

Just Natural Cholesterol Reducer & Control

1. Ingredients: Red Kojic Rice, Panax notoginseng

2. Administration and dosage

Two capsules for each time and two times daily

3. Overview

In modern society, the material life is highly developed, but people with hyperlipemia become more and more. In clinics, hyperlipemia is one of the common diseases for medium aged and senile people. It can induce cerebral and cardio vascular diseases and microcirculation disorder, and so it is the major cause for atherosclerosis.

3.1 TCM knowledge on hyperlipemia. It is believed in TCM that, though lipid is the nutritional materials of human body, when it becomes a disease when hyperlipemia forms. For factors which induce people intake too much lipid, or disorders of lipid transportation, utilization and evacuation, blood lipid would increase, and the etiological factors include the following ones:

(1) Improper diet: eating and drinking without temperance, or overfeeding, or excessive intake of greasy food and food with thick flavor. When too much lipid enters human body with diet, the distribution and transformation can not be performed timely, the lipid would be detained in blood, and blood lipid would increase. If people take improper meals for long term, or excessively drink, the digestive system would be injured, and food can not be transformed to essence to nourish human body, but fat particles will form and enter into blood circulation, thus to induce hyperlipemia.

(2) Less movements: some people like be quiet, and they love to sleep and move less, or because the limitation of work, they bend to the table all day long, and sit more and walk less, and functional activities of vital energy is not adjusted enough, Qi stagnates and body fluid will not be distributed unfavorably, the transformation of lipid will not be performed timely, and it is produced more and use less, so it will deposit in body and infiltrate into blood, so blood lipid increases.

(3) Psychological stimulation: considering or gloomy and danger make Qi activity stagnate, and lipid would be distributed improperly, and blood lipid increases.

(4) Senility and asthenia: when people get old, the solid and hollow organs would wane gradually, and in TCM, it is the functional lowering of kidney, spleen and liver. Lipid metabolism would be abnormal, and blood lipid will increase. If people are indulgent in sexual activities, or work or think too much, they may get old even they are year in age.

(5) Constitution and natural endowment: people who have obese parents will have excessive body fluid, and lipid is transformed slowly, there is too much lipid in blood, and blood lipid will increase.

(6) Waste thirsting, edema and jaundice, etc. are not cured: waste thirsting is diabetes, for people with diabetes, the food essence can not be transformed to be fat and store, the lipid will dissolve to become grease and mix into blood, the blood lipid would increase. After long term of edema, lipid metabolism is disordered. For people with jaundice, the distribution and transformation of lipid would be affected, the biliary system is unable to cleanse turbid and dissolve fat, so blood lipid will increase.

3.2 Knowledge of western medicine on hyperlipemia. It is believed in modern western medicine that, the pathogenic factors of hyperlipemia can be divided into two big groups, i.e. primary hyperlipemia and secondary hyperlipemia.

Primary hyperlipemia in the congenital defect of lipid or lipoprotein metabolism (family), or other environmental factors, and it is induced by various mechanisms. These environmental factors include diet and drugs, which are described as follows:

(1) Genetic factors: genetics can induce hyperlipemia by multiple mechanisms, some may exert effects on cellular level, which mainly displays in lipoprotein receptor defects on cell surface or defects of some enzymes (such as the depletion or deficiency of lipoprotein lipase), it also may happen on molecular level of lipoprotein or apoprotein, which are mainly induced by genetic defects.

(2) Dietary factor: the effects of dietary factor are rather complicated, and a rather great proportion of hyperlipoproteinemia patients are closely related with dietary factors. Carbohydrates are taken too much, and insulin secretion would be promoted to speed up the synthesis of very low density lipoprotein, therefore, hypertriglyceridemia would be induced. The excessive intake of cholesterol and animal fat are related to the formation of hypercholesteremia, and other dietary ingredients (long term excessive intake of protein, fat and carbohydrates, or deficient intake of dietary fiber, etc.) are also related to the disease.

Secondary hyperlipemia is caused by other primary diseases, including diabetes, hepatic diseases, thyroid diseases, kidney diseases, pancreas diseases, obesity, glycogenic thesaurismosis, gout, Addison's disease, Cushing's syndrome, abnormal globulinemia, etc. Secondary hyperlipemia is rather common in clinics, if not examined carefully, the primary disease is usually ignored, and only the symptoms are treated, not the pathological causes, so the problem can not be solved radically, which is unfavorable to treatment. And we briefly described the common diseases as follows:

(1) Diabetes and hyperlipoproteinemia. In human body, carbohydrate metabolism is closely related with fat metabolism, and it is found in clinical study that, about 40% of the diabetes patients have secondary hyperlipemia.

