leeway for different body types. Cross Fit's random workouts keep things interesting, but there's little in the way of programmed progression if you only follow the workout of the day. It's fine for those who want to lose some fat and exercise, not the best choice for those who want to train (Chu, 1998).

### **Strength development through Cross Fit Training**

Rippetoe would argue that if you've never truly focused on basic compound lifts, using his methods and basic linear periodization, then you may still be a newbie in terms of gains to be made, even if you've been "exercising" for years. The squat-centric routine has lifters training three days per week, each session beginning with squats followed simply by either the flat bench press and deadlifts or the overhead press and power clean. Relatively-low volume in each workout (3x5 on most exercises after thorough warm-ups) helps to focus the lifter on technical mastery of each exercise while allowing ample recovery between sessions. Weight progressions are equally straightforward. Each workout adds 5-10 pounds per exercise, using linear periodization to allow steady progress as the beginner, as expected, slowly and steadily adapts (Rippetoe, *et al.*, 2006). This consistent, progressive loading allows the lifter to build a snowball of progress by coordinating the "newness" of weight training with significant recovery time. While some beginners may benefit from higher volume workouts, Rippetoe has argued that recovery (meaning ample nutrition and rest) is more beneficial than simply doing "harder" workouts (Rippetoe, *et al.*, 2006).

### **Cross Fit Exercises (CFE) and Endurance**

The most condemning component of CFE is that it damages the control of specificity, which just says that to be a decent runner you should work on running. To run well in any occasion, you should organize race-particular wellness. Preparing, along these lines, builds up the instruments you'll require on race day. This is physiology and preparing hypothesis

101. It doesn't get more fundamental than this. To be a decent power lifter, you should hone control lifting. To be a decent marathoner, you ought to work on running long separations (Fitzgerald, 2013).

### **Intervals increase aerobic ability of Fast Twitch (FT) fibers**

At the instructing center, I displayed at Renato Canova made a decent point that to some degree quick interim preparing can expand the oxygen consuming capacity of Fast Twitch strands. It's best to consider it an interaction amongst FT and ST filaments. In that extraordinary powers and volumes will increment vigorous or anaerobic compounds in each sort of strands along the range. This means albeit high and low force may both hit comparable vigorous catalysts, they do as such in various courses and in various fiber sorts (Burgomaster, *et al.*, 2005).

Please keep in mind that this program is not developed specifically for you: it is developed for this person. You will need to look at what you can handle. This means several things. Can you make your intervals (speed and recovery); are you losing strength, power, speed, flexibility; are you sleeping, eating, and feeling good? (Negative replies in these areas are all indicators of overtraining.) If not, you must change something! Please beware and understand that this program is for someone who has been conditioned to handle Cross Fit and a running program (Saltin, 1977).

### **Cross Fit and weight loss**

There's no supernatural program that will prompt weight reduction all alone. To get thinner you have to consume a larger number of calories than your body devours. The circuit-style, high-force exercises given by Cross Fit wrench up your heart rate, enact various muscles and give a major calorie consumes. On the off chance that your calorie utilization doesn't nullify what you consume, Cross Fit will help you shed pounds (Weisenthal, 2014).

### **How Weight Loss Works**

To lose a pound of fat you have to consume 3,500 calories more than you expend. A sheltered approach to achieve the number is by lessening your caloric admission by 250 every day, and consuming 250 calories through exercise. The 500-calorie deficiency will break even with one pound for every week. The American Council on Exercise led a review that demonstrated some Cross Fit exercises can consume in the vicinity of 12 and 20 calories for each moment. In a 30-minute session this works out to consume of 360 to 600 calories. For whatever length of time that your eating regimen does not supplant those calories Cross Fit will bring about weight reduction (Li, V., McDonald, 2014).

### **Building Muscle to Burn**

Muscle is dynamic tissue which consumes calories even very still. So the more muscle tissue you have, the greater your calorie consume will be every day. Cross Fit uses various muscle bunches through compound activities, and the actuation of numerous muscles will consume a greater number of calories than enacting a solitary muscle at any given moment. On the off chance that you recoup legitimately and construct the coveted muscle tissue, this will can help weight reduction (Suman, 2001).

