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Diet, Exercise and Cardiovascular Health

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Abstract: *This review study is an attempt to assess the relationship of diet, exercise and cardiovascular problems. In this regard, 20 research articles were included in the study. Focusing on the role of diet and exercise in promoting health and reducing health complications, the findings of 10 research articles were carefully reviewed and then it is concluded that proper diet and exercise both are the key elements of good health. It is also concluded that lack of proper diet and exercise may cause of various cardiovascular problems.*

Keywords: *Diet, Exercise, Health, Cardiovascular, Problems*

1. BACKGROUND OF THE STUDY

Human body need to perform regular physical activities or exercise because maintenance and promotion of health is directly associated with balance diet and daily physical activities or exercise. Research evidence shows that exercise with balance diet help one to stay healthy through improved cardio respiratory and muscular fitness, bone health, cardiovascular and metabolic health biomarkers and to avoid health complications (Gordon-Larsen et al,.2007). The author further stated that inactive children are more likely to become inactive adults. According to Janssen& Leblanc, 2010). Play and recreation are essential in learning motor and social skills and in the development of creativity.

According to Mozaffarian D, Benjamin EJ, et al (2015) that cardiovascular disease (CVD) is the primary cause of death in the United States, accounting for 35% of adult deaths. Many Observational studies show that excess body weight and adiposity are associated with an increased CVD risk. Furthermore, intervention studies show that weight loss has beneficial effects on CVD risk factors, and would therefore be expected to prevent CVD. Dietary calorie restriction (CR) and endurance exercise training both can cause energy deficits and weight loss and consequently improve CVD risk factors.

Eating a healthy diet and exercise can lead to the best performance. You will feel better with your appearance, which can increase your confidence and self-esteem. Short-term benefits of exercise include reducing stress and improving cognitive function. It's not just a diet and exercise that improves your mood.

As result of the above discussion, it is obvious to say that diet and exercise both are the strong elements of good health. According to James, (2004) Lacking of sufficient intake of diet and exercise can create many health complications among the children's as well as among the adults. Tension, diabetes, blood pressures and heart attack are the major health problems and the main factors responsible for all these problems are insufficient intake of food ingredients and lack of exercise. How much exercise promotes health and reduce cardio vascular problems.

Exercise strengthens the heart. It helps her to absorb more blood by making any heartbeat. This brings a lot of oxygen to your body. If oxygen is high, your body will be more effective. In 1996, the release of the Surgeon General's Report on Physical Activity and Health provided a springboard for the largest government effort to date to promote physical activity among Americans. This historic turning point redefined exercise as a key component to health promotion and disease prevention, and on the basis of this report, the Federal government

mounted a multi-year educational campaign. To discover the fact, the researchers intend to review the available literature.

2. Objectives of the Study

The main objectives of this review study were

1. To assess the diet and its role in maintenance of health
2. To assess the role of exercise in reducing heart problems

3. Significance of the Study

Diet, exercise and health all are interrelated with each other. For good health, one need to use balance diet and do regular exercise. So this review article may help the masses in recognizing the concept about the role of diet and exercise in marinating health and reducing health problems.

4. Research Questions

1. Does diet and exercise promote health and reduce cardio vascular problems

5. Methods & Materials

As this study was related with Diet, Exercise and Heart Proble.1ms. Similarly systematic reviews of 20 articles were drawn for the purpose to extract the findings and conclusion of the study.

5.1. Data Collection

As this was a review article therefore literature review was the method of data collection. The review of related literature was mainly associated with research question stated above. For finding out the more relevant articles the below criteria (Inclusion & Exclusion) were adopted by the researcher.

5.1.1. Inclusion Criteria

Articles were included in the study through the following criteria

1. The articles published from 2005 to 2018
2. The articles having free access
3. The articles associated with diet, exercise and heart problems

5.1.2. Exclusion Criteria

Articles were excluded from the study through the following criteria

1. The articles published before 2005
2. The articles having no free access
3. The articles which not answer the question for which this review article attempting

6. Data Analysis

Data analysis is considered more important for the purpose to draw the result for which the researcher is attempting. Findings of the various research articles were included in the study by following the inclusion and exclusion criteria stated above and through a descriptive way by reviewing the findings of the study.