Under general conditions, for insulin-dependent diabetics, disorder of chylomicra (CM) and very low density lipoprotein (VLDL) usually appear in blood, which is closely related with severity of pathological conditions. When insulin is seriously deficient, especially for patients with ketoacidosis, the above two lipoproteins all significant increase, which display in type α and type β hyperlipoproteinemia. While for patients with no ketosis, CM may not appear in blood, and VLDL may be normal or slightly increases (type α hyperlipoproteinemia). The above metabolism disorders can be alleviated after treated with insulin.

Lipoprotein disorder is more commonly seen in patients with non-insulin dependent diabetes mellitus, which may be related with the fact that most of this kind of patient has obesity. It is indicated in clinical observation that, many symptoms are not obvious in this kind of patient, and they come to visit doctors only because of coronary disease, stroke or other peripheral cerebral diseases and hyperlipemia, and the disease is found out during further examination. After body weight and sugar (carbohydrates) intake are limited, the abnormal lipoprotein is usually improved to some extent.

(2) Liver ailment and hyperlipoproteinemia. The modern medical data confirm that, many substances are processed, manufactured, decomposed and evacuated in liver, including lipid and lipoprotein, etc. When liver gets sick, and lipid and lipoprotein will have disorder. Take fatty liver in medium and old aged people for example, it can be seen in clinical observation that, no matter what reason the fatty liver is induced, the contents of blood fat and VLDL may increase, which display as type α hyperlipoproteinemia. In late phase, hepatic cellular damage would further progress, but contents of plasma triglyceride and VLDL may decrease, or hyperlipoproteinemia even appear.

(3) Obesity and hyperlipoproteinemia. It is indicated in clinical data that, obesity is usually secondary to increased triglyceride content, some patients may increased cholesterol content, which mainly display as type α hyperlipoproteinemia, and type β hyperlipoproteinemia secondly.

3.3 Study on Just Natural Cholesterol Reducer & Control and its application in TCM and western medicine

It is believed in TCM that no matter what causes hyperlipemia, the final pathogenic mechanism is disorder of solid and hollow organs, the grease and lipid can not be transported and transformed, and stagnation of turbid phlegm in middle-Jiao will be induced. While turbid phlegm will cause diseases all over the body. Phlegm and turbid, grease and lipid, they all would block the blood vessels. Dissipating phlegm and dispersing stasis are applied to obtain certain therapeutic effects in treatment of hyperlipemia.

Just Natural Cholesterol Reducer & Control is the typical prescription based on TCM theory to treat the disease from pathogenic tache and etiological factors. It dries dampness to eliminate phlegm, promotes blood to dissipate stasis, digests food and lowers lipid, and soften blood vessels. The composing ingredients of the prescription are red rice ferment and notoginseng.

Red rice ferment is one of the famous traditional Chinese crude drugs, which originates from Tang dynasty, so it has a history of a thousand years. Red rice ferment is the fermented products produced by *Monascus ruber*. It is dark red and can produce red pigment, so it has been named red rice ferment since the ancient times. Traditionally, red rice ferment is not only a Chinese crude drug, but also a kind of food. In Compendium of Materia Medica compiled in Ming dynasty, it is recorded that the effect of red rice ferment is "tonifying stomach to promote digestion, activating blood flow to dissipating turbid phlegm". The drug can be applied to dyspepsia, dizziness and chest distress, etc. It is demonstrated in modern study that, red rice ferment has various pharmacological actions, and it has important developing value, its prospect is unlimited.

Substance contained in red rice ferment has no toxic effect, and it has powerful effect to reduce the effect of cholesterol, its mechanism is to inhibit the reductase of rate-limiting enzyme HMG-CoA (3-hydroxy-3-methyl glutaryl CoA) in the synthesis of cholesterol. In recent studies, it is found that, it can not only exert effect in liver cells and lactating animals, but it can also inhibit synthesis of cholesterol in fungi.

It is also found in the recent studies that, red rice ferment has certain depressurization effect, and the corresponding active ingredient can be dissolved in water, its molecular ingredient was less than 3000, which is different from the ingredient of cholesterol. In addition, scholars find that the fermented products of *Monascus ruber* can inhibit tumor growth, and it indicated that red rice ferment may become a new effective drug to treat various tumors, so it attracts the people's attention again.

