# Comparative Study of the Three Methods Include of Drug Therapy, Instruction Therapy and Islamic Medicine in Decreasing Blood Lipids

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**Abstract:** The aim of this paper is comparing the Three Methods include of Drug Therapy, Instruction Therapy and Islamic Medicine in Decreasing Blood Lipids. The community of research is all of the people who go the research center of Iran Hejamat association and all of the people who are suffered from hyperlipidemia and go to specialized clinic of Jamaran heart hospital at three months. Results indicate that the method instruction therapy doesn't have any side effects or adverse effects and in order to encourage and accept patients is more useful. Therefore educating proper patterns for nutrition and exercising are much easier and more acceptable and as face as economical thrift. [Akram Hafezi. Comparative Study of the Three Methods Include of Drug Therapy, Instruction Therapy and Islamic Medicine in Decreasing Blood Lipids. Journal of American Science 2011;7(11):122-127]. (ISSN: 1545-1003). http://www.americanscience.org.

**Keywords:** Comparative Study, Drug Therapy, Instruction Therapy, Islamic Medicine, Blood Lipids

## 1. Introduction

One of the important and hazardous factors in cardiovascular diseases is the increasing of blood lipids. According to the conducted researches about of heart patients are suffering from hyperlipidemia. The people who are suffering from high-cholesterol level are four times 'more exposed to cardio vascular diseases, [1] Every Year Heart ischemic diseases result in death of millions of people all 'over the world [2]. In Spite of the fact that world governments have taken vast actions and measures through the recent years, but still the level of the lipids especially cholesterol in industrial countries is .high, and Americans in comparison with other countries have higher blood cholesterol level [3]. Conducted surveys and investigations in the United States of America shows that every year more than ten million people suffering from heart diseases resulting from coronary sinus consult physicians and seek medical advice and more than half a million people have been reported to be dead because of suffering from coronary sinus diseases [4]. On the other hand the results of a ten years study In thirteen countries in the world have shown that the concentration and viscosity of cholesterol serum is an important dangerous factor in leaking out and appearing CHD in all of the progressive countries about one fourth of the population aging more than 20 years old, have high blood cholesterol and lipid level [5]. According' to the conducted surveys in Tehran about one fourth of heart patients who are confined to bed, are encountered and affected with the increase of blood lipids [6].

The research center of heart and vessels in Isfahan have reported the breakout and prevalence of Hyper cholesterol my and hyper Glyceridemy in people aging more than 19 years old in the urban community of Isfahan in- order 35 and 40 percent [7]. Also Kimiyagar in a research have studied the situation of the lipid consumption pattern in ten: provinces 'of Iran and he has reached the-same results. The percentage of saturated lipids in seven provinces out of ten provinces is more than the recommended amounts and the percentage of unsaturated fatty acids in all of the aforementioned provinces is less than the recommended amounts.

On the whole these results declare the breakout of hyperlipidemia in the Country amounting to higher than 35 percent individual aging over 20 years old and they show the false and erroneous breakout of lipid consumption [8].

On one hand each one percent reduction in the amount of blood cholesterol reduces the danger of suffering from cardiovascular diseases about two percent [9].

According to conducted surveys in large populations and with long explorations we could notice the fact that not only-the appearing of heart diseases decreases while the blood cholesterol level comes down but also the death rate related to heart diseases falls [11, 12] and then by lowering blood lipids we could save millions of lives all through the world and it's the task and responsibility of the physicians and instructors followers of treatment and hygienic services to study different methods to lower the blood lipids and they should give all these information to the public [13]. In relation with the methods to lower hyperlipidemia several studies have been conducted. Especially surveys about the effects of drugs and medicine in lowering blood lipids and also the rate of the influences of instruction in decreasing hyperlipidemia.

In 1999 Rezayr and his colleagues conducted a research related to effects of in struction in lowering blood lipids and the results show that instruction has great influences in decreasing blood lipids [14]. But in library studies and within internet studies, no research has been found in relation to comparison of different methods in decreasing blood lipids. Especially about the role of Islamic medicine (Hejamat) in decreasing blood lipids and comparing it with other methods, no researches have been conducted. This paper determines the rate of the influence in every each of the three methods, Drug therapy, Instruction therapy and Islamic medicine in lowering blood lipids especially blood cholesterol level. Comparing the above methods has also been taken in to consideration by the researcher. May this research and the results derived out of it be a key to be used in vast programming' of feeding the whole country and the best use of the most useful methods in planning for lowering blood lipids.

