Benefits of implementing the "NEWSTART" healthy lifestyle to improve triglyceride and cholesterol in people with high fasting blood glucose levels

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Background

Inappropriate life habits of modern people including high pressure work, excess refined food have greatly increased the incidence of chronic illness, such as hyperlipidemia, diabetes and obesity. The risk of being affected by these non-communicable diseases can be reduced by correcting unhealthy lifestyle and therefore people are able to maintain good health condition.

Methods

The purpose of this study is to explore the effect of a healthy lifestyle changing program "NEWSTART". It's a 13 days lifestyle changing program which include 8 principles (Nutrition, Exercise, Water, Sunlight, Temperance, Air, Rest and Trust), medical and nutrition knowledge, mental courses, cooking lessons and exercise. The research implement physical examinations before and after the program on blood biochemical tests of participants with high fasting blood glucose levels. Participants included 15 men and 34 women with average age of 59.3 and fasting blood glucose over 100 mg/dl. Blood samples were collected on the second day and the thirteenth day during the program.

Results

Analysis of pre/post measurements :

	Pre measurements (n=49)	Post measurements (n=49)
fasting blood glucose, FBG (mg/dl)	125.1±37.32	106.8±19.96*
serum triglyceride, TG (mg/dl)	162.9±81.87	107.0±46.61*
total cholesterol (mg/dl)	194.3±59.12	170.16±60.43*
HDL-C (mg/dl)	57.1±15.00	55.2±14.31*

* statistical significance(p <0.05)

To investigate the factors that may be associated with the change of HDL-C, we found HDL-C will decrease 1 mg/dl for every 10 mg/dl increase in TG after controlling other variables such as age, gender, etc.

Conclusions

It is demonstrated that participants' blood biochemical values were significantly improved. The decrease of HDL-C with the increase in TG may be related to the metabolic mechanism of HDL-C, which needs further study. It is strongly advisable for those who have high fasting blood glucose levels to participate in NEWSTART program, which is also beneficial for all people to practice healthy lifestyle.