Notoginseng is the famous drug for activating blood circulation to dissipate blood stasis, which can be applied to hyperlipemia, hypertension and high blood viscosity as well as the induced diseases such as coronary disease, stroke, etc., and the effect is good. Application of notoginseng has a history of several thousands of years in China. In pharmacological studies, it is demonstrated that Notoginseng could improve microcirculation, lower blood viscosity, and lower blood lipid, broaden vessels, lower blood pressure and resist platelet aggregation.

Pharmacological study is performed on rabbit and quail models with hyperlipemia, and results indicate that, red rice ferment capsule could obviously lower serum TC concentration and TC/HDL-C ratio for animals with endogenous hypercholesteremia ($P < 0.05$), while for exogenous hypercholesteremia group, TC, TG concentrations and TC/HDL-C ratios of rabbits are obviously lowered ($P < 0.05$), and it has effects to inhibit atherosclerotic plaque and the deposition of lipid in liver.

In toxicological study, the animal models are performed acute toxicity test with dose equal to 500 times of clinical dose, long term toxicity test with doses equal to 50 and 100 times of clinical dose, and it is indicated that the drug has not toxicity.

Through 8 weeks of drug administration in 8 clinical institutes, including Affiliated Hospital of China Academy of Medical Science, Affiliated Hospital of University of Traditional Chinese Medicine and Clinical Pharmacology Study Base of Harbin Medical University, etc., and it is indicated in the observation on 486 cases with hyperlipemia that, Just Natural Cholesterol Reducer & Control can averagely lower the TC, TG, LDL-C and TC/HDL-C by 23.0%, 36.5%, 28.5% and 34.2%, and HDL-C is increased by 19.6%, the total excellence rate is 85.7%, total effective rate is 93.2%, no toxic or side effects with clinical significance is found till now. The clinical results also indicate that, the drug has certain effects on hyperlipemia in patients with insulin independent diabetes.

Just Natural Cholesterol Reducer & Control is a safe and effective natural TCM preparation, which can treat hyperlipemia, arteriosclerosis and the induced coronary disease or other cardio and cerebral vascular diseases, the comprehensive therapeutic effect is significant and the safety is high.

4. How can lipid lowering capsule lower blood lipid_

4.1 It is believed in TCM that no matter what causes hyperlipemia, the final pathogenic mechanism is disorder of solid and hollow organs, the grease and lipid can not be transported and transformed, and stagnation of turbid phlegm in middle-Jiao will be induced. While turbid phlegm will cause diseases all over the body. Phlegm and turbid, grease and lipid, they all would block the blood vessels. Dissipating phlegm and dispersing stasis are applied to obtain certain therapeutic effects in treatment of hyperlipemia. It can dry dampness to eliminate phlegm, promotes blood to dissipate stasis, digests food and lowers lipid, and soften blood vessels.

4.2 It is indicated in modern pharmacological study that, lipid lowering capsule can exert effect by the following pharmacological actions_

- (1) Inhibit the rate-limiting enzyme in synthesis of cholesterol, HMG-CoA(3-hydroxy-3-methyl glutaryl CoA) reductase, and inhibit the synthesis of cholesterol.
- (2) Improve microcirculation, lower blood viscosity, broaden blood vessels, lower blood pressure and resist platelet aggregation.
- (3) Promote cholesterol metabolism, prevent the deposition of cholesterol in liver and arteries.
- (4) Effectively lower triglyceride concentration in blood and blood viscosity, avoid arteriosclerosis induced by increased triglyceride concentration.
- (5) Fatty liver is the disease with fat accumulated in liver excessively, and the blood lipid is usually increased, too. Lipid lowering

capsule can adjust blood lipid and prevent the deposition of lipids in liver, promote the fat metabolism and alleviate fatty liver.

(6) Lower cholesterol concentration in blood and promote the secretion of bile acid, thus to dredge the excessive cholesterol in bile.

(7) Effectively lower LDL-C concentration and increase HDL-C concentration.

5. Indications of lipid lowering capsule

5.1 Hyperlipemia

Blood fat is the general name of fat (lipids and lipoids) contained in blood, in blood, fat mainly includes triglyceride, phospholipids, cholesterol and free fatty acids.

In blood, fat content only takes a small portion of the total amount of fat in human body, and they transport between tissues and usually can reflect the lipid metabolism in human body. The plasma lipid contents are stable in human with a certain waving range. Blood fat level can be easily affected by pathological factors, for example, one person has normal fasting plasma lipid, now he take some pig oil fried egg and go to hospital to detect his blood fat level 2 hours later, and it would be found that blood fat level is higher than that of fasting stomach. However, the influence induced by this diet is transient, and the blood fat would return to be normal 3-6 hours later. In short term starvation, the stored fat will be mobilized in great number, and blood fat content would increase transiently. Therefore, it is easy to understand that when you go to hospital to determine your blood fat, doctor would ask you to eat nothing after supper, and then you can take blood sample to determine lipid level.