## 2. Material and Methods

As it mentioned the main purpose of conducting this survey is determining and comparing the rate of influence among the following methods, drug therapy, instruction therapy and Islamic medicine in lowering experimental survey that with intervention in all three groups of experiments, it started in the first six months of the year 2010. The community of research is all of the people who go the research center of Iran Hejamat association and all of the people who are suffered from hyperlipidemia and go to specialized clinic of Jamaran heart hospital at three months and it has been selected randomly according to treatment centers.

The number of needed samples according to the formula of estimating sample volume and with the reliance of 90 percent and the ability of testing 80 percent according to the conducted researches about lipids and regarding two factors blood cholesterol and triglyceride. 31, people have been estimated for each testing group. After starting the research and after ten samples from each of the three groups the number of samples has been controlled again. All three groups have been unified and equalized according to the number of the people and other intervening changeable like age, sex and education.

The conditions of samples are as follow:
- The range of age 30 to 50 years old.
- Not suffering from any serious cardiovascular diseases, no history of diabetes. There are hypothyroidism and pancreatitis and no pregnancy in women.

In order to collect information in this research questionnaires with two main parts have been used. The first part is two parts in itself.

A- Demographic and basic information questionnaire which deals with questions about personal and social characteristics and ground changeable like age, sex education and so on.( Totally seven questions)

B- Second part is related to physical situations and history of diseases like weight blood pressure blood cholesterol and so on. (Totally thirteen questions)

This part has been marked after conducting different examinations, in order to select patients and determine hyperlipidemia.

The examinations which have been carried out only to determine hyperlipidemia are consisted of
1- Determining the rate of blood cholesterol
2- Determining the rate of blood triglyceride.
3- Determining the rate of blood HDL cholesterol ~
4- Determining the rate of blood LDL cholesterol

These experiments have been carried out in two stages before and after interference and intervention. The second part of the questionnaire consists of questions related to deliberation of the amount of knowledge and attitude and practice of the patients related to the causes and consequences and the ... ways to prevent blood lipids.

After completing the questionnaires in two stages the miscellany of the marks on knowledge and attitude and practice and in each research unit related to hyperlipidemia, the consequences and the ways to cure and prevent it have been-appointed assessed, and collected. In order to determine the scientific validity of the questionnaire using content validity of the questionnaire using content validity method and by utilizing the view points and opinions of fifteen honorable professors of the university of Tarbiyat Modares and nutrition institute. In order to determine Thecientific unity or sustainability of the means of collecting in formation Test-retest method has been used. In order to measure the blood lipids in laboratories the current methods in the country have been applied'. Of course the level of LDL cholesterol serum have been measured in directly and by employing Friede- Wald formula because measuring LDL level demands specialized laboratory methods and costly specialized laboratory kits which are usually very rare and exquisite or they are not often available therefore the researcher does have this restrictions. Frieda Wald formula=cholesterol-LDL=triglyceride/5 (total cholesterol-HDL cholesterol). The required conditions for applying the above formulation is that the level of triglyceride serum should be less than- 400 mg/dl in quantities over 40 mg/dl level LDL serum cannot be calculated by this formulation and the researcher have omitted

the amount of LDL in those samples who are possessed of high triglyceride which is over 400 mg/dl. The level of serum lipids are different considering sex, age and race but according to the national association of heart, blood and lung. Health view point in 1993. The natural quantity of plasma lipids in the adults is as following: the researcher has based her survey on the following aspects, and charts.

Total cholesterol less than 200 mg/dl

Triglyceride less than 200 mg/dl

LDL cholesterol less that 130 mg/dl and HDL cholesterol more than 35 mg/dl

The people who are suffering from hyperlipidemia and those who

Are hyperlipidemia patients are possessed of total cholesterol level or triglyceride or both over 200 mg/dl (15). The method of executing the study this is an experimental research which has been conducted ~ Tehran since the second half of January 1998 until, autumn 1999.

The stages in executing the plan are as follow: with the approval and agreement of the Jamaran heart hospital authorities and the research center of Iran Hejamat and by coordinating and harmonizing and achieving assistance from general practitioner and specialists in these clinics in order to cooperate in the research plan and referring the to go patients who have history of high blood lipids or in the recorded results of the required experiments by the physicians. They are possessed of high level of cholesterol or triglyceride over 200 mg/d. Exclusive interviews with the referred patients In order to obtain agreement for participating in the survey and then medical examinations by physicians and specialists who were cooperating in the research in order to study the history of sickness and physical condition and the required conditions for participation in the sampling process.