### **Recovery Time**

To what extent your body requires for recuperation will to a great extent rely on upon your present wellness level. High-power exercises, similar to Cross Fit, can now and again harm the skeletal muscles, and if these muscles don't enough recoup you won't have the capacity to perform at your top until they do. On the off chance that you can't play out your best, your capacity to consume calories and shed pounds might be prevented. Recuperation doesn't generally mean time off, and now and again your body simply needs a break. Each couple of months spend half a month doing low-force resistance and cardio preparing before bouncing once again into a high-power exercise (Sharkey, 1977).

### **Fueling to Prevent Muscle Loss**

Your body will consume muscle for fuel in the event that it is not sufficiently powered. Expert Fitness says that eating an enduring eating routine of slender protein and amino acids will assist limit your body's inclination to fall back on eating muscle tissue. The Cross Fit nutritious page prescribes lessening your sugar and straightforward starch consumption, however expanding your organic product, vegetable, complex carb and lean protein admission.

### **Uniqueness of Cross Fit Exercises**

A program has developed in prevalence across the nation that has created a great deal of buzz among specialists, wellness specialists, fitness coaches, proficient competitors and that's only the tip of the iceberg - It's the Cross Fit framework. The Cross Fit framework drives comes about through dangerous molding. This is not another idea, and it's not something that was contrived by Cross Fit. This technique for weight preparing and molding has been by and by for quite a while. All the same, this type of activity provides the most outcomes in the briefest measure of time without requiring hours of your day consistently (Suman, 2001).

### **Cross Fit burns calories**

High-power exercises like Cross Fit are troublesome. The American Council on Exercise (ACE) reports that men can consume 15-18 calories for every moment and ladies can consume 13-15 calories for each moment while doing the exercises. Also, members who work at a high power consume more calories throughout the day with EPOC (Suman, 2001).

### **Cross Fit builds muscle to boost metabolism**

Cross Fit members can hope to fabricate quality and increment bulk. Greg says that the greatest change he saw when he began with Cross Fit was an adjustment in his muscle to fat quotients and bulk. This enhanced body piece not just helps your body to look more slender and more tightly additionally helps

you to keep up a sound digestion (Murawska-Cialowicz, *et al.*, 2015).

### **Cross Fit community provides social support**

A key component of the Cross Fit program is imparting your WOD comes about on the web or to others in your group. For some individuals who are attempting to shed pounds, this component of sharing may help enhance responsibility and consistency (Heinrich, *et al.*, 2017).

### **Workouts are accessible to anyone**

As per their site, Cross Fit is accessible to "anybody with an Internet association and the readiness, interest, and boldness to attempt it." Participants can work out all alone utilizing the WOD posted on the site or they can go to a neighborhood Cross Fit box. In numerous urban communities, the cost of setting off to a case is not as much as the cost of joining a full-benefit wellbeing club (Campbell and Meyer, 2009).

### **Workouts are quick and efficient**

For sound individuals who definitely know how to perform common Cross Fit activities, the exercises gave are both snappy and powerful. On the off chance that you are a bustling individual who is attempting to get in shape with exercise, short exercises may help you keep your activity program on track (Capell, 2004).

### **Reason behind Cross Fit Weight Loss Program May Not Work**

While the advantages of Cross Fit may help, a few people get in shape and keep it off, there are disadvantages to the program that may settle on it the wrong decision for a few people who are attempting to thin down. The issue that Zuffelato pursued into a while of doing Cross Fit was wounds. His experience is not one of a kind as per numerous specialists (Heinrich, 2014).

### **Cross Fit dropout rate is high**

Cross Fit is excessively serious for some individuals. As

indicated by Zuffelato, "because of the high physical request, there is a high turnover rate in Cross Fit." likewise, ACE specialists additionally recognize that you may stop since it's excessively troublesome. In the event that weight reduction is your objective, then you have to discover a program you can stay with for the long haul (Heinrich, 2014).

