



# The Effects of Health Guidance for Men with High Risks of Metabolic Syndrome

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## Abstract

The study intends to clarify the effect of health guidance provided by an occupational health nurse for six months for male workers identified with high risks of metabolic syndrome at workplace health check. The subjects were 73 males out of 137 total workers who went through the health check, and one health nurse intervened throughout the study period. The effect of guidance was measured by the changes in attendance persistency, abdominal girth, weight, improvements in eating and exercising habits, their eagerness to improve lifestyle, etc. Data analysis was performed by  $\chi^2$  test.

The participants' average age was 48.0, and they mainly involved deskwork. The guidance attendance persistency was 57.5%, and among the 42.5% dropouts, 35% discontinued due to overwhelming workload. At the beginning, the averages of abdominal girth and weight were 91.7cm and 76.0kg respectively. After six months, they were reduced by 2.0cm in girth and 1.4kg in weight. The lifestyle improvement rate was 55.0% in diet and 25.0% in physical exercise, with the diet improvement rate significantly high ( $P < 0.01$ ). As for their willingness for lifestyle improvement, 55.0% participants, more than two times the initial rate, expressed their intention to improve it within half a year.

**Keywords:** Metabolic syndrome; High risk; Health guidance; Occupational Health Nurse

## Purpose of the Study

The primary purpose of the medical examination was not only to discover metabolic diseases but also to provide the people an opportunity to reconsider their lifestyle. The specific health instruction was to raise health consciousness [1].

The study intends to clarify the effect of health guidance provided by an occupational health nurse for six months for male workers identified with high risks of metabolic syndrome at workplace health check.

## Methods

The study was conducted from June 1<sup>st</sup> to November 30<sup>th</sup>, 2015. The subjects were 73 males out of 137 total workers who went through the health check, and one health nurse intervened throughout the study period. The effects of guidance were measured by the changes in attendance persistency, abdominal girth, weight, improvements in eating and exercising habits, their eagerness to improve lifestyle, etc.

Data analysis was conducted using statistical software SPSS14.0 for Windows. A  $\chi^2$  test was performed.

## Ethical Considerations

The following six items were explained to the subjects by the investigator and the subjects' consent was obtained: individual privacy will be protected; the investigation will be conducted anonymously and participation is voluntary; there will be no disadvantages for declining to participate; acquired information will be used for no purpose other than research; subjects will be assigned an ID number for computer processing; and a questionnaire will carry out decision processing at the end of research, after which all electronic data will be deleted.

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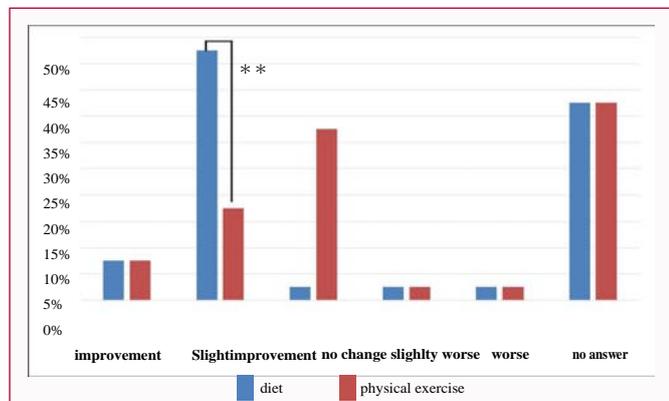
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**Table 1:** Age.

Age	(n=73)
30s	9(12.3%)
40s	35(47.9%)
50s	25(34.3%)
60s	4(5.5%)



**Figure 1:** Life style improvement rate. Data were analyzed by the  $\chi^2$  test. \* $P < .05$ ; \*\*  $P < .01$

## Results

The participants' average age was  $48.0 \pm 6.7$ , and their works were mainly deskwork (Table 1). The guidance attendance persistency was 57.5%, and among the 42.5% dropouts, 35% discontinued due to overwhelming workload. At the beginning, the averages of abdominal girth and weight were 91.7cm and 76.0kg, respectively. After six months, they were reduced by 2.0cm in girth and 1.4kg in weight. The lifestyle improvement rate was 55.0% in diet and 25.0% in physical exercise, with the diet improvement rate significantly high ( $P < .01$ ) (Figure 1).