7. Research Based Evidence Regarding the Association of Diet, Exercise and Heart Problems

At universal level, one of the main causes of morbidity and mortality is cardiovascular disease (CVD). Many factors are responsible for this life threatening problem. These factors includes hypertension, hypercholesterolemia, insulin resistance, diabetes, and lifestyle factors such as smoking and diet are also major risk factors associated with the disease (Ross R. 1999)

Human health need to utilize proper or sufficient amount of food components on daily basis. The basic aim of food intake is to maintain the energy need as well as to maintain the different physiological and psychological functions of the body.

According Hoeger (2018) High intake or use of high caloric food may cause obesity because human bodies have a storage capacity of 2000k/calories. The body consume the store energy by performing the activities of daily life. If the stored energy is not utilized than it may take the shape of collection of cholesterol in the body. Similarly if the level of cholesterol is exceed in the body than body it lead the body toward the state of obesity. Various health experts recommend a minimum level of energy expenditure of about 1000 kcal (4200 kJ) per week because lacking of physical activities may boost the level of fats in the body. The author further stated that expending 1000 kcal (4200 kJ) per week is equivalent to 1 h of moderate walking 5 days a week (Lee IM, Skerrett, 2001).

Exercise or physical activities are the best way of utilizing the energy store in the body. If we consume daily food ingredients and do nothing means physical activities or exercise than energy may store which create many health problems such as high blood pressure, heart attack and so. Willett, W. (2011)

Physical activity is described as body movement that expends energy and raises the heart rate. Sedentariness is ranked as less than 30 minutes of physical activity a week, and sedentary time means time spent in low-energy postures, e.g.

sitting or lying. Inactivities life style has a significant effect on the overall health of an individual. (Warburton, et al. 2006)

According to Held C, Iqbal R, Lear SA, et al (2012) Inactivity or a sedentary lifestyle is associated with increased cardiovascular events and premature death. Sedentary behavior, measured by television viewing time, has been associated with adverse cardiovascular health, increased obesity, diabetes mellitus, cancer, and early death. (Wijndaele K, Brage S, Besson H, et al. 2011)

A review of several studies has definite that continued total sedentary time (measured objectively via accelerometer) has a harmful relationship with cardiovascular risk factors, disease, and mortality outcomes. (Dunstan DW et al. 2011)

Globally, physical inactivity is the fourth leading risk factor for mortality (accounting for 6% of deaths). This follows high blood pressure (13%), tobacco use (9%) and high blood glucose (6%). Overweight and obesity are responsible for 5% of global mortality.

Evidence from many scientific studies shows that diet and exercise both plays an important role reducing the risk factors of the chance of having a heart attack or experiencing another cardiac event, such as a stroke, and reduces the possibility of needing a coronary revascularization procedure (bypass surgery or coronary angioplasty). Regular exercise has a favorable effect on many of the recognized risk factors for cardiovascular disease. For example, exercise promotes weight reduction and can help reduce blood pressure. Exercise can reduce "bad" cholesterol levels in the blood (the low-density lipoprotein [LDL] level), as well as total cholesterol, and can raise the "good" cholesterol (the high-density lipoprotein level [HDL]). In diabetic patients, regular activity favorably affects the body's ability to use insulin to control glucose levels in the blood. Although the effect of an exercise program on any single risk factor may generally be small, the effect of continued, moderate exercise on overall cardiovascular risk, when combined with other lifestyle modifications (such as proper nutrition, smoking cessation,and medication use), can be dramatic.

The normal amount of fats in male body is 20 % of total body weigh while in female the normal amount of fats is 18 % when it exceed 10% than a person called obese or fatty. Fats or obesity can create many health complications such as high blood pressure, heart attack, psychological problems etc.

There are many causes of heart problems but the main causes of heart problems are: using high caloric diet, lack of exercise, social cultural conditions, and use of contraceptive pills among the female etc. To avoid health problems, regular exercise, use of diet according to the age, sex and nature of the activity are considered more significant.