### **High risk for injury**

Cross Fit exercises regularly incorporate high-hazard exercises. At the point when joined with the weight to go up against the clock or against different competitors the activities may put numerous members at hazard for harm. Zuffelato was constantly harmed and ascribed his wounds to the exceptional program. He didn't completely recoup until he supported off and permitted his body more recuperation time (Thompson, 2013).

### **Intense culture doesn't work for everyone**

The aggressive way of Cross Fit preparing might overpower for a few exercisers, particularly the individuals who are new to work out. On the off chance that you are excessively scared, making it impossible to completely take an interest all the time, you're not prone to see practical outcomes (Dawson, 2015).

### **Modifications may take longer to learn**

Individuals who are new to exercise, who have not practiced routinely for quite a while or have wounds to oblige should adjust the activities to remain protected and sound. This might be excessively tedious. While anybody can do Cross Fit, not everybody ought to do Cross Fit (Paine, 2010).

### **An Effective Approach**

In gyms and wellbeing clubs all through the world the run of the mill exercise comprises of seclusion developments and expanded vigorous sessions. The wellness group from mentors to the magazines has the practicing open trusting that horizontal raises, twists, leg expansions, sit-ups and so forth consolidated with 20-40 minute spells on the stationary bicycle or treadmill

will prompt awesome wellness (Burgomaster, *et al.*, 2005).

**Research Methodology**

The purpose of this study was to evaluate the Effect of Cross Fit exercises on weigh loss of males in Lahore. So researcher used experimental method of research design for population of Lahore by selecting a sample of 08 males ranging age from 18 to 25 years.

A pretest of all the research participants was taken to analyze their body composition through body analyzing machine. Then a 28 days cross fit training session was applied on them with a breakup of weekly program of 4 weeks and on completion of training program, a post test was taken to analyze that what are the changes in body composition. Then on the behalf of that posttest, results were developed and evaluated on following indicators;

- Basal Metabolic Rate (BMR)
- BMI (Body Mass Index)
- Fat Percentage (TBF)
- Lean Muscle Mass
- Total Body Water

**Results and Data Analysis**

**Pre-Test Results**

#	Name	Age (Years)	Weight (Kgs)	Height (cms)	BMI	BMR (KCal)	Body Fat (%)	Lean Muscle Mass (%)	Total Body Water (%)
1	Subject 1	19	77.7	170	26.77	1857	18.1 %	40.2%	52.3
2	Subject 2	23	91.7	172.4	30.67	2034	26.6 %	36.6 %	47.7
3	Subject 3	22	68.4	163	25.82	1674	18.7 %	40.8 %	53.63
4	Subject 4	24	86.3	171	29.51	1946	22.2 %	40.1 %	52.8
5	Subject 5	23	86.5	177.8	27.3	1990	19.7 %	39.9 %	52.5
6	Subject 6	22	68.9	162.5	26.1	1678	20.8 %	39.1 %	51.2
7	Subject 7	23	66.3	167.6	23.6	1661	12.4 %	43.9 %	57.4
8	Subject 8	21	67.5	160	26.3	1653	21.4 %	39.1 %	50.8

Table shows the sample’s profile in which their age, weight, height, BMI, BMR, Body Fat %, Lean Muscle Mass% and Total Body Water % are included. Overall this table shows that age of the samples lies between 18 to 25 years and their weight are between 60 to 95 kg. Height

of the samples are between 5.0 ft to 6.0 ft.