According to abnormal changes of the blood fat ingredients, hyperlipemia can be divided into three categories:

(1) Hypercholesterolemia: normal people have total blood cholesterol lower than 5.7 mmol/L, if the value is more than 6.0 mmol/L, hypercholesterolemia can be diagnosed, and total blood cholesterol between the tow values is marginal or borderline value, which is also not the normal condition. The certain reason is not sure for increased total blood cholesterol, some may relate with family genetics, and the patient has many relatives with increased blood cholesterol, or some young one even has coronary diseases. Some patients may intake food containing much cholesterol for long term, such as speck, pig oil, animal internal organs, mussel and sea food, etc., and total blood cholesterol increases. In addition, obesity, increased age (senility), female menopause, etc. are related with the increased blood cholesterol. In summary, the disease generate because of genetic defect or the interactions between these defects and environmental factors, the only thing is that, the pathogenic factor can not identified for each patient, therefore, it is call "primary hypercholesterolemia".

The disease on a few patients is induced by other diseases, such as hypothyreosis, chronic nephropathy and diabetes, etc. When applied for long term, some drugs can induce cholesterol to increase, such as dihydrochlorothiazide of diuretics, dehydrocortisone or dehydrocortisone of hormones, etc. These patients have the disease under the presence of other diseases. Therefore, it is called secondary hypercholesterolemia.

No matter primary or secondary, LDL-C usually increases in blood, and the increases of blood cholesterol and LDL are the risky factors promoting coronary diseases. Therefore, the prevention and treatment of hypercholesterolemia is a critical measure to prevent coronary disease and atherosclerosis.

(2) Hypertriglyceridemia: the disease is diagnosed when blood triglyceride surpasses 1.7 mmol/L. It is also related with diet, it may happen if people intake food containing too much carbohydrate, or drink and smoke much, or they have too less body movements. Increased triglyceride usually seen in family genetic disease, which is related to genetic abnormalities. After blood sample is taken out from these patients, there is butter like substance on the surface, and lower layer is turbid. This kind of people usually suffers from acute pancreatitis, diabetes and biliary obstruction, etc. Increased triglyceride may be the risky factor of coronary disease and atherosclerosis, and patients have increased VLDL, and coronary diseases are much easier to be initiated when HDL-C is obviously decreased.

(3) Combined hyperlipidemia: the disease can be diagnosed when there is simultaneous increase of total blood cholesterol and triglyceride. It is related with genetics, diet and other diseases, because there are tow abnormal blood fat components, and HDL-C usually decreases, so the possibility to initiate coronary disease is much greater.

5.2 Abnormal blood fat

Blood fat increases, HDL-C decreases, or only HDL-C decreases, and this kind of condition is a kind of blood fat abnormality. After blood fat abnormality is finally diagnosed, the patients should have the relevant indicators examined, such as blood glucose, hepatic and renal functions and other relevant indicators, and diseases which may initiate blood fat abnormality should be paid special attention. The blood fat of family members should be determined when necessary to make clear the pathogenic factor.

6. Typical examples of Just Natural Cholesterol Reducer & Controls

6.1 One patient from Guangdong, Liu Liming, male, 42 years old, a senior staff of one company. The patient usually got palpitation, vertigo and insomnia, etc., and he was diagnosed hyperlipemia and slight fatty liver. The patient had taken various drugs with no ideal effect, and he took Just Natural Cholesterol Reducer & Controls following the doctor's advice for 2 treatment courses, i.e. 2 months. The symptoms completely disappeared after 10 days of drug administration, and blood fat returned to be normal after 1 treatment course, and fatty liver was also reversed. The drug was stopped after one treatment of consolidation, and the disease was not relapsed after one year's follow up.

6.2 One patient from Beijing, Mr. Chen, 62 years old, a retired civil servant. The patient had cardio and cerebral vascular diseases and hyperlipemia for more than ten years, and he had taken many good drugs and special drugs, total seven to eight varieties, but with no ideal effect. After he took Just Natural Cholesterol Reducer & Control, he could feel that his right arm and left leg were not dumb any more, and chest was not depressed. Moreover, the blood pressure and blood fat were all obviously decreased. Mr. Chen took the capsules totally for 3 treatment courses. Now it seems that he become the person twenty years ago, and there is no chest depression and dumb on arm or leg, and he tell everybody he meets that, traditional lipid lowering drug "Just Natural Cholesterol Reducer & Control" is marvelous!