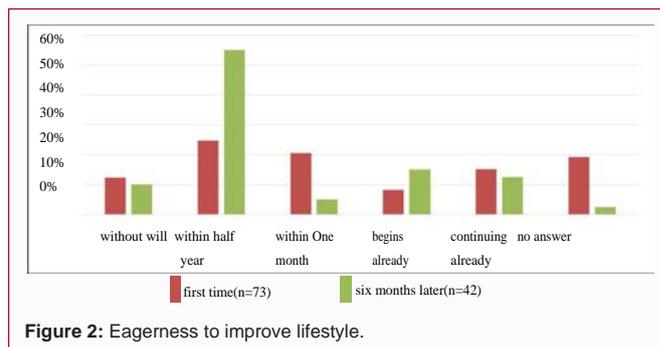
As for their willingness for lifestyle improvement, 55.0% participants, more than two times the initial rate, expressed their intention to improve it within half a year (Figure 2).

The result demonstrated that men in their most productive years successfully reduced abdominal girth and weight and improved their eating and exercising habit at the guidance of a health nurse. In particular, their motivation for improved diet and lifestyle steadily increased.

## Discussion

Reduction in abdominal girth and weight is believed to be partly affected by the fact that daily variation in values is easily recognized individually because abdominal circumference and body weight are shown by a concrete value as a result. Therefore, it is estimated that employees had a tendency to keep their motivation [2,3].

High improvement rate in dietary habit is believed to be partly affected by the fact that employees were able to get cooperation of their family to take charge of decision of menu and cooking at home in addition to their own efforts including transformation of consciousness.



**Figure 2:** Eagerness to improve lifestyle.

Individual motivation for improvement of lifestyle habit is enhanced at the time when the instruction session for six months is completed. It is necessary at this time to make them restart metabolic syndrome prevention by setting a new goal as well as to provide their families with information from workplaces in order to ensure their continued cooperation [4,5].

It is required to establish an in-house healthcare system in the future which may not allow employees to quit their efforts on ground of "busy schedule" by enhancing diffusion and enlightenment of knowledge not only for employees with high risk of metabolic syndrome but also for all employees.

## Conclusion

The result demonstrated that men in their most productive year's successfully reduced abdominal girth, weight, improved their eating and exercising habit at the guidance of a health nurse. In particular, their motivation for improved diet and lifestyle steadily increased. However, it is necessary at this time to make them restart metabolic syndrome prevention by setting a new goal as well as to provide their families with information from workplaces in order to ensure their continued cooperation.

## References

- Hiratani M, Nakamura S, Nakanisi S, Kihira E. Effects of Specific Health Instruction. Journal of the Japanese Association of Rural Medicine. 2015;64(1):34-40.
- Hayashi F, Takemi Y, Nishimura S, Okuyama M, Nakamura M. Relationship between Weight Loss in Male Workers and Their Attitude towards Weight Loss Attempts after the First Interview of the Specific Health Guidance. The Japanese Society of Nutrition and Dietetics. 2012;79(5):294-304.
- Muramoto K, Tsushita K. The Assessment of the Effect of lifestyle Modification Advice Program. Journal of Japan Society for the Study of Obesity. 2013;19(2):75-81.
- Tsushita K. The Second Phase of Specific Health Check-ups and Specific Health Guidance. Journal of the Japanese Society of Human Dry Dock. 2012;27(3):535-46.
- Ciba A, Yamamoto H, Morinaga Y, Kawauchi K. Implementation and Evaluation of a Workplace Pervasive Program of Health Guidance for Lifestyle Diseases Prevention. Journal of Japan Academy of Community Health Nursing 2016;19(1):31-9.