**Post-Test Results**

#	Name	Age Years	Weight (Kgs)	Height (cms)	BMI	BMR KCal	Body Fat (%)	Lean Muscle Mass (%)	Total Body Water (%)
1	Subject 1	19	76.3	170	26.28	1833	17.1	41.5	52.4
2	Subject 2	23	89.7	172.4	30	2002.3	25.8	37.0	49.4
3	Subject 3	22	66.1	163	24.96	1635	16.9	41.6	57.0
4	Subject 4	24	85.1	171	29.32	1920	21.1	40.9	56.0
5	Subject 5	23	85.0	177.8	26.83	1963.6	17.9	41.1	57.0
6	Subject 6	22	66.2	162.5	24.99	1636.2	19.5	40.8	53.5
7	Subject 7	23	64.5	167.6	22.9	1631	11.0	44.7	61.0
8	Subject 8	21	66.0	160	25.72	1627.8	19.2	39.6	51.6

Table shows the sample’s profile after 28 days Cross Fit session in which their age, weight, height, BMI, BMR, Body Fat %, Lean Muscle Mass% and Total Body Water % after the session are included. Overall this table shows that how the volunteers have reduced their weight and got results after doing session.

**Subject Wise Summary**

**Subject 1**

The table above shows that a subject naming subject 1 who is 19 years old and before applying Cross Fit program on him his body weight was 77.7 Kg, his BMI was 26.77, BMR was 1857 Kcal, his body fat % was 18.1, his lean muscle mass % was 40.2 and his total body water % was 52.3 but after applying a 4 weeks’ session of Cross Fit exercises his body weight was 76.3, his BMI was 26.28, BMR was 1833 Kcal, his body fat % was 17.1, his lean muscle mass % was 41.5 and his total body water % was 52.4 which proves that Cross Fit exercises can be used for loosing body weight.

**Subject 2**

The table above shows that a subject naming subject 2 who was 23 years old and before applying Cross Fit program on him his body weight was 91.7 Kg, his BMI was 30.67, BMR was 2034 Kcal, his body fat % was 26.6, his lean muscle mass % was 36.6 and his total body water % was 47.7 but after applying a 4

weeks' session of Cross Fit exercises his body weight was 89.7 Kg, his BMI was 30, BMR was 2002.3 Kcal, his body fat % was 25.8, his lean muscle mass % was 37.0 and his total body water % was 49.4 which proves that Cross Fit exercises can be used for losing body weight.

### **Subject 3**

The table above shows that a subject naming Subject 3 who was 22 years old and before applying Cross Fit program on him his body weight was 68.4 Kg, his BMI was 25.82 , BMR was 1674 Kcal, his body fat % was 18.7, his lean muscle mass % was 40.8 and his total body water % was 53.63 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 66.1 Kg, his BMI was 24.96, BMR was 1635 Kcal, his body fat % was 16.9, his lean muscle mass % was 41.6 and his total body water % was 57.0 which proves that Cross Fit exercises can be used for losing body weight.

### **Subject 4**

The table above shows that a subject naming subject 4 who was 24 years old and before applying Cross Fit program on him his body weight was 86.3 Kg, his BMI was 29.51 , BMR was 1946 Kcal, his body fat % was 22.2 , his lean muscle mass % was 40.1 and his total body water % was 52.8 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 85.1 Kg, his BMI was 29.32, BMR was 1920 Kcal, his body fat % was 21.1, his lean muscle mass % was 40.9 and his total body water % was 56.0 which proves that Cross Fit exercises can be used for losing body weight.

### **Subject 5**

The table above shows that a subject naming Subject 5 who was 23 years old and before applying Cross Fit program on him his body weight was 86.5 Kg, his BMI was 27.03 , BMR was 1990 Kcal, his body fat % was 19.7 , his lean muscle mass % was 39.9 and his total body water % was 52.5 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 85.0

Kg, his BMI was 26.83, BMR was 1963.6 Kcal, his body fat % was 17.9, his lean -muscle mass % was 41.1 and his total body water % was 57.0 which proves that Cross Fit exercises can be used for loosing body weight.