Good health need to utilize sufficient amount of diet and to do regular exercise. Many of health problems such as heart attack, blood pressure directly associated with high intake of food and lack of exercise. (Stand, 2009)

According to Vuori (2001) Regular physical activity or exercise considerably promote health and whole functional capacity of the body. Along with health promotion, exercise or regular physical activities have significant biological effects moderate physical activity translate into reduced risk of CHD, cerebrovascular disease, hypertension, maturity onset diabetes, overweight and obesity, and osteoporosis. In addition proper diet is also considered the basic of good health. (Ivy JL. 1997)

Regular physical activity helps reduce several cardiovascular risk factors including obesity, dyslipidemia, hypertension, metabolic syndrome, and diabetes mellitus. (Myers J, Prakash M, Froelicher, et al 2002)

Among patients with established coronary disease, regular physical activity has also been found to help improve angina-free activity, prevent heart attacks and result in decreased death rates.

In patients with heart failure, exercise improves heart function and quality of life. It also improves walking distance in patients with peripheral artery disease. (Demopoulous L, Bijou R, Fergus I, etal 1997)

Supervised exercise programs such as cardiac rehabilitation in patients who have undergone percutaneous coronary interventions, heart valve surgery, have stable chronic heart failure, are transplantation candidates or recipients, or have peripheral arterial disease result in significant short and long term CVD benefits. (Demopoulous L, Bijou R, Fergus I, Jones M, et al 1997)

According to Golaszewski, T., Allen, J., & Edington, D. (2008) that Nutritional awareness, daily exercise both are the factors which play a

key role in the uplifting or promotion of health. Some time we utilize macro-nutrients but not utilize micro-nutrient as a result the body may lead to obesity and heart problem and similarly some time we utilize micro-nutrients but not utilize macro-nutrients as result the body may lead to weakness or bones problems. Similarly along with both category of food, regular exercise may be performed for the purpose to maintain and promote health and avoid health complications.

8. Analysis Previous Finding

Table1. *Showing the role of diet in promoting health*

Authors	Year	Findings
Bailey	2012	Healthy diet and physical activities have a significant health outcomes
Khan etal,.	2017	Good health need to utilize balance diet and regular exercise
Deci & Ryan	2008	People who engage in physical activity and eat healthy foods have a higher chance of living a healthy lifestyle
Kwan etal,.	2012	A decrease in physical activity showed an increase in many health risk behaviors
Sami etal,.	2017	Healthier bodies need healthy diet for maintaining the physiological functions of the body

Table2. *Showing the role of exercise in reducing cardiovascular problems*

Authors	Year	Findings
Khan etal,.	2017	Lack of exercise and balance diet directly associated with cardiovascular health problems
Ludwig	2007	Healthy eating in childhood and adolescence is important for proper growth and development and to prevent various cardiovascular health problems 2
Kuh & Shlomo	2004	Obsity, high blood pressure, high cholesterol, heart disease and stroke, type-2 diabetes and osteoporosis are mainly caused by poor nutritional and exercise habits 6
Khan etal,.	2017	Improper intake of food and lack of daily exercise may cause coronary heart disease, stroke, hypertension and so 13
Kwan etal,.	2012	Insufficient intake of food and lack of exercise may lead the body toward many heart problems 8

9. Findings

1. Excessive intake of food may cause of health complications
2. Lack of exercise may cause health complications
3. Heart problems mainly associated with high intake of food and lack of exercise.

10. Conclusion

After careful reviewing the views and opinions of the various researchers, the researcher arrived at conclusion that diet, exercise and heart all are very closely associated with each other. Therefore it is recommended to use sufficient amount of food ingredients and to perform regular exercise on daily basis.

11. Recommondations

After findings and conclusion, it is recommended to

1. Utilize the food ingredients according to age, sex and nature of activity
2. Regular perform physical activities or exercise
3. Create awareness among the masses about the regular exercise, sufficient amount of diet through different kind of awareness programs such as seminars, and workshops etc.

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