-Classifying the examined patients who are possessed of the required conditions for participating in the survey as cases according to the place 'they have gone for consultation and randomly have been categorized in to three groups drug therapy, instruction therapy and Islamic medicine (Hejamat) and completing the KAP_ questionnaires and physical condition (including weight, blood pressure," height, ... ) and handing out recommendation letters in order to carry on examinations HDL, LDL, CHOL, TG in Aghdasiyeh lab and recommending patients to stay Fasting' for 12 to 14 hours before undergoing blood examinations and then questionnaires have been completed and blood tests have been carried out-and the primary data have been gathered besides for illiterate people the questionnaires have been filled out by making exclusive interviews. To the research units of the

group drug therapy after gathering primary data the remising papers have been given to the cooperating physicians in the survey plan, to recommend the next medical consulting session after two months. To the research units of the group of Islamic medicine after gathering primary it has been recommend having another medical consulting after two months.

Determining the educational needs of the group instruction therapy according to analyzing the questionnaires and planning the educational contents suitable for the demands of the people and applicable to social-economic and cultural conditions and based on the latest scientific achievements in this ground have been designed and then preparing facilities and educational materials have' been administered. The proper nutritional patterns and exercise in the group of instruction therapy have been designed and face to face group discussions and consultations have been employed. This phase was consisted of four, 20 to 30 minutes sessions for each of the research units and after the first exclusive session pamphlets and educational leaflets about the causes and consequences and effects and the ways to control and treat hyperlipidemia was presented and given away. Again the KAP questionnaires (Knowledge- Attitude- practice) were completed in all three groups after two months and blood retests were carried out. After collecting data in two stages before and after statistical analyzing was administered the applied statistical methods were chi-square T-test for Equality of means and variance analyzing and paired T-test and correlation- coefficients were Pierecon and Spierman.

The primary data analyze in all three groups before performing education and instruction showed that all three groups were coordinated and matched according to demographic changeable.

## 3. Results

The average of triglyceride, total cholesterol, LDL cholesterol and HDL cholesterol in the group instruction therapy by applying parried T-test after instruction have shown significant changes comparing to the time before instruction.

P=0/00  P=0/00  P=0/00  P=0/03

And in regard to the two month period of the survey which happens to be quiet a short period is quiet considerable.

Table 1. The average distribution and variance T.G total HDLc and LDLc in the Group instruction therapy before and after intervention.

| Instruction Group therapy Variable | Before intervention | | After intervention | | T-value | 2.tail sig |
|---|---|---|---|---|---|---|
| | Mean | S.D | Mean | S.D | | |
| T.G | 297/4 | 71/57 | 277/55 | 67/62 | -10/34 | 0/000 |
| T.chol | 247/51 | 19/77 | 231/18 | 19/66 | -11/99 | 0/000 |
| LDL$_C$ | 139/51 | 35/1 | 127/93 | 30/27 | -4/90 | 0/000 |
| HDL$_C$ | 48/59 | 10/02 | 54/25 | 11/25 | 2/32 | 0/03 |

The average of triglyceride comp total cholesterol, LDL cholesterol, HDL cholesterol in the group drug therapy by applying paired T-test in the stage' of after interference comparing to the time before in terference are P = 0/00 P = 0/00 P = 0-00 and P = 0/00 respectively and it shows considerable changes.

Table 2. The average distribution and variance T.G.chol HDL$_C$ and LDL$_C$ in the Group drug therapy before and after intervention

| Drug therapy Group Variable | Before intervention | | After intervention | | T-value | 2.tail sig |
|---|---|---|---|---|---|---|
| | Mean | S.D | Mean | S.D | | |
| T.G | 260/79 | 81/71 | 246/1 | 79/2 | -3/41 | 0/002 |
| T.chol | 259/36 | 37/28 | 239/58 | 38-77 | -5/01 | 0/000 |
| LDL$_C$ | 158/81 | 43/87 | 139/37 | 41/14 | -4/51 | 0/000 |
| HDL$_C$ | 44/2 | 12/58 | 53/17 | 16/03 | -5/52 | 0/000 |

The average of triglyceride, total cholesterol, LDL cholesterol, HDL cholesterol in. the group Hejamat therapy by applying paned T-test after interference (Hejamat) comparing. to the time before interference are

P = 0/00 P = 0/037        P = 0/00 P = 0/05

Table 3. The average distribution and variance T.GoT.chol HDL.LDL in the Group hejamat therapy before and after intervention

| Hejamat therapy Group Variable | Before intervention | | After intervention | | T.value | 2.tail sig |
|---|---|---|---|---|---|---|
| | Mean | S.D | Mean | S.D | | |
| T.G | 295/67 | 112/85 | 275/57 | 10/4 | -2/05 | 0/05 |
| T.chol | 253/28 | 45/41 | 237/67 | 38/23 | -4/12 | 0/000 |
| LDL$_C$ | 139/95 | 80/95 | 125/5 | 43/29 | -2/22 | 0/037 |
| HDL$_C$ | 50/75 | 2/02 | 55/71 | 13/38 | -4/21 | 0/000 |

Respectively, it shows the positive effect of Hejamat in reforming and rectifying the level of blood lipid.

The average of the marks knowledge attitude and practice in formation observation and faction of the patient in the group instruction Therapy. After performing the educational program has shown more changes.

Table 4. The average distribution and variance T.G.T.chol HDL.LDL in the group hejamat therapy before and after intervention

| Education therapy Group Variable | Before intervention | | After intervention | | T.value | 2.tail sig |
|---|---|---|---|---|---|---|
| | Mean | S.D | Mean | S.D | | |
| Knowledge | 7/59 | 1/50 | 10/21 | 1/58 | 9/27 | 0/000 |
| Attitude | 5/3 | 1/35 | 7 | 1/32 | 9/89 | 0/000 |
| practice | 7/18 | 1/80 | 10/03 | 1/37 | 8/1 | 0/000 |

In comparing the three methods in decreasing the blood lipids no significant differences have been traced.

This means that all the three groups have the same effect on lowering the blood lipids.

Table 5. The variation Campion of the level of T.G. T.chol LDLcHDLC   after intervention in all three groups and the comparison of the level of impact

| Variable | Source | D.F | Sumofsquares | Mean squares | F Ratio | F Prob |
|---|---|---|---|---|---|---|
| T.G | Between Groups | 2 | 534/51 | 257/25 | 25% | 77% |
|  | Within Groups | 86 | 90940/42 | 10/52/21 |  |  |
| Tchol | Between Groups | 2 | 371/61 | 158/8 | 54% | 58% |
|  | Within Groups | 85 | 25204/2 | 293/07 |  |  |
| LDL$_C$ | Between Groups | 2 | 905/55 | 4752/77 | 89% | 0/412 |
|  | Within Groups | 78 | 19393/43 | 5050/04 |  |  |
| HDL$_C$ | Between Groups | 2 | 263/37 | 131 | 1/17 | 0/3 |
|  | Within Groups | 85 | 9628/8 | 111 |  |  |

## 4. Discussions

Education is one of the most important factors in preventing heart and coronary sinus diseases and controlling the dangerous and risk factors because when people know how to control their diseases .they can manage to cooperate in their treatment much better in this survey it's been tried to educate the society of research and in addition to boosting the level of knowledge and awareness about health in treatment of hyperlipidemia and in order to prevent CHD with creating suitable aspiration and creating accurate and proper health attitudes, amending and rectifying reprobate attitudes and in the end lowering blood lipids.

On the other hand drug is one of the common ways to lower the level of blood lipids in the world. With advisement common drugs in the group drug therapy we have identified this method as a standard method and then compare the efficiency of these two other methods with it. It may be claimed that this group has the role of a witness in the current research because the people undergoing these tests have all been patients leaving them high and dry was not a moral task.

Hejamat is also a traditional way which has been applied since many years ago and it's been know an action in order to control blood lipids in Islamic medicine and the research center of the association of Iran Hejamat established in the year 1368 under the supervision of the ministry of health. Nowadays all through the country more than one thousand physicians are the members and they believe in: decisive treatment of hyperlipidemia by Hejamat. The researcher besides planning the study indicates aspirations and assumptions. Results showed that between the averages of cholesterol triglyceride, LDL HDL in all three groups before and after the interference significant difference can be traced. Besides in the average of the marks knowledge, attitude and practice are not in the group of instruction therapy in the two other groups after executing the educational program significant difference can be found. Comparing the level of blood lipids can be traced in all three groups after interference, in comparison with the time before that no significant difference. This means all three methods have almost the same effect in lowering the level of blood lipids. Although all three methods have the same consequences in lowering the level of blood lipids in applying each of these methods important cases must be taken in to consideration and some of them will be mentioned as follow:

The drug there a p y method is related to' some problems like egression of national currency and in fact economic problems in order to provide drugs interference and the side effects of the drugs and all these problems have significant impacts in real impression of this method.  The Hejamat method seems that more research is required especially about the way to perform Hejamat and the level of safety and assurance of this method. On the other hand the issue of accessibility to the centers which perform Hejamat under the supervision of specialists is upraised and of course it should be -declared that the research center of the Hejamat association.  They haven't already provided a clear pattern for the number of times that one should undergo Hejamat and then according to the above explanations it seems that the method instruction therapy doesn't have any side effects or adverse effects and in order to encourage and accept patients is more useful therefore educating proper patterns for nutrition and exercising are much easier and more acceptable and as face as economical thrift.

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