### **Subject 6**

The table above shows that a subject naming subject 6 who was 22 years old and before applying Cross Fit program on him his body weight was 68.9 Kg, his BMI was 26.01 , BMR was 1638 Kcal, his body fat % was 20.8 , his lean muscle mass % was 39.1 and his total body water % was 51.2 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 66.2 Kg, his BMI was 24.99, BMR was 1636.2 Kcal, his body fat % was 19.5, his lean -muscle mass % was 40.8 and his total body water % was 53.5 which proves that Cross Fit exercises can be used for loosing body weight.

### **Subject 7**

The table above shows that a subject naming subject 7 who was 23 years old and before applying Cross Fit program on him his body weight was 64.5 Kg, his BMI was 22.09 , BMR was 1661 Kcal, his body fat % was 12.4 , his lean muscle mass % was 43.9 and his total body water % was 57.4 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 64.5 Kg, his BMI was 22.9, BMR was 1631.0 Kcal, his body fat % was 11.0, his lean -muscle mass % was 44.7 and his total body water % was 61.0 which proves that Cross Fit exercises can be used for loosing body weight.

### **3.1.8 Subject 8**

The table above shows that a subject naming subject 8 who was 21 years old and before applying Cross Fit program on him his body weight was 67.5 Kg, his BMI was 26.03 , BMR was 1653 Kcal, his body fat % was 21.4 , his lean muscle mass % was 39.1 and his total body water % was 50.8 but after applying a 4 weeks' session of Cross Fit exercises his body weight was 66.0 Kg, his BMI was 25.72, BMR was 1627.8 Kcal, his body fat % was 19.2, his lean -muscle mass % was 39.6 and his total body water % was 51.6 which proves that Cross Fit exercises can be

used for losing body weight.

### **Major Findings**

- By applying cross Fit exercises, an average change of 1.5 to 2 kg in body weight of each volunteer was found
- There was a change of almost 1 point in BMI of each volunteer.
- There was a change of almost 50 calories in each volunteer's BMR
- There was a loss of average 1% in each volunteer's body fat %.
- An increase of average 0.5 to 1 % was found in Lean muscle mass of each volunteer.
- An increase of average 2 to 3 % in total body water of each volunteer was found.

### **Discussion**

The program is organized such that members are tested to do a specific number of repetitions in an exercise in a particular time span; the more propelled Cross Fit members will go up against each other to perceive how quick they can finish the day by day exercise and post their outcomes on the Cross Fit site (Sibley et al., 2012). There's no supernatural program that will prompt weight reduction all alone. To get more fit you have to consume a greater number of calories than your body devours. The circuit-style, high-force exercises given by Cross Fit wrench up your heart rate, enact various muscles and give a major calorie consume. On the off chance that your calorie utilization doesn't refute what you consume, Cross Fit will help you get more fit (Weisenthal, 2014).

Numerous expert and world class competitors are taking an interest in the Cross Fit Program. Prize-warriors, cyclists, surfers, skiers, tennis players, marathon runners and others contending at the largest amounts are utilizing the Cross Fit way to deal with propel their center quality and molding, however that is not all. Cross Fit has tried its strategies on the stationary, overweight, neurotic, and elderly and found that these uncommon populaces met an indistinguishable accomplishment from our stable of competitors. We call this "sectioning". On the off chance that our program works for Olympic Skiers and overweight, stationary homemakers then it will work for you (Shugart, 2008). The Cross Fit

framework drives comes about through dangerous molding. This is not another idea, and it's not something that was contrived by Cross Fit. This strategy for weight preparing and molding has been by and by for quite a while. All the same, this type of activity provides the most outcomes in the briefest measure of time without requiring hours of your day consistently (Suman, 2001).

### **Recommendation**

- Gyms and fitness clubs should recommend cross Fit programs to the clients who want weight loss long with increased strength and aerobic fitness.
- Fitness and health clubs should promote awareness of cross Fit among their trainers and health experts so that they could easily recommend and conduct cross fit exercises to their clients and could help them in betterment of their life style.
- Nutrition experts should also get their expertise in cross Fit specific diet planning.
- People who are interested in losing their weights should give a try to Cross fit exercises, it will not only help them in losing weight but will also help them in improving muscular strength and body